Factors Affecting the Nutritional Status of Pregnant Women with Low Birth Weight in the Work Area In Panyabungan Jae Health Center, Penyabungan District, Mandailing Regency City Natal 2022

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ARTICLE INFO	ABSTRACT
Keywords: *Nutritional Status of Pregnant Women,* *LBW*	Pregnancy is an important period of life. At that time the mother must prepare herself as well as possible to welcome the birth of her baby. WHO (Word Health Organization), states that the prevalence of LBW in the world is 20 million (15.5%) annually, and developing countries are the largest contributor, which is around 96.5%. This research is an analytic survey with a cross sectional approach. The research population was 72 people. A sample of 43 respondents using the Random Sampling technique, namely the total population that will be used as a population. The research instrument uses Primary Data (Questionnaire) which consists of 20 questions. The independent variable in this study was the nutritional status of pregnant women with low birth weight. And the dependent variable of this study is age, occupation, education, parity, source of information. The results of the study were that most of the mothers, as many as 20 people (44.4%) of respondents had less status. The results of the chi-squer test obtained a p-value of 0.030 <0.05 so that Ho was rejected and Ha was accepted. In this study, there are factors that affect the nutritional status of pregnant women with low birth weight in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal District. It is hoped that the cooperation of health workers, cadres and parents will fulfill balanced nutrition in toddlers to avoid LBW. In this study, there are factors that affect the nutritional status of pregnant women with low birth weight in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal District. It is hoped that the cooperation of health workers, cadres and parents will fulfill balanced nutrition in toddlers to avoid LBW. In this study, there are factors that affect the nutritional status of pregnant women with low birth weight in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal District. It is hoped that the cooperation of health workers, cadres and parents will fulfill balanced nutrition in toddlers to avoid LBW.
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1. INTRODUCTION

Pregnancy is an important period of life. At that time the mother must prepare herself as well as possible to welcome the birth of her baby. Healthy mothers will give birth to healthy babies. One of the factors that influence maternal health is maternal nutrition (Depkes RI, 2016). The period of pregnancy is a time when a woman needs various nutritional elements that are much more than under normal circumstances (Sjahmien, 2016).

Nutritional status can be known by calculating Body Mass Index (BMI) and measuring upper arm circumference (Mardalena, 2017).

According to the WHO (World Health Organization), the prevalence of LBW in the world is 20 million (15.5%) annually, and developing countries are the largest contributor, which is around 96.5% (WHO, 2018). Indonesia is one of the developing countries, where the prevalence of LBW is still quite high. the incidence of LBW in Indonesia in 2017 was still relatively high at 7.1%.

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In Indonesia, the LBW rate of 10-14% is one of the highest rates in developing countries (Husaini 2018), whereas the results of previous studies stated that in the delivery ward at Dr. Moewardi Surakarta, in 2016 the LBW rate was 193 cases (11.8%) of 1628 live births. This figure is higher than the LBW target set in the nutrition improvement program target towards Healthy Indonesia 2016, which is a maximum of 7%.

From the initial survey data conducted by researchers on 15 November 2021 which was carried out by asking for data about childbirth and LBW data through medical records at the Panyabungan Jae Health Center, it was found that delivery from January to October 70 mothers gave birth for LBW babies ranging from 58 babies (42 %) and 10 pregnant women with LILA less than 23.5 cm.

2.   METHODS

This type of research used an analytic survey method with a cross-sectional approach on the factors that influence the nutritional status of pregnant women with low birth weight. The research was conducted from October 2021 to February 2022. The population in this study were 72 pregnant women at the Panyabungan Jae Health Center. The sample in this study was the total population using the Random Sampling technique so that a total sample of 43 people was obtained.

3.   RESULTS AND DISCUSSION

Table 1 Frequency Distribution of Respondents Based on Age in the Work Area of the Panyabung Jae Health Center, Panyabungan District, Mandailing Natal Regency City in 2022

No	Age	Frequency	Percentage (%)
1	< 20 years	9	20,9
2	< 21 – 35 years	25	58,1
3	< 36 years	9	20,9
	Amount	**43**	**100**

From the frequency distribution, it was found that the majority were aged <21-35 years, 25 people (58.1%), while the minority were aged <36 years, 8 people (20.9%).

Table 2 Frequency Distribution of Respondents Based on Education in the Working Area of the Panyabung Jae Health Center, Panyabungan District, City of Mandailing Natal Regency in 2022

No	Education	Frequency	Percentage (%)
1	SD	6	14.0
2	JUNIOR HIGH SCHOOL	15	34,9
3	SENIOR HIGH SCHOOL	14	32,6
4	College	8	18,6
	Amount	**43**	**100**

From the frequency distribution, it was found that the majority of education was high school and junior high school, 15 people (34.9%), while the minority had elementary and tertiary education, 6 people (14.0%).

Table 3. Frequency Distribution of Respondents Based on Occupation in the Working Area of the Panyabung Jae Health Center, Panyabungan District, City of Mandailing Natal Regency in 2022

No	Work	Frequency	Percentage (%)
1	IRT	13	30,2
2	Farmer	7	16,3
3	civil servant	6	14.0
4	Self-employed	17	39.5
	Amount	**43**	**100**

From the frequency distribution, data shows that the majority of jobs are 17 people working as entrepreneurs (39.5%), while the minority are working as civil servants 6 people (14.0%).

Table 4 Frequency Distribution of Respondents Based on Parity in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal Regency City in 2022

No	Parity	Frequency	Percentage (%)
1	Primipara	5	11,6
2	Multipara	16	37,2
3	Scundipara	12	27,9
4	Grandemultipara	10	23,3
	Amount	**43**	**100**

From the frequency distribution, it was found that the majority of parities were 16 multiparas (37.2%), while the minority were 5 primiparas (11.6%).

Table 5. Frequency Distribution of Respondents Based on Information Sources in the Work Area of the Panyabung Jae Health Center, Panyabungan District, City of Mandailing Natal Regency in 2022.

No	Resources	Frequency	Percentage (%)
1	Mass media	9	20,9
2	Electronic Media	17	39.5
3	Health workers	12	27,9
4	Neighbors or people other	5	11,6
	Amount	**43**	**100**

From the frequency distribution, it was found that the majority of information sources were sourced from electronic media, 17 people (39.5%), while the minority were sources from neighbors or other people, 5 people (11.6%).

Table 6. Cross Tabulation Between Factors Affecting Nutritional Status Of Pregnant Women With Low Birth Weight Incidence At Panyabung Jae Health Center

Nutritional Status of Pregnant Women	Weight Incident Low Born								P-values
	Good		Enough		Not enough		Total		
Age	f	%	F	%	F	%	F	%	0.030
<20 year	0	0.0	3	7.0	6	14.0	9	20,9	
20-35 years	0	0.0	12	27,9	13	30,2	25	58,1	
>35 years	1	2,3	3	7.0	5	11,6	9	20,9	
Total	1	2,3	18	41.9	24	55,8	43	100	
Elementary Education	0	0.0	4	9,3	2	4,7	6	14.0	
JUNIOR HIGH SCHOOL	1	2,3	5	11,6	9	20,9	15	34,9	
SENIOR HIGH SCHOOL	0	0.0	3	7.0	5	11,6	14	32,6	
College	0	0.0	3	7.0	5	11,6	8	18,6	
Total	1	2,3	18	41.9	24	55,8	43	100	
IRT work	0	0.0	2	4,7	5	11,6	13	30,2	
Farmer	0	0.0	2	4,7	5	11,6	7	16,3	
civil servant	0	0.0	2	4,7	4	9,3	6	14.0	
Self-employed	1	2,3	12	27,9	4	9,3	17	39.5	
Total	1	2,3	18	41.9	24	55,8	43	100	
Parity Primipara	1	2,3	1	2,3	3	7.0	5	11,6	
Multipara	0	0.0	11	25,6	5	11,6	16	37,2	
Scundipara	0	0.0	3	7.0	9	20,9	12	27,9	

	f	%	f	%	f	%	f	%
Grandemultipara	0	0.0	3	7.0	7	16,3	10	23,3
Total	1	2,3	18	41.9	24	55,8	43	100
Source Media information mass	0	0.0	6	14.0	3	7.0	9	20,9
electronic media	0	0.0	4	9,3	13	30,2	17	39.5
Health workers	0	0.0	5	11,6	7	16,3	12	27,9
Neighbors / People Other	1	2,3	3	7.0	1	2,3	5	11,6
Total	1	2,3	18	41.9	24	55,8	43	100

Based on the results of data analysis using the chi-square test, a significance value of 0.030 was obtained. Based on this value, because the p value <0.05, then 0.030 <0.030 it can be concluded that "Nutritional status has a factor with the incidence of low birth weight".

Table 7. Analysis of Questionnaire Answers on the Relationship Between Nutritional Status in Toddlers and Stunting Incidents in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal Regency City in 2022

No	Nutritional Status of Pregnant Women with Bblr Events	Wrong		Correct		Total	
		f	%	f	%	f	%
1	A mother who is malnourished during pregnancy will not have a baby suffering from malnutrition	22	51,2	21	48,8	43	100
2	Good nutrition is needed by pregnant women so that the growth of the fetus will not be too late gave birth to a baby with normal weight	19	44,2	24	55,8	43	100
3	Pregnant women need more nutrients than when not pregnant	17	39.5	26	60.5	43	100
4	Nutritious food consists only of rice and vegetables	25	58,1	18	41.9	43	100
5	Insufficient intake proteinsnot bad for fetus in the womb	26	60.5	17	39.5	43	100
6	Staple food is food containing carbohydrates	16	37,2	27	62,8	43	100
7	Drink alcohol no effect on pregnancy	24	55,8	19	44,2	43	100
8	Lack of vitamin intake dan mineral Noaffect the growth of the fetus in the womb	25	58,1	17	39.5	43	100
9	Consuming foods that contain high salt continuously will cause disease	16	37,2	27	62,8	43	100
10	Foods that can reduce nausea and vomiting such as bread, candy and ginger	16	37,2	27	62,8	43	100
11	Iron deficiency in the motherpregnant can cause anemia	14	32,6	29	67,4	43	100
12	Plusblood tablets can drink using the	33	76,7	10	23,3	43	100
13	Third trimester energy needs necessary for the development of the fetus and placenta	13	30,2	30	69.8	43	100
14	Twin pregnancy is wrong one cause of low birth weight estimates	15	34,9	28	65,1	43	100

15	If pregnant women consume nutritious food, then the estimated fetal weight is normal according to gestational age	20	46.5	23	53.5	43	100
16	Maternal factor is not one of the causes of birth weight low	25	58,1	18	41.9	43	100
17	Malnutrition during pregnancy does not cause the weight of the baby low birth	25	58,1	18	41.9	43	100
18	Measuring lila is to find out and one of the determining factors for pregnant women to have a risk of giving birth babies with LBW	17	39.5	26	60.5	43	100
19	Suggest more rest when pregnancy is approaching term or bed rest if conditions occur deviate from a normal pregnancy	14	32,6	29	67,4	43	100
20	Break the habit smoking, drugs and alcohol in pregnant women	31	72,1	12	27,9	43	100

From the table above it is known that the majority of respondents answered the wrong questionnaire on questionnaire number 12, namely 33 respondents (76.7%), while the minority of respondents answered the correct questionnaire on questionnaire number 12, namely 10 respondents (23.3%).

Nutritional Status of Pregnant Women

Based on the results of the study, it was found that the nutritional status of pregnant women in the Work Area of the Panyabungan Jae Health Center was that the majority of respondents were undernourished, namely 24 people (55.8%), while the minority had good nutritional status of 1 person (2.3%). And the rest have sufficient nutritional status as many as 18 people (41.9%).

The nutritional status of pregnant women is the health condition of pregnant women which is influenced by the consumption of food and drink at some time before pregnancy. Nutritional status can be determined by calculating the Body Mass Index (BMI) and measuring the circumference of the upper arm.

From the above results it is known that the nutritional needs of mothers during pregnancy are different for each individual. This is influenced by previous medical history and nutritional status, lack of intake of disrupted nutrients, and nutritional needs that are not constant during pregnancy. During pregnancy, such as an increase in calorie needs, in line with an increase in basal metabolic rate and weight gain, which will increase the use of calories during activities (Weni, 2017)

According to Sri, 2017, based on research results it is known that of the 14 mothers with nutritional status who gave birth to LBW 12 (85.7%) higher than non LBW 2 (14.3), the results of the analysis concluded that the nutritional status of mothers has a significant factor statistically with low birth weight babies.

Low Birth Weight Incidence

Based on the results of the study, it was found that the incidence of low birth weight events in the Working Area of the Panyabungan Jae Health Center was that all mothers had low birth weight. With a good category based on a Z-Score <2, namely 1 person (23%) while a Z-Score <-3, which is sufficient for 18 people (41.9%). Meanwhile, malnutrition status with a Z-Score <-2 was 24 people (55.8%). With the total number of respondents who experienced low birth weight were 43 people (100%)

According to the Ministry of Health (2016) fetal factors can be caused by congenital defects suffered by the fetus, uterine infections, multiple pregnancies, premature rupture of membranes, and chromosomal abnormalities. Uterine and placental factors can be caused by abnormal cord insertion,

placental infection, and placental detachment. While maternal factors can be caused by mother's age, parity, social economic conditions, prenatal care, obstetric history, pregnancy interval, education. According to Manuaba, 2017, based on research results, other factors that cause LBW are history of abortion and spacing of pregnancies. The results showed that most of the respondents had never had an abortion, namely 159 respondents (95.2%).

Pregnant women who have experienced abortion in subsequent deliveries will tend to have low birth weight. Spacing less than 2 years causes reproductive function and health are not fulfilled properly. Delivery distance is a factor that can affect the incidence of LBW. The smaller the birth spacing the greater probability of giving birth to a LBW baby.

Factors Affecting the Nutritional Status of Pregnant Women with LBW

From the results of statistical tests using chi square it is known that p value = 0.030 < α = 0.05 then Ha is accepted and Ho is rejected, which means that there are factors that influence the nutritional status of pregnant women with low birth weight in the working area of the Panyabungan Jae Health Center, Panyabungan City Christmas Mandailing Regency 2022

Based on the results of the study, it was found that the nutritional status of pregnant women in the Work Area of the Panyabungan Jae Health Center was that the majority of respondents were undernourished, namely 24 people (55.8%), while the minority had good nutritional status of 1 person (2.3%). And the rest have sufficient nutritional status as many as 18 people (41.9%). This is due to previous medical history and nutritional status, lack of intake of a disturbed nutrient, and nutritional needs that are not constant during pregnancy.

According to the assumptions, the researchers concluded that the nutritional status of the mother has a close relationship with the birth weight of the baby and can be an important consideration as an indicator of birth outcomes

The results of this study are in line with the conclusions of Dyah's research (2018), namely that there are factors that affect the nutritional status of pregnant women with low birth weight events with the results obtained p-value 0.009 <0.09 so that Ho is rejected and Ha is accepted, meaning there are factors which affect the nutritional status of pregnant women with the incidence of low birth weight

According to previous researchers in accordance with the opinion of Solihin, 2017 which stated that the nutritional status of the mother at the time of conception and during pregnancy can affect the growth of the fetus in the womb, if the mother's nutritional status is poor before and during pregnancy it will cause Low Birth Weight (LBW).

4. CONCLUSION

From the results of research on 43 respondents in the Work Area of the Panyabungan Jae Health Center, Panyabungan District, City of Mandailing Natal Regency in 2022, the majority of toddlers are adequately nourished, namely 20 people (44.4%) while the minority are well-nourished, namely 1 person (2.3%). %) and the rest were undernourished, namely as many as 18 people (41.9%) and obtained a p value of 0.934 with α = 0.05, it can be concluded that there is a significant factor between the nutritional status of pregnant women and the incidence of low birth weight. Ho is rejected and Ha is accepted, meaning that there are factors that affect the nutritional status of pregnant women with the incidence of low birth weight in the Working Area of the Panyabungan Jae Health Center, Panyabungan District, Mandailing Natal Regency City in 2022.

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