Journal Of Health Science Community
ISSN: 2714 7789 (print) – 2745 3561 (online)
DOI : https://doi.org/10.30994/jhsc.v5i3.258
Vol. 5 No. 3 February 2025 , Pages 175-182

Analysis Factor Risk Heavy Baby Low Birth Based On Anemia In Term Pregnancy At Harapan Clinic, West Jakarta

Retno Palupi Yonni Siwi [1] * , Elisha Handsome [2]
[1.2] Program Studies S1 Midwifery Faculty Nursing and Midwifery STRADA University Indonesia
***Corresponding author :** palupi@strada.ac.id

ABSTRACT

Based on data profile health DKI Jakarta on year 2020 found 985 LBW in DKI Jakarta. The high incidence of LBW is caused by several factors, one of which is anemia during pregnancy. This study aims to determine the correlation between anemia and the incidence of LBW in term pregnancies at the Harapan Clinic, West Jakarta. This study used *a retrospective cohort study design* . Samples in study This as much as 72 Mother give birth to in Clinic Hope West Jakarta in 2022 with *total sampling technique* . This study uses secondary data Which taken from book register Mother pregnant in Clinic Hope Jakarta West Java period January – December 2022. Data analysis in this study used the *chi square test.* The results of the study showed that most respondents experienced anemia during pregnancy, as many as 43 respondents or 59.7%, with most respondents giving birth to babies who were not LBW, as many as 48 babies or 66.7%. There were 33.3% of pregnant women with anemia giving birth to LBW babies. Analysis using the Chi-Square statistical test obtained a result of p 0.000 (p value <0.05), meaning that there was connection Which significant between anemia pregnancy with incident LBW at Harapan Clinic, West Jakarta. Anemia during pregnancy can cause adverse effects on the mother and the baby she will give birth to. Anemia can reduce the oxygen supply to the mother's metabolism because hemoglobin functions to bind oxygen. The hope of this research for the community is to increase knowledge about the incidence of LBW and anemia during pregnancy.

Keywords: Anemia, Heavy Baby Born Low (LBW), Pregnancy Aterm

INTRODUCTION

Anemia is a low level of Hb in the blood caused by a lack of nutrients needed for the formation of Hb. Hemoglobin (Hb) levels Which not enough in pregnancy can increase risk death maternal mortality, prematurity rates, increased perinatal mortality rates and low birth weights. baby born low (LBW) (Trisia et et al., 2023). Hemoglobin (Hb) Which less on pregnancy until labor is problem health Which experienced by all women in the world, especially in developing countries, such as Indonesia. Based on data profile health DKI Jakarta on year 2020 found 985

LBW in DKI Jakarta. The high incidence of LBW is caused by several factors, one of which is anemia during pregnancy.

A preliminary study conducted by researchers at the Harapan Clinic, Tambora, West Jakarta in January 2023 using the observation method through the register book there is 85 Mother pregnant Which visit, And as much as 56 (47.6%) Mother pregnant suffer anemia with Hb < 11 gr%. Amount labor in Clinic Hope in 2022, there were 72 deliveries, of which 23.6% (17 newborns) were born with LBW. It is known from the register book that all 17 LBW had a history of anemia in pregnancy in their mothers. One of the factors causing anemia at

Harapan Clinic is the lack of compliance of pregnant women in consuming blood-boosting tablets (TTD). At Harapan Clinic give education And Signature as effort prevention anemia on pregnant women. Anemia is considered a risk factor and can cause complications that threaten the lives of the mother and fetus (Li et al., 2018). Bleeding during antepartum and postpartum is often found in pregnant women with anemia (Rukiyah, AY, & Yulianti, 2019). The risk of postpartum hemorrhage increases in women who give birth with severe anemia (Mahmud et al., 2020).

Study Which done by Beautiful (2021) state there is connection between anemia and the incidence of LBW at Dustira Hospital, Cimahi City. The study was conducted by Mitao year 2015 in Tanzania North state that factor related to the incidence of LBW are maternal height, time of first *antenatal care* (ANC) visit, number of ANC visits, iron supplementation, calcium supplements, maternal education, all diseases during pregnancy, and hypertension. A study in India in 2016 stated that anemia in pregnant women is associated with an increased risk of postpartum hemorrhage, low birth weight, and perinatal death (Aditianti & Djaiman, 2020). Research by Aditianti and Sri (2020) with a meta-analysis using PRISMA and with *random effect statistics* stated that there was an effect of anemia in pregnant women with the incidence of LBW.

In pregnancy, anemia can have a negative impact on maternal and infant morbidity and mortality. The impact of anemia on the fetus includes *Intra Uterine Growth Retardation* (IUGR), premature birth, babies with congenital defects, low birth weight (LBW) and increased risk of fetal death in the womb. The impact of anemia on pregnant women is shortness of breath, fatigue, palpitations, hypertension, sleep disorders, preeclampsia, abortion and increased risk of bleeding before and during childbirth even until on maternal death (Asmin et al., 2021).

METHOD

This study used a *retrospective cohort study design* . The sample in this study was 72 mothers who gave birth at the Harapan Clinic, West Jakarta in 2022. Which determined with *total sampling* . Location specifically in Jl. Map West No. 60, Ward Kalideres, Subdistrict Kalideres, City Jakarta West. Study This study uses secondary data taken from the pregnant women's registration book at the Harapan Clinic, West Jakarta for the period January - December 2022. Data analysis in this study used the *chi square test* with α 0.05.

RESULTS

Characteristics Respondents

Age		
Age	**Frequency**	**Percentage (%)**
20 years	3	4.2
20-35 years	59	81.9
35 years	10	13.9
Total	72	100
Education		
Education	**Frequency**	**Percentage (%)**
SENIOR HIGH SCHOOL	50	69.5
D3	7	9.7
S1	15	20.8
Total	72	100
Work		
Work	**Frequency**	**Percentage (%)**
housewife	47	65.3
Private employees	13	18.1
civil servant	6	8.3
Trader	6	8.3
Total	72	100
Pregnancy		
pregnancy	**Frequency**	**Percentage (%)**
Primigravida	30	41.7
Multigravida	42	58.3
Total	72	100

Based on the table above, it is known that almost all (81.9%) respondents are aged 20-35 years, which means they are not included in the high risk. While most (69.5%) have a high school education with a job, most (65.3%) mothers gave birth at the Harapan Clinic year 2022 as Mother House ladder. If seen part big (58.3%) Mother giving birth in Clinic Hope Jakarta West Year 2022 first time pregnant.

Characteristics Variables

Table 5. Characteristics Respondents Based on Anemia

Anemia		
Anemia	**Frequency**	**Percentage (%)**
No Anemia	29	40.3
Anemia	43	59.7
Total	72	100
LBW		
LBW	**Frequency**	**Percentage (%)**
No LBW	48	66.7
LBW	24	33.3
Total	72	100

Based on the secondary data identified, it was found that most (59.7%) of respondents experienced pregnancy anemia with hemoglobin levels <11 gr/dl. Meanwhile, it is known that most (66.7%) Respondent give birth to baby Which No LBW with heavy birth weight >

2500 grams.

Tabulation Cross Between Variables

Table Cross Tabulation Between Anemia and BBLR

Variables	**LBW**				**Total**	
	No LBW		LBW			
Anemia	N	%	N	%	N	%
No Anemia	29	40.3	0	0	29	40.3
Anemia	19	26.4	24	33.33	43	59.7
Total	48	66.7	24	33.3	72	100

Based on data from the West Jakarta Harapan Clinic, out of 72 mothers giving birth, it was found that 40.3% Respondent Which No anemia moment pregnant give birth to baby who are not LBW. As many as 33.3% of respondents who experienced pregnancy anemia gave birth to babies with LBW. There were 26.4% of respondents who experienced pregnancy anemia who gave birth to babies who were not LBW.

Results Test Statistics

Table Results Test Statistics Anemia Relationship with LBW

Chi-Square Tests	**Value**	**Asymp. Sig (2- sided)**
Pearson Chi- Square	24.279 [a]	0.000

Data study This analyzed with help SPSS Statistics 22, test statistics using the Chi-Square test and the results obtained were p 0.000. Based on the results of the statistical test obtained connection Which significant Because p value < 0.05. So that,
There is a significant relationship between anemia in pregnancy and the incidence of LBW at the Harapan Clinic, West Jakarta.

DISCUSSION

Pregnancy Anemia

Based on results study, obtained that part big (59.7%) respondents experienced pregnancy anemia with hemoglobin levels <11 gr/dl. Factors that affect hemoglobin levels in pregnant women are direct factors including consumption tablet Fe, status nutrition Mother pregnant, disease infection, And bleeding. While indirect factors include ANC frequency, age (Masthura et al., 2021). According to Chandra et al (Sasono et et al., 2021), level Education also greatly influences the ability to receive nutritional information, determining or influencing how easily someone receives knowledge, the higher the education, the easier it is for someone to receive nutritional information.

The final factor is parity, which also affects anemia in pregnancy because it requires additional iron to increase the number of red blood cells in the mother and to form cell blood red fetus, If supply backup Fe minimum then each pregnancy will drain the body's Fe reserves and eventually cause anemia in subsequent pregnancies, the more often a woman experiences pregnancy and childbirth, the more iron she will lose and the more anemic she will become, this is three times the risk in the third pregnancy and above for the mother (Sasono et al., 2021).

Based on the results of the literature review analysis that have been presented and the results obtained analysis univariate show that amount Mother in RSKD Mother And Child Siti Fatimah Makassar In 2017, out of 114 respondents, 59 pregnant women (51.8%) were anemic. Anemia in pregnant women is caused by several things, including: other Because lack substance nutrition in food Which consumed And blood thinning or hemodilution occurs. Anemia that often occurs is iron deficiency. on Mother can influence growth And

development fetus/baby during pregnancy and afterwards. Anemia is one of the factors that can cause intrauterine growth disorders so that this factor becomes Wrong One reason death fetus, LBW And growth abnormalities (Sasono et al., 2021).

Anemia on Respondent due to by various factor, there is Respondent who are pregnant at a high-risk age, namely <20 years and >35 years. Based on the research results of Senja Atika Sari, et al. (2021), it was stated that there is a relationship between age and the incidence of anemia in pregnant women, where pregnant women under the age of 20 years and over the age of 35 years have a risk of 3.921 times greater anemia in her pregnancy compared with Mother pregnant at the age of 20 to 35 years. Mothers who are pregnant at the age of 35 years have entered the early stages of the degenerative phase, so that body function is not optimal and experiences various problem health. Pregnancy at the age of under 20 as well as over 35 years is a pregnancy that has a risk of anemia (Masthura et al., 2021).

LBW

The results of the study showed that of the 72 respondents, the majority (66.7%) of respondents give birth to baby Which No LBW with heavy body born > 2500

grams. While 33.3% of respondents gave birth to LBW babies. Most respondents are multigravida. The results of this study are similar to the results of Veronica's study (2015) which was conducted at 4 RSUP Prof. DR. Kandou Manado showed that the incidence of LBW with risky parity was 47.3% while in mothers with non-risk parity it was 61.11%.

Based on research data, pregnant women with high-risk ages were found. Research results This similar with results study Eny (2016) Which do research at Tawangrejo Health Center, Madiun City. The results of Eny's research stated that the incidence of LBW in pregnant women with a risky age was 61.5% and in pregnant women with a non-risk age was 30%. Other similar studies include the results of Marlenywati's research (2015) on the incidence of LBW in pregnant women with an age at risk as big as 33.3% And on Mother pregnant with age No at risk by 8.6%.

At the age of <20 years, the reproductive organs are not yet functioning perfectly, so that there is competition fight over nutrition for Mother Which Still in progress development with the fetus. At the age of 35 years, the maturity of the reproductive organs decreases. This can result in health problems during childbirth and the risk of LBW (Sasono et al., 2021).

Connection between Anemia with LBW

Based on the research results, it is known that there is a relationship between anemia in pregnancy and the incidence of LBW with a p value = 0.000. Based on the research results of Syifaurraahmah, et al. (2016) with the title Relationship between Anemia and the Incidence of LBW Baby Heavy Born Low on pregnancy aterm in HOSPITAL Ahmad Darwis Suliki, obtained results analysis bivariate with test Chi square obtained mark $p = 0.047$ ($p \leq 0.05$) with a prevalence ratio of 1.7. It was concluded that there was a significant relationship between anemia in term pregnant women and low birth weight babies at Suliki Regional Hospital, Lima Puluh Kota Regency.

Anemia in pregnancy tends to increase the incidence of LBW. This can occur because anemia is a direct cause of prematurity rates and fetal growth retardation. Another mechanism that contributes to the incidence of LBW is immune depression in anemia sufferers which increases morbidity due to infections, such as urinary tract infections (Ajeng Maharani Pratiwi, 2018).

Hemoglobin is a component of red blood cells that functions to distribute oxygen throughout the body, if Hb is lacking, body tissues lack oxygen. Oxygen is needed by the body to fuel the metabolic process. Iron is a raw material for making red blood cells. Pregnant women have a high metabolic rate, for example to create fetal body tissue, form it into organs and also to produce energy so that pregnant women can continue their normal daily activities (Asiyah et al., 2017). The results of the study showed that anemia in

pregnancy have an impact on incident BBLR according to with the above theory that pregnant women who are anemic tend to give birth to LBW babies. Anemia in pregnancy has a negative effect on the antenatal, intranatal, especially neonatal period which can cause LBW.

The results of this study are in line with research conducted by Tazkiah (2013) entitled Epidemiological Determinants of LBW Incidence in Malaria Endemic Areas in Regency Banjar Province Kalimantan South. Results study

obtained that factor Mother Which relate with LBW is: age Mother (OR 2.825) nutritional status (OR 2.583), family income (OR2.275), knowledge of ANC (OR 3.238), ANC visits (OR 5.673), anemia (OR2.739). Furthermore, multivariate analysis was carried out and the results showed that the determinants of LBW incidence were ANC visits, maternal age and anemia. When pregnant, a woman requires more nutritional intake considering that in addition to the body's nutritional needs, pregnant women must provide sufficient nutrition for the fetus (SamiatulMilah, 2018). Anemia nutritional status before and during pregnancy can affect growth fetus Which currently conceived. Lack nutrition In this case, anemia in pregnant women can affect the growth process of the fetus, causing... miscarriage, baby born dead, disabled default And anemia on baby, born with low birth weight. Anemia during pregnancy can have adverse effects on both the mother and the baby she is about to give birth to. Anemia can reduce the oxygen supply to the mother's metabolism because hemoglobin functions to bind oxygen (Prawirohardjo, 2020).

CONCLUSION

Based on the analysis of the research results entitled "Analysis of Risk Factors for Infant Weight Born Low Based on Anemia On Pregnancy Aterm In Clinic Harapan Jakarta Barat", it can be concluded that most respondents experienced pregnancy anemia with hemoglobin levels <11 gr/dl, namely 43 respondents or 59.7% with most respondents who gave birth to non-LBW babies with birth weights> 2500 grams, namely 48 babies or 66.7%. Based on the results of statistical tests with the help of SPSS, the results obtained were p 0.000 (p value <0.05), meaning that there is a significant relationship between pregnancy anemia and the incidence of LBW at the Harapan Clinic, West Jakarta.

Mother pregnant with anemia tend experience birth premature, easy become ill consequence Power stand body weak, And anemia Also can cause birth of babies with Low Birth Weight (LBW). The hope of this research for the community is to increase knowledge about the incidence of LBW and anemia during pregnancy.

REFERENCE

Aditianti, A., & Djaiman, SPH (2020). Meta Analysis: The Effect of Anemia in Pregnant Women on Low Birth Weight. Journal of Reproductive Health, 11(2), 163–177.

Ajeng Maharani Pratiwi. (2018). The Relationship between Anemia in Pregnant Women and the Incidence of Low Birth Weight Babies in Banjarnegara Regency. Doctoral Dissertation, Aisyiyah University of Yogyakarta, 120(1), 0–22.

Asia, S., Estuning Rahayu, D., & Dwi Novita Isnaeni, W. (2017). Comparison of the Effects of Supplementation of Blood Supplement Tablets with and without Vitamin C on Hemoglobin Levels in Pregnant Women with Gestational Age of 16-32 Weeks in Keniten Village, Mojo District, Kediri Regency. Journal of Health Sciences, 3(1), 76–81.

Asmin, E., Salulinggi, A., Titaley, CR, & Bension, J. (2021). The Relationship Between Knowledge and Compliance of Pregnant Women Consuming Iron Supplement Tablets With Incident Anemia In Subdistrict Leitimur South And Bay Ambon. Journal of Community Health Epidemiology, 6(1), 229–236.

Astuti, RY, & Dewi Ertiana. (2018). Anemia in Pregnancy. CV Pustaka Abadi.

Cutland, C. L., Lackritz, E. M., Mallett-Moore, T., Bardaji, A., Chandrasekaran, R., Lahariya, C., Nisar, M. I., Tapia, MD, Pathirana, J., Kochhar, S., & Munoz,

FM (2017). *Low Birth Weight: Case Definition & Guidelines For Data Collection, Analysis, And Presentation Of Maternal Immunization Safety Data. Vaccine , 35* (48), 6492–6500.

Jakarta Health Office, 2020. (2020). 2020 Annual Report on Public Health of the Jakarta Provincial Health Office iv.

Eve Pratami. (2019). *Evidence Based* In Care Midwifery. EGC.

Dear, F. I. (2020). Compliance Consumption Substance Iron (Fe) To Incident Anemia in Pregnant Women. *Window of Health:* Health Journal, *3* (4), 336–342.

Ministry of Health. (2020). Health Profile of DKI Jakarta Province (Vol. 21, Issue 1). Ministry of Health of the Republic of Indonesia. (2020). Guidelines Antenatal, Childbirth, Postpartum, and Postpartum Services Baby

New Born In Era Adaptation New.

Lee, L., Hey, Y., Zhu, W., Wang, C., Su, R., Feng, H., & Which, H. (2018). *A*

Retrospective Cohort Study of Risk Factors and Pregnancy Outcomes in Chinese Pregnant Women .

Mahmud, A., Nurdiana, N., & Ulandari, R. (2020). Comprehensive Midwifery Care for Mrs. "S" with Mild Anemia at the Pangale Health Center, Central Mamuju Regency. Malakbi Midwifery Journal, 1(1), 29.

Masthura, S., Desreza, N., & Nurhalita, S. (2021). Factors Affecting Hemoglobin (Hb)

Levels in Pregnant Women in the Third Trimester in Southwest Aceh Regency. *Idea Nursing Journal* , XII(3), 36–45.

Pitriani, T., Nurvinanda, R., & Lestari, IP (2023). Factors Related to with Increasing Incident Baby with Heavy Body Low Birth Rate (LBW). Journal of Professional Nursing Research, 5(4), 1597–1608.

Queen, H. (2021). Care Nursing On Baby Heavy Body Born Low With Nursing Problems Risk of Infection in the NICU Room of Dr. Harjono Ponorogo Hospital. 53(9), 1689–1699.

Prawirohardjo, sarwono. (2016). Science Midwifery (pp. 4–5).

Rukiyah, AY, & Yulianti, L. (2019). Midwifery Care 4 (Pathology) (J. : TEAM (ed.)).

SamiatulMilah, A. (2018). Overview of Pregnant Women's Knowledge About Nutritional Intake in Pawindan Village, Ciamis District, Ciamis Regency. Media Information, *14* (2), 95–109.

Sasono, HA, Husna, I., Zulfian, Z., & Mulyani, W. (2021). Relationship between Education Level and the Incidence of Anemia in Pregnant Women in Several Regions of Indonesia. Jurnal Medika Malahayati, 5(1), 59–66.

Dear, I. (2017). Knowledge Mother On Management LBW In HOSPITAL Dr.

Soekarno City Tasikmalaya. Gaster, 15(1), 53.

Thristy, I., Ipaljri, A., & Sihaloho, O. (2021). The Relationship Between Anemia in Pregnancy and Low Birth Weight (LBW) at Budi Kemulia Hospital City Batam. Zone Medical: Program Studies Education Batam University Doctors, 11(3), 116–123.

Trisia, R., Aisyah, S., & Handayani, S. (2023). The Relationship between Hypertension in Pregnancy, Nutritional Status and Anemia of Pregnant Women in the Third Trimester with LBW. Aisyiyah Medika Journal, *8* (1), 136–146.

Vanessa, Nisrina Nuri, Irianton, Aritonang, Rina, & Octavia. (2019). Compliance of Consumption of Iron Supplement Tablets in Pregnant Women with Anemia in Kulon Progo and Bantul Districts.

Revelation, W., Dear, N. A., & Ramadan, M. (2021). Connection Age Mother, Parity and Hemoglobin Levels with the Incidence of Low Birth Weight (LBW) Babies at Siti Fatimah Regional Hospital, South Sumatra Province in 2020. Sriwijaya Nursing Journal, 8(2), 1–11.

WHO. (2018). *Safe Motherhood and Reproductive Health Right Act, 2018* .

WHO. (2021). *Word Health Organization. Maternal Mortality Rates In The United States,* 2020. *National Center Health Statistics* , *3* , 1.