



THE EFFECT OF MATERNITY MOTHER'S HEMOGLOBIN LEVELS ON NEWBORN WIGHT IN VK UPT ROOM PUSKESMAS GAJAH MADA TEMBILAHAN INDRAGIRI HILIR REGENCY IN 2020

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ABSTRACT

One indicator of the degree of public health is the Infant Mortality Rate. In Indonesia, the infant mortality rate of 34 per 1,000 live births or 29.4% occurs due to the lack of hemoglobin levels that cause anemia in the mother during pregnancy until childbirth thus increasing the risk of Low Birth Weight (BBLR) and even causing the death of the mother and her baby if the mother suffers from severe anemia. The purpose of this study is to find out the effect of maternity mother hemoglobin levels on newborn weight in VK UPT Room. Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency. This research uses analytical research methods with quasi eksperimen research design. A study sample of 20 maternity mothers. The study was conducted on February 8, 2020 using the checklist sheet and data analysis used in the Independent T-Test statistical test. The results found there was an influence of maternity mother hemoglobin levels on the weight of babies born with a p value = $0.000 < 0.05$. From the results of this study, it is expected to improve early detection efforts by monitoring and monitoring during pregnancy while conducting ANC services and always paying attention to maternal Hb levels so that the mother and her fetus are in good health, so that treatment as early as possible can be done to prevent the onerous onlihood of BBLR.

Keyword: *Hemoglobin Levels, Baby Weight Born*

INTRODUCTION

Pregnancy is a natural process in a woman's period of growth. Physical and psychological changes that occur during pregnancy are physiological rather than pathological. The care provided is sought to help the mother adapt to changes during pregnancy and anticipate the abnormal state of the mother's physical and psychological changes (Bartini, 2012). To get a healthy baby, not separated from efforts to realize the health of the child as early as possible from the womb until the birth and growth of the next baby (Depkes RI, 2009 in Setiawan, 2013).

Lack of hemoglobin (Hb) levels of pregnant women is one of the health problems that is susceptible to occur during pregnancy. Hb levels less than 11 gr/dl indicate pregnant women have anemia. Anemia in pregnant women increases the risk of obtaining Low Birth Weight (BBLR), the risk of bleeding before and during childbirth,

can even lead to the death of the mother and her baby if the pregnant woman suffers from severe anemia. This can certainly make a big contribution to the maternal mortality rate as well as the infant mortality rate, which based on sarki in 2007 the figure is still quite high, namely the maternal mortality rate (AKI) 228 per 100,000 live births and infant mortality rate (AKB) 34 per 1,000 live births (Depkes RI, 2009 in Setiawan, 2013).

Hemoglobin (Hb) levels are widely used parameters to establish the status of anemia. Hemoglobin can be measured chemically and the amount of Hb/100 ml of blood can be used as an index of oxygen carrier capacity in the blood. Low hemoglobin content thus indicates anemia (Supriasa, 2012 in Princess 2016). Iron deficiency can cause disturbances or inhibitions in fetal growth of both body cells and brain cells. Abnormal hb levels can result in fetal death in the womb, abortus, congenital defects, Low Birth Weight (BBLR) abnormal Hb levels in babies born, this leads



to morbidity and maternal mortality and perinatal death is significantly higher. In pregnant women whose hemoglobin levels are abnormal can increase the risk of morbidity as well as mortality of mothers and babies the likelihood of giving birth to babies with BBLR and premature is also greater (Kristyanasari, 2010 in Putri2016). The prevalence of low birth weight (BBLR) in Indragiri Hilir Regency is 46 infants or 1% of all births weighed (Dinkes Inhil, 2017).

Most women experience anemia during pregnancy, both in developed and developing countries. (WHO, 2015 in Princess 2016), estimates that 35 % - 75% of pregnant women in developing countries and 18% of pregnant women in developed countries experience anemia, an estimated 600,000 women die each year from complications related to pregnancy, childbirth, and puerperium.

In Indonesia, hemoglobin (Hb) levels are generally less due to iron deficiency. According to the 2013 Basic Health Research (Riskesdas), there were 37.1% of pregnant women who were anaemic: pregnant women with Hb levels of less than 11.0 gr/dl, with almost the same proportion in urban areas (36.4%) and rural areas (37.8%). In Riau Province in 2015, fe tablets were given 83.5% but the incidence of anemia in pregnant women was still high at 37.1% (Depkes, RI, 2015).

The prevalence of BBLR in Indonesia, especially in Riau Province of Low Birth Weight Babies (BBLR) is below 2% on average. In 2016 Baby BBLR was 0.7% increased compared to 0.1% in 2015. If viewed based on the Strategic Plan of the Ministry of Health of the Republic of Indonesia in 2015-2019, then the number of BBLR incidents in Riau Province is below the target set (<8%). Some kab / city there are Babies BBLRnya quite high among others: Siak Regency (1,8%), Dumai City (1,7%), Singingi Regency (1,2%) and Upper Rokan Regency and Bengkalis Regency each 1.1% (Dinkes Provinsi Riau, 2016).

Based on research conducted by Pramono (2011), with the title of the relationship of hemoglobin levels of maternity mothers to the weight of newborns

in islamic hospitals samarinda, shows that there is a significant relationship between the hemoglobin levels of the mother and the weight of the newborn (x^2 value = 4,551 > X^2 table = 3,841). The result of the calculation of Odds Ratio (OR) is 8.4 which means pregnant women with normal Hb levels have an 8.4 times chance of giving birth to a baby of normal weight compared to pregnant women who have abnormal hemoglobin levels.

Similarly, research conducted by Andria (2017), entitled Anemia Relations In Pregnant Women With Low Birth Weight Events at Rokan Hulu Regional General Hospital, showed that the incidence of anemia in pregnant women in Rokan Hulu Hospital in September – December 2016 was 47 (14.9%) and mothers who give birth to babies with BBLR are 21 (6.7%). Chi Square's analysis showed an anemia relationship in pregnant women with bblr events with a value of =0.000 or <0.05). The conclusion is that there is a link between anemia in pregnant women and the incidence of BBLR in Rokan Hulu Hospital.

In the preliminary study conducted on April 16, 2019 at UPT Puskesmas Gajah Mada Tembilihan in the register book in 2018 recorded from 526 normal maternity mothers gave birth to a low birth weight of 28(5%) Baby. Based on the data that has been obtained that there are several factors that affect it, namely hemoglobin levels in the blood in the mother.

Based on the above data, the authors are interested in taking the study with the title "The Effect of Maternity Mother Hemoglobin Levels On Newborn Weight in VK UPT Room. Puskesmas Gajah Mada Tembilihan Indragiri Hilir Regency In 2020"

MATERIAL AND METHODS

This type of research will be conducted using analytical research methods with Quasi Experimental research design with observational approach. This research was conducted in the VK Room of UPT Puskesmas Gajah Mada Tembilihan Indragiri Hilir Regency. The population in this study was 955 maternity mothers and 20 samples with sampling techniques using



Accidental Sampling. The study was conducted from February 3 to March 8, 2020. The study used interviews with mothers to fill in the maternal data on the checklist sheet and to check the hemoglobin levels of

maternity mothers and weigh the baby's weight at least 1 hour after birth. Then fill up. Data is distributed in narratives and tabulars using the Independent Statistical Test T-Test.

RESULT

a) Maternity Mother Hemoglobin Levels

Table 1
Frequency Distribution of Maternity Mother Hemoglobin Levels in VK UPT Room. Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency in 2020

No	Hemoglobin Levels	f	%
1	Anemia	12	60
2	No Anemia	8	40
Total		20	100

Based on table 1 found that the hemoglobin levels of maternity mothers in the VK Room UPT Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency are as large as 12 people (60%) and Not anemia as much as 8 (40%).

b) Newborn Weight Loss

Table 2
Frequency Distribution of Babies Born Weight in VK UPT Room. Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency in 2020

No	Birth weight	F	%
1	Normal birth weight	7	35
2	Low birth weight	13	65
Total		20	100

Based on table 2 obtained low birth weight results of 13 (65%) 7 (35%) of people and their normal birth weight people in VK Room UPT Puskesmas Gajah Mada Tembilahan Indragiri Hilit Regency Year 2020.

c) Effect of Hemoglobin Levels of Maternity Mothers Facing Newborn Weight

Table 3
Effect of Hemoglobin Levels of Maternity Mothers Facing Newborn Weight in VK UPT Room. Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency in 2020

No	Variabel	Mean	SD	Perbedaan		P Value
				Mean	SD	
1	Maternity mother hemoglobin levels	10.45 gr/dl	2.00	-2387.05	605.45	0.000
2	Baby's weight is born	2397.50 gr	606.21	gr		



Based on table 3 obtained the average hemoglobin level of maternity mothers is 10.45 gr/dl with a standard deviation of 2.00 and the average newborn weight of 2397.50 gr with a standard deviation of 606.21. Statistical test results obtained a value of $p=$

0.000 then it can be concluded that there is a significant influence of maternity mother hemoglobin levels on the weight of newborns in the VK Room UPT Puskesmas Gajah Mada Tembilahan Indragiri Hilir In 2020.

DISCUSSION

Based on research conducted in VK Room UPT Puskesmas Gajah Mada Indragiri Hilir Regency year 2020 obtained as many as 12 people (60%) maternity mothers with anemia and 8 People (40%) which is not anaemic as well as the result of a low birth weight of 13 people (65%) and Normal birth weight of 7 people (35%).

The results of this study are in line with research conducted by Harjanto (2011) entitled *The Relationship Between Anemia In Maternity Mothers With The Incidence of Low Birth Weight Babies in Panembahan Senopati Bantul Education Hospital*, obtained by 47 people (14.9%) mothers with anemia, and 268 people (85.1%) who do not have anemia.

Anemia can cause disturbances or barriers to the growth of body cells including brain cells, in pregnant women can increase miscarriage, premature birth, low birth weight, bleeding before and during childbirth can even result in death in the mother and her fetus (Tarwoto, 2016 in Andria 2017).

Therefore, it is expected for pregnant women to always check hemoglobin levels at least twice in the first trimester and the third trimester, and increase iron consumption from natural sources, especially animal food sources that are easily absorbed such as liver, meat, and fish. In addition, foods that contain a lot of vitamin C and vitamin A (fruits and vegetables) to aid the absorption of iron and help the process of the formation of Hb so

that if hb normal blood flow to the fetus will also be normal so as to prevent the onslance of low birth weight babies.

From the results of the statistical test Independent T-Test proves there is a significant Influence of Maternity Mother Hemoglobin Levels On Newborn Weight with a value of $p \text{ value} = 0.000 > 0.05$.

The results of this study have proven the existing theory that anemia in pregnant women will increase the risk of getting a low birth weight, the risk of bleeding before and during childbirth, can even lead to the death of the mother and her baby if the pregnant woman suffers from severe anemia. This is due to the lack of nutrient blood supply of oxygen in the placenta which will affect the function of the placenta to the fetus (Depkes RI, 2015).

The results of this study were also supported by research conducted by Andria (2017) on the *Relationship of Anemia In Pregnant Women With Low Birth Weight Events (BBLR) at Rokan Hulu Regional General Hospital*, concluding that anemia is significantly related to the increased incidence of BBLR. In addition, there was also research conducted by Harjanto (2011) in a study titled *The Relationship Between Anemia In Maternity Mothers With The Incidence of Low Birth Weight Babies in Panembahan Senopati Bantul Education Hospital*, concluding that anaemic mothers are at 4,176 times the risk of BBLR occurring compared to pregnant women without anemia.

CONCLUSION

There is an influence of maternity hemoglobin levels on newborn weight in the

VK UPT Room. Puskesmas Gajah Mada Tembilahan Indragiri Hilir Regency In 2020.



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