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THE RELATIONSHIP BETWEEN NUTRITIONAL STATUS OF PREGNANT WOMEN AND NEWBORN WEIGHT IN TIO SIRINGO RINGO CLINIC

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ABSTRACT

Background; *A healthy pregnancy and a safe physical condition as well as a satisfying emotional state for both mother and fetus. Nutritional problems are an indirect cause of maternal and child deaths which are actually preventable. The low nutritional status of pregnant women during pregnancy can result in some adverse impacts on the mother and baby, including babies born with low birth weight. Objective; the research was to determine the relationship between nutritional status and newborn weight at the Tio Siringo Ringo Clinic.* ***Method;*** *This type of research is an analytic survey using a cross sectional design. The sample of this research was taken the whole population (total sampling) as many as 30 people.* ***Results;*** *cross-tabulation research between pregnant women Lila and baby weight at the Tio Seringgo Ringo Clinic in 2023. That out of 30 respondents (100%). Among them Lila pregnant women who lack chronic energy totaling 3 respondents (10.0%), with LBW 2 respondents (6.7%), and not LBW 1 respondent (3.3). Pregnant women Lila did not lack chronic energy as many as 27 respondents (90.0%), with LBW baby weight as much as 1 respondent (3.3%), and not LBW 26 respondents (86.7%).* ***Conclusion;*** *research there is a relationship Lila Pregnant Women with Baby Weight. With p = 0.001 <0.05 where from 30 respondents. Lila Pregnant women lacked chronic energy as many as 3 respondents (10.0%), Lila Pregnant women did not lack energy as many as 27 respondents (90.0%). It is recommended for pregnant women to increase their knowledge about nutrition fulfillment during pregnancy.*

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1. INTRODUCTION

A healthy pregnancy and a safe physical condition as well as a satisfying emotional state for both the mother and the fetus are the expected goals of midwifery care for pregnant women.

However, not many pregnant women know how to make pregnancy go well and what factors can affect pregnancy. (1).

If a pregnant woman has poor nutritional status during her pregnancy, she is at risk of having a baby with poor health conditions. And women with good nutritional status will give birth to healthy babies (2). Malnutrition in pregnant women can cause low birth weight (LBW) babies, premature births, so that it can have an impact on the low nutritional status of the baby. Infants who are malnourished will experience permanent physical, mental, social and intellectual developmental disorders and must be brought into adulthood (3).

In developing countries, including Indonesia, malnutrition is a major health problem. Nutritional problems are an indirect cause of maternal and child mortality which is actually preventable. The low nutritional status of pregnant women during pregnancy can result in various adverse effects for the mother and baby, including babies born with low birth weight (LBW). Babies with LBW have a 10-20 times greater chance of dying than babies born with sufficient birth weight. Therefore, it is necessary to have early detection in pregnancy which can reflect fetal growth through an assessment of the nutritional status of pregnant women (4).

Nutritional problems are an indirect cause of maternal and child mortality which can actually be prevented. The low nutritional status of pregnant women during pregnancy can result in some adverse impacts on the mother and baby, including babies born with low birth weight (LBW). Babies with LBW have a 10-20 times greater chance of dying than babies who are just born enough. Therefore, there is a need for early detection in pregnancy which can reflect fetal growth through an assessment of the nutritional status of pregnant women (4).

Pregnant women are declared KEK if they have a threshold for measuring LILA <23.5 cm, this means that pregnant women with a risk of KEK are expected to give birth to LBW babies (5).

Since the fetus until the child is two years old or the first 1000 days of life, nutritional adequacy greatly affects the physical and cognitive. KEK malnutrition which is associated with the risk of chronic disease in adulthood, obesity, heart and blood vessel disease, hypertension, stroke and diabetes. During pregnancy, the nutrition of pregnant women must meet nutritional needs for themselves and for the growth and development of the fetus because fetal nutrition depends on maternal nutrition and the nutritional needs of the mother must also be fulfilled (6).

Based on the description above, the researcher (writer) is interested in conducting research with the title "The Relationship between Nutritional Status of Pregnant Women and Newborn Weight at Tio Siringo Ringo Clinic"

2. RESEARCH METHODE

This type of research is an analytic survey using a cross-sectional design which aims to determine the relationship between the nutritional status of pregnant women and the weight of newborns at the Tio Siringo-ringo Clinic in 2023 by measuring or observing the independent and dependent variables together through prime data. taken directly from the respondents.

This research was conducted at the Tio Siringo-ringo Clinic which is located at Jalan Istiqomah Kel. Medan Helvetia, Medan City, North Sumatra. This location was chosen because based on the results of the initial survey, it was found that there were LBW babies which were related to the nutritional status of pregnant women. The time for research at the Tio Siringo Ringo Clinic starts from submitting a title, namely from February to May 2023.

The population in this study were all pregnant women who had antenatal checks at the gestational age of 0-42 weeks during delivery at the Tio Siringo Ringo Clinic, namely 30 people. The sample of this research was taken the whole population (total sampling) as many as 30 people.

The instruments or tools used in this study were secondary data obtained from the Tio Siringo-ringo Clinic in the form of a mother's card that had been stipulated by the Indonesian Ministry of Health.

3. RESULT AND ANALYSIS

Table 1 Frequency Distribution of Respondent Characteristics Based on Age, Education

No	Karakteristik	Jumlah	
		F	%
1	Usia		
	<25 tahun	3	10.0
	25-35 tahun	25	83.3
	>36 tahun	2	6.7
2	Pendidikan		
	SD	2	6.7
	SMP	12	40.0
	SMA	16	53.3
	Total	**30**	**100.0**

Based on table 1 of the characteristics of the respondents based on the age of the 30 respondents, it is known that those aged <25 years are 3 respondents (10.0%), 25-35 years are 25 respondents (83.3%), and >36 years are 2 respondents (6.7%).

Based on table 4.1 of the characteristics of respondents based on education of 30 respondents, it is known that elementary school education is 2 respondents (6.7%), junior high school is 12 respondents (40.0%), and high school is 16 respondents (53.3%).

Bivariate analysis aims to determine whether there is a relationship between the independent variable (x) and the dependent variable (y).

Table 2. Cross tabulation of the relationship between BMI and baby's weight

No	IMT	BB Bayi				Total		*P-Vaule*
		BBLR		Tidak BBLR				
		f	%	f	%	F	%	
1	Kurang	2	6,7	1	3,3	3	10,0	0,007
2	Normal	1	3,3	20	66,7	21	70,0	
3	Overweiht	0	0	5	16,7	5	16,7	
4	Obesitas	0	0	1	3,3	1	3,3	
	Total	**3**	**10,0**	**27**	**90,0**	**30**	**100,0**	

Based on table 4.5, it can be seen that the cross tabulation between BMI and baby weight at the Tio Seringgo Ringo Clinic in 2023. That of 30 respondents (100%). Among them, 3 respondents (10.0%) had less BMI, 2 respondents (6.7%) had low birth weight babies, and 1 respondent (3.3) did not have LBW. Normal BMI was 21 respondents (70.0%), with LBW baby weight was 1 respondent (3.3%), and 20 respondents (66.7%) were not LBW. Meanwhile, 5 respondents (16.7%) had overweith BMI, 0 respondents (0%) had LBW babies, and 5 respondents (16.7) were not LBW. And obesity BMI amounted to 1 respondent (3.3%). with LBW baby weight as many as 0 respondents (0%), and not LBW 1 respondent (3.3).

Table 3 Cross-tabulation of the Relationship between Lila Pregnant Women and Baby's Weight

No	Lila Ibu Hamil	BB Bayi				Total		*P-Vaule*
		Normal		Tidak BBLR				
		f	%	f	%	f	%	
1	Kekurangan Energi Kronis	2	6,7	1	3,3	3	10,0	
2	Tidak Kekurangan Energi Kronis	1	3,3	26	86,7	27	90,0	0,001
	Total	**3**	**10,0**	**27**	**90,0**	**30**	**100,0**	

Based on table 3, it can be seen that the cross tabulation between Lila's pregnant mother and the baby's weight at the Tio Seringgo Ringo Clinic in 2023. That out of 30 respondents (100%). Among them were Lila pregnant women who lacked chronic energy, totaling 3 respondents (10.0%), with LBW babies weighing 2 respondents (6.7%), and 1 respondent who was not LBW (3.3). Pregnant women Lila did not lack chronic energy as many as 27 respondents (90.0%), with LBW baby weight as much as 1 respondent (3.3%), and not LBW 26 respondents (86.7%).

DISCUSSION

BMI (Body Mass Index) of Pregnant Women

Based on table 4.4, it can be seen that the cross-tabulation between BMI and baby weight at the Tio Seringgo Ringo Clinic in 2023. That of 30 respondents (100%). Among them, 3 respondents (10.0%) had less BMI, 2 respondents (6.7%) had low birth weight babies, and 1 respondent (3.3) did not have LBW. Normal BMI was 21 respondents (70.0%), with LBW baby weight was 1 respondent (3.3%), and 20 respondents (66.7%) were not LBW. Meanwhile, 5 respondents (16.7%) had overweith BMI, 0 respondents (0%) had LBW babies, and 5 respondents (16.7) did not have LBW. And obesity BMI amounted to 1 respondent (3.3%). with LBW baby weight as many as 0 respondents (0%), and not LBW 1 respondent (3.3).

Based on research conducted at the Tio Seringgo Ringo Clinic in 2023. By using the Chi square test with a significant value or a p-value of 0.007 and an α value (0.05), it means that there is a relationship between BMI and baby's weight at the Tio Seringgo Ringo Clinic in the year 2023. This research is in line with research conducted by Nurhayati on pre-pregnancy body mass index (BMI) and maternal weight gain during pregnancy associated with birth weight. In this study, the chi-square test was used with a p-value of 0.006 with α (0.05) which means there is a relationship between pre-pregnancy body mass index (BMI) and maternal weight gain during pregnancy related to birth weight (7).

Normal baby weight at birth is 2500-4000 grams, the incidence of LBW in Indonesia is 6.2% Based on the 2018 Riskesdas results. Babies who are old enough with low birth weight usually do not have health problems, but it is different with premature babies who are born with low birth weight. low (8).

Big babies may have a different genetic code or certain medical conditions while in the womb that can accelerate the growth of the fetus. But health experts reveal that the trend of big babies is more closely linked to more mothers who are obese before and during pregnancy.

This research is in line with research conducted by Maya on the relationship between pre-pregnant mother's body mass index (BMI) and weight gain during pregnancy with the baby's birth

weight at Surabaya Hospital. In this study, the chi-square test was used with a p-value 0.040 with α (0.05) which means that there is a relationship between the body mass index (BMI) of pre-pregnant women and weight gain during pregnancy with the baby's birth weight in Surabaya Hospital (9).

This research is in line with research conducted by Siti on the relationship between maternal weight gain during pregnancy and baby weight at birth at BPS Wirahayu Panjang, Bandar Lampung. In this study, the chi-square test was used with a p-value of 0.002 with α (0, 05) which means there is a relationship between maternal weight gain during pregnancy and baby weight at birth at BPS Wirahayu Panjang, Bandar Lampung (10).

Based on a study entitled The Relationship between Nutritional Status of Pregnant Women and Newborn Weight at Tio Seringo Ringo Clinic in 2023. It can be concluded that nutritional deficiencies in women during the reproductive period can affect the health of mothers both before pregnancy, during pregnancy, and after pregnancy, during before pregnancy can result in low body weight and reduced fat reserves. During pregnancy can result in reduced duration of pregnancy and low weight gain during pregnancy.

LILA Pregnant Women

Based on table 4.5, it can be seen that there is a cross tabulation between the baby's weight at the Tio Seringgo Ringo Clinic in 2023. That out of 30 respondents (100%). Among them were Lila pregnant women who lacked chronic energy, totaling 3 respondents (10.0%), with LBW babies weighing 2 respondents (6.7%), and 1 respondent who was not LBW (3.3). Pregnant women Lila did not lack chronic energy as many as 27 respondents (90.0%), with LBW baby weight as much as 1 respondent (3.3%), and not LBW 26 respondents (86.7%).

Based on research conducted at the Tio Seringgo Ringo Clinic in 2023. By using the Chi square test with a significant value or a p-value of 0.001 and an α value (0.05), it means that there is a relationship between pregnant women and baby weight at the Tio Seringgo clinic Ringo Year 2023.

This research is in line with research conducted by Merta et al concerning the relationship between the upper arm circumference of pregnant women and newborn weight in the city of Yogyakarta. In this study, the chi-square test was used with a p-value of 0.005 with α (0.05) which means that there is a relationship between the upper arm circle of pregnant women and the weight of newborns in the city of Yogyakarta (11).

An arm circumference that is less than 23.5 cm can be categorized as chronic energy deficiency (CED). Pregnant women who suffer from CED in Indonesia are 21.6%, the highest incidence of CED for pregnant women in Indonesia is in East Nusa Tenggara by 32.4% with a total of 306 pregnant women (12).

KEK during pregnancy also has a negative impact on fetal growth, pregnant women who experience KEK can cause miscarriage, abortion, stillbirth, then neonatal, congenital defects, anemia in infants, and babies born with low weight. Measurement of lila pregnant women is one of the parts that must be carried out by health workers (13).

This research is in line with research conducted by Merta et al concerning the relationship between the upper arm circumference of pregnant women and newborn weight in the city of Yogyakarta. In this study, the chi-square test was used with a p-value of 0.005 with α (0.05) which means there is a relationship between the upper arm circle of pregnant women and the weight of newborns in the city of Yogyakarta.

This research is in line with research conducted by Rahma on the relationship between the upper arm circle of pregnant women and the baby's weight at the Cut Meutia General Hospital in

North Aceh District and the IV IM Kindergarten Hospital. 07.01 lhokseumawe in 2018, in this study used the chi-square test with a p-value of 0.006 with α (0.05) which means there is a relationship between the upper arm circle of pregnant women and the baby's weight at the cut meutia public hospital, north aceh district and tk IV IM hospital. 07. 01 lhokseumawe in 2018 (14).

This research is in line with research conducted by Huda regarding the relationship between chronic energy deficiency in pregnant women and the incidence of low birth weight in newborns at the Wuluhan Health Center in 2016. In this study, the chi-square test was used with a p-value of 0.001 with α (0.05) which means there is a relationship between chronic energy deficiency in pregnant women and the incidence of low birth weight in newborns in the Wuluhan health center area in 2016 (15).

Based on the research entitled The Relationship between Nutritional Status of Pregnant Women and Newborn Weight at Tio Seringo Ringo Clinic in 2023. It can be concluded that the existence of LILA for pregnant women is very important to be one of the main concerns for health workers, improving nutritional status can begin in the preconception period to prepare pregnancy is more optimal, and generation improvement starts from fulfilling the nutritional status of both mother and baby. The right LILA measurement can help detect the nutritional status of women who will or are pregnant.

4. CONCLUSION

The conclusion in this study is that there is a relationship between IM and LILA for pregnant women and baby weight at the Tio Siringo Ringo Clinic in 2023

References

[1] Rukiyah AY, Yulianti, Lia; Maemunah; Susilawati L. Asuhan Kebidanan I (Kehamilan). Media trans info Jakarta. 2017;

[2] Nugroho T.Buku Ajar Asuhan Kebidanan. Yogyakarta: Nuha Medika; 2014.

[3] Sutanto AV. Asuhan Pada Kehamilan. Yogyakarta: Pustaka Baru Press; 2017.

[4] Chairunita C, Hardinsyah H, Dwiriani CM. Model Penduga Berat Bayi Lahir Berdasarkan Pengukuran Lingkar Pinggang Ibu Hamil. J Gizi dan Pangan. 2007;1(2):17.

[5] Hanifah L. Hubungan Antara Status Gizi Ibu Hamil Dengan Berat Badan Bayi Lahir (Studi Kasus Di Rb Pokasi) Karya. Kti Progr Stud Div Kebidanan Fak Kedokt Univ Sebel Maret Surakarta. 2009;93.

[6] Kementerian Kesehatan RI. Profil Kesehatan Republik Indonesia. Jakarta; 2017.

[7] Nurhayati E. Indeks massa tubuh (IMT) Pra hamil dan kenaikan berat badan ibu selama hamil berhubungan dengan berat badan bayi lahir. J Ners dan Kebidanan Indones. 2016;4(1):1–5.

[8] Mandriwati GA, Ariani NW, Harini RT, Darmapatni MWG, Javani S. Asuhan Kebidanan Kehamilan Berbasis Kompetensi. Jakarta: Buku Kedokteran EGC; 2018.

[9] Puspita IM. Hubungan Antara Indeks Massa Tubuh (Imt) Ibu Prahamil Dan Kenaikan Berat Badan Selama Kehamilan Dengan Berat Badan Lahir Bayi Di Rsud Dr. M. Soewandhie Surabaya. Kebidanan J. 2019;4(2):32–7.

[10] Lathifah NS. Hubungan Kenaikan Berat Badan Ibu Selama Hamil Terhadap Berat Badan Bayi Saat Lahir Di BPS Wirahayu Panjang Bandar Lampung. J Ilmu Kedokt dan Kesehatan. 2019;6(4):274–9.

[11] Kusuma RM, Astuti Y, Kusumawardhani AM. Hubungan Lingkar Lengan Atas Ibu Hamil dengan Berat Badan Bayi Baru Lahir di Kota Yogyakarta. JMed Respati. 2019;14(2):117–25.

[12] Saimin. Hubungan antara Berat Badan (BBL) dengan Status Gizi ibu berdasarkan ukuran Lingkar Lengan Atas. 2015;

[13] Suparasa IDN, Bakri B, Fajar I. Status Pemeliharaan Gizi. EG Jakarta. 2001;

[14] Putri AR, Atas MAHLL. Ibu Hamil dengan Berat Badan Lahir Bayi di Rumah Sakit Umum Cut Meutia Kabupaten Aceh Utara dan Rumah Sakit Tk IV IM. 07.01 Lhokseumawe Tahun 2015. Jurna Kedokt dan Kesehat Malikussaleh. 2015; 3–6.

[15] Ermawan AH, Indriyani D, Kholifah S. Hubungan kekurangan energi kronis pada ibu hamil dengan kejadian berat badan lahir rendah pada bayi baru lahir Di wilayah puskesmas wuluhan tahun 2016. Indones J Heal Sci. 2017;9(1).