Relations Low Birth Weight (LBW) With Height Body For Toddlers Age 36-48 Months In The Kauman Tulungagung Health Center In 2019

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ABSTRACT

Low Birth Weight (LBW) is the weight of babies born less than 2500 grams, this can affect growth, especially in subsequent toddler height. Abnormal height growth in infants is not only influenced by low birth weight factors but there are still many other factors that affect, but it is thought to have something to do with low birth weight. The purpose of this study was to determine the relationship between Low Birth Weight (LBW) with Height body for Toddlers Age 36-48 months in the KaumanTulungagung Health Center in 2019. The design of this study was observational analytic by method retrospective. The study was conducted on June 14th-21st, 2019. The population was all infants born to LBW aged 36-48 months in the Kauman Health Center Work Area using a total sampling technique with a total of 32 respondents. Retrieval of data using questionnaires and measurements of height. Data analyzed with the test of correlation statistical spearman rho. The results were obtained from 29 respondents (100%) with Low Birth Weight (LBW), most respondents had normal height, as many as 19 respondents (65.5%), while from 3 respondents (100%) with Very Low Birth Weight (LBWR)) there are almost half of the respondents have a normal height that is as much as 1 respondent (33.3%). The results of the correlation test Spearman rho obtained values $\rho = 0.204$ and $\alpha = 0.05$ which means the value ($\rho \geq 0.05$) so that Ho is accepted meaning that there is no LBW relationship with the height of toddlers aged 36-48 months. It was concluded that body weight at birth did not have a significant impact on the height of toddlers aged 36-48 months, this is because mothers are able to provide balanced nutrition to help their children grow. For this reason, it is necessary to educate mothers about balanced nutrition for toddlers, so that babies born with Low Birth Weight (LBW) can grow normally as they age.

INTRODUCTION

Health is very important for human life, because this will affect the health of a nation. One of the health indicators of a nation is still being seen from the high or low infant mortality rate. One of the causes of the high Infant Mortality Rate (IMR) is Low Birth Weight (LBW) (MOH, 2015).

Low Birth Weight (LBW) is the weight of babies born less than 2500 grams. LBW is caused by several factors, among others, the mother's knowledge about fulfilling nutrition when she is pregnant or prematurely born is a baby born less than 37 weeks, the gestational age of the mother at age <20 years> 35 years. Premature babies usually often experience health problems until death occurs. LBW generally will experience a higher risk and those who survive in the first five years will have a higher risk of experiencing growth disorders (Supriasa, 2012)

Growth occurs simultaneously with development, growth is an increase in the size and number of cells and intracellular tissue means increasing physical size and partial or whole body structure

so that it can be measured in units of length and weight. On growth is more emphasized on increasing physical size becomes larger or more mature shape, such as increasing the size of body weight, height, and head circumference (Whaley and Wong 2009)

Height is a picture of the state of skeletal growth. Profit indicator height is the measurement objective and repeatable; the tool can be made, inexpensive and easy to carry, is a good indicator for physical disorders in the past (stunting) (Soetjiningsih, 2012)

According to the WHO in 2015 in the world there are LBW is 15.5%, which means that around 20.6 million babies are born every year, 96.5% of them in developing countries. Low Birth Weight (LBW) is one of the main problems in developing countries. In the same year, the Indonesian Ministry of Health in 2015 found that the prevalence of Low Birth Weight (LBW) was estimated at 15% of all births in the world with a limit of 3.3% to 38% and was more common in developing countries or with socio- low economy. According to the IDHS, (2015) that LBW rates in Indonesia appear to vary, nationally based on further analysis SDKI LBW figures are around 7.5% in 2015, while births to LBW babies in Indonesia are still relatively high with LBW percentage in 2014 which is 11 , 1%.

Based on the number of births weighed, the LBW percentage in East Java increased from 2.79% to 3.32% in 2015. LBW is the leading cause of neonatal deaths in East Java, 38.03%. Babies born with low birth weight have a high risk of mortality and morbidity during growth (East Java Provincial Health Office, 2015).

Data obtained from the Tulungagung District Health Office in 2015 obtained the number of LBW events by 2.67% (464 people) and IMR that occurred because of LBW as many as 24 people. In Tulungagung Regency the incidence of LBW is still high for a period of 3 years in a row. The results of a preliminary study conducted by researchers there were 32 toddlers with Low Birth Weight in 2015 at Kauman Health Center; the number of LBW is due to the baby being born not yet months or prematurely (less than 37 weeks of pregnancy).

Low birth weight has a severe impact on growth, especially on the height of the next toddler. Babies born with LBW will be at risk of stunting. The high number of LBW is estimated to be the cause of the high incidence of stunting in Indonesia. As explained by Nadiyah and Nasution, (2014) that LBW is the most dominant risk factor for stunting in infants. Stunting is a condition where a person's height is much shorter than the height of a toddler his age. Short(stunting toddlers) can be known if a toddler has measured his length or height, then compared to the standard and the results are below normal. Stunting (short body) describes the condition of under-nutrition that has been running for a long time and requires time for toddlers to develop and recover. Short toddlers (stunting) can be seen growth disturbance after the age of 2 years (Gibney, 2009).

Efforts that can be made to prevent LBW events through health education about fetal growth and development, check the pregnancy periodically at least 4 times during pregnancy, maternal age (20-34 years), provide good supplements to maintain nutritional status during pregnancy. Furthermore, what can be done to reduce the incidence of stunting by fulfilling nutrition during pregnancy, giving exclusive breastfeeding for 6 months, making sure the nutritional intake of 6 months and above is fulfilled with MP-ASI, monitoring its growth, and maintaining environmental cleanliness, including preventing birth of LBW.

Based on the description above, the researchers conducted a study of the relationship of Low Birth Weight (LBW) with the height of toddlers aged 36-48 months in the Work Area of KaumanTulungagung Health Center.

RESEARCH METHODS

This study uses aapproachretrospectivewith. The population in this study were all children born to LBW aged 36-48 months in the Kauman Health Center working area of 32 children.

The sample in this study were all children born to LBW with ages 36-48 months in the Kauman Health Center Work Area that met the inclusion and exclusion criteria.

Data collection on Low Birth Weight (LBW) using questionnaires and KMS books while data collection for toddler height using z-scores based on Anthropometry Nutrition according to TB / U with microtoice.

The study was conducted on June 14-21, 2019, after the data were analyzed using the Correlation statistical test Spearman Rho.

Conclusion if $\rho \leq$ of α (0.05) then Ho is rejected, it means that there is a Low Birth Weight (LBW) Relationship with Toddler Body Height 36-48 Months in the Work Area of KaumanTulungagung Health Center.

RESULTS

A. low birth weight (LBW) Toddler

Table 1: Distribution of the frequency of low birth weight (LBW) in PuskesmasKaumanTulungagung 2019

No	LBW	Frequency	Percentage
1	LBW	29	90,6%
2	VLBW	3	9,4%
3	ELBW	0	0%
Total		**32**	**100%**

Based on Table 1 it can be explained from 32 respondents, it was found that almost all of the respondents had a history of Low Birth Weight (LBW) of 29 respondents (90.6%)

B. Toddler Body Height of Toddler

Table 2 : DistributionHigh Height (TB) In the Work Area of KaumanTulungagung Health Center in 2019

No.	Body Height	Frequency	Percentage
1	High	0	0%
2	Normal	20	62,5%
3	Short	9	28,1%
4	Very Short	3	9,4%
Total		**32**	**100%**

Based on Table 2, it can be explained from 32 respondents, the results obtained that the majority of respondents have a normal height of 20 respondents (62.5%)

C. Cross Tabulation of Low Birth Weight (LBW) With Height Toddler Age Age 36-48 Months in the Work Area of Kauman Health Center Tulungagung

Table 3: Cross Tabulation of Low Birth Weight (LBW) With Height (TB) Toddlers Age 36-48 Months in KaumanPuskesmasTulungagung Health Area 2019

	HeightHeight (TB)							
							Total	
	N		P		SP			
	F	%	F	%	F	%	F	%
LBW	19	65,5%	8	27,6%	2	6,9%	29	100%
VLBW	1	33,3%	1	33,3%	1	33,3%	3	100%

Table 3 can be explained that of the 29 respondents (100%) with Low Birth Weight (LBW) most respondents have a normal height of 19 respondents (65.5%) while of 3 respondents (100%) with Very Low Birth Weight (BBLSR) almost half of respondents have normal height of 1 respondent (33.3%)

The results of data analysis using the correlation test spearman rho n signifikan significance value (ρ) = 0.204 where the value is greater than $\alpha = 0.05$ then Ho is accepted, so it is said that There Is No Relationship of Low Birth Weight (LBW) With Height (TB) Toddlers Age 36-48 Months in the Region Work of KaumanTulungagung Health Center in 2019

DISCUSSION

A. Low Birth Weight (LBW) Toddler in the Work Area of KaumanTulungagung Health Center

Based on the results of the study in table 1 of 32 respondents it can be explained that almost all of the respondents had Low Birth Weight of 29 respondents (90.6%) and some Small respondents have Very Low Birth Weight (BBLSR) of 3 respondents (9.4%).

According to IkaPantiawai (2010) babies born with LBW can be grouped into three namely Low Birth Weight (LBW) are babies born with weight <2500 (2500-1500) grams, babies with birth weight 1500-1000 grams are Birth Weight Very Low (BBLSR), and babies born with birth weight <1000 grams are Extreme Low Birth Weight (BBLER). There are several factors that affect Low Birth Weight (LBW), namely maternal age, parity status, malnutrition during pregnancy, pregnancy spacing, lifestyle.

Based on the cross-tabulation of maternal age with LBW birth that out of 32 respondents all mothers aged <20 years were 2 respondents (100%) and maternal age> 35 years as many as 3 respondents (100%) could give birth to children with Low Birth Weight criteria (LBW). According to Bartini (2012) the optimal reproductive age for a mother is 20-35 years. At this age the uterus is ready for pregnancy, the mother is mentally ripe, and is able to care for the baby and herself. According to researchers this is not in accordance with the above theory, because there are still many women who are pregnant less than 20 years and more than 35 years. At the age of less than 20 years mothers can be at high risk of giving birth to LBW because reproductive function has not yet developed. And also for mothers over 35 years of age it is not recommended to give birth because it can have an impact on maternal health and fetal growth. If the mother knows the safest age for childbirth and conceives, the mother may not be at risk of giving birth to a child with LBW.

Based on the cross tabulation of parity status with LBW events it can be explained that parity status ≥ 3 can give birth to children with the criteria of Low Birth Weight (LBW) of 2 respondents (100%). According to IkaPantiawai (2010) Parity is the number of children born to someone whether born alive or stillborn. Based on the facts and theories above, the researcher believes that there are still many mothers who have given birth with a third or more parity. because mothers who often give birth have a risk of anemia in subsequent pregnancies if they do not pay attention to the

needs of their nurses because during pregnancy the nutrients will be divided for the mother and the fetus it contains. This causes growth disturbance in the fetus and results in LBW birth.

Based on the cross tabulation of pregnancy distance with LBW birth it can be explained that the birth interval ≤ 2 years can give birth to children with the criteria of Low Birth Weight (LBW) of 14 respondents (93.3%). According to Iskandar (2012) Distance of pregnancy less than 2 years can lead to poor fetal growth, prolonged labor and bleeding at the time of delivery because the condition of the uterus has not recovered properly. The results of this study are in accordance with thetheory above that the distance of pregnancy 2 years has a greater risk of giving birth to a LBW child compared to mothers who have a birth distance> 2 years, that is because the distance of the pregnancy is too close causing the mother to have a short time to restore the condition of her uterus so that she can return to the previous condition. Pregnant women who are too close are at risk of developing anemia in pregnancy. As for other factors thatinfluence such as lifestyle, not using contraception and the mother does not conduct routine checks.

B. Toddler Body Height in the Work Area of KaumanTulungagung Health Center

Based on the results of the study in table 2 can be explained from 32 respondents, the results obtained that most respondents have normal height as many as 20 respondents (62.5%), almost half of respondents have a short height of 9 respondents (28.1%), while a small proportion of respondents had a short bandan height of 3 respondents (9.4%).

According to Supriasa, (2012) Height is an anthropometric measure that describes skeletal growth. Under normal circumstances, height grows with age.

One of the factors that influence height is the work of parents where adequate family income will support the growth of children because parents can provide all the basic needs of children. Good socio-economic conditions will support the fulfillment of children's nutritional life. Working parents will reduce the time to play a role in the growth of their children. Especially mothers who have the main task of caring for their children, working mothers will hand over the care of their children to others who do not necessarily have knowledge about the care of large children, so that it can affect the child's growth and development (Soetjiningsih, 2012).

Based on the facts and theories above, researchers argue that height in infants aged 36-48 months under normal circumstances can grow with age. In this study, most respondents have normal height because parents are able to provide balanced nutritional needs where balanced nutrition can increase a child's growth. Supported by cross tabulation of the work of mothers with height that almost all mothers working as entrepreneurs have toddlers with normal height of 6 respondents (85.7%). Where working mothers are able to provide balanced nutrition and the child's needs well. Even though working mothers do not take care of their children completely, mothers also monitor the growth of their children

C. . Low Birth Weight (BBLR) Relationships with Height in Work Areas KaumanTulungagung Health Center

Based on the cross tabulation 3 it can be concluded that of 29 respondents (100%) with Low Birth Weight (LBW) most respondents had normal height of 19 respondents (65.5%) while of the 3 respondents (100%) with Very Low Birth Weight (LBW) almost half of respondents had normal height of 1 respondent (33.3%). The results of the analysis using thecorrelation statistical test Spearman rho obtained p-value 0.204> α = 0.05, so H0 is accepted, which means there is no relationship of Low Birth Weight (LBW) with the height of toddlers aged 36-48 months.

One of the factors that influence height growth is Low Birth Weight (LBW) Babies born with Low Birth Weight (LBW) will be at risk of experiencing growth problems (Soetjiningsih, 2012).

The results of this study are not in accordance with the above theory, although toddlers born with Low Birth Weight (LBW) are smaller than babies born normally with concomitant increase in age of toddlers born LBW able to grow especially in normal height like toddlers born normally. In contrast to what was done by researchers in the Kaumanpuskesmas work area where of the 29 respondents (100%) of toddlers born with Low Birth Weight (LBW) most respondents had normal

height as many as 19 respondents (65.5%). With p = 0.204> α 0.05, H0 was accepted there was no relationship between Low Birth Weight with height of toddlers aged 36-48 months. This is supported by the mother's habit of being able to provide sufficient nutrition so that the child's nutrition can be fulfilled. So the child can grow optimally with age.

Based on interviews with mothers and measurements of height in the work area of the Kauman Health Center, that of the 32 respondents there were no births with Low Birth Weight (BBLR) with physicalabnormalities / disabilities. Most babies born with LBW have normal height.

Low Birth Weight has a heavy impact on growth especially the height of the next toddler. Babies born with LBW will be at risk of stunting. Stunting is a condition where the height of a toddler is much shorter than a toddler his age(Nadiyah and Nasution, 2014).

The results of the study are not in accordance with the above theory, infants born with LBW do not affect the height of the next body. Like toddlers born in LBW in the Kauman Health Center working area, they grow normally like toddlers born normally because there are no toddlers born with LBW with physical abnormalities or disabilities. In contrast to toddlers born with LBW, but having a physical disorder or disability will experience growth disorders later, such as shorter height or stunting than toddlers born with LBW without physical abnormalities or disabilities.

This can be seen from the cross tabulation between parental education and toddler height where out of 32 respondents who had a high school education last year were 8 respondents (100%). One of the factors that influence height growth is family, especially parents' education. Parental education is an important factor for children's growth. Good education can receive information from outside, especially on how to take good care of children, how to take care of children's health, educate them, etc. (Soetjiningsih, 2012)

The results of the research and the facts above there are a match between the facts and the results of research that have been carried out that higher maternal education is more easy to receive information from outside. Mothers who have a better level of knowledge are more likely to apply their knowledge in caring for their children, in providing food with nutrients that are appropriate to the nutrients needed so toddlers do not experience lack of food intake and experience normal growth as well.

This study is supported by previous research by Amaliah, 2016 health ecology journal Vol 15. That there is no relationship of Low Birth Weight (LBW) with the growth and development of children aged 6-23 months. To optimize LBW and prevent adverse effects in the future, the most important thing is to provide adequate nutrition to promote growth. In addition to energy, protein is a driving force for growth and brain development, iron supplementation can also optimize growth and development.

This study agrees with the above theory, although Low Birth Weight (LBW) with balanced nutrition at birth can affect height growth in subsequent toddlers because height can grow with age. Providing enough energy, protein, and iron for the growth of children in the future.

The results of this study can be concluded, that body weight at birth does not have a significant impact on growth, especially height in infants born with Low Birth Weight (LBW) at the age of 36-48 months because height grows along with age. Height growth can be measured every month so that it can be monitored to what extent growth. Especially in infants less than 5 years who are required every month to take measurements of height to determine whether there is interference with growth or not early on. Provision of balanced nutrition can increase growth, mother's education also affects the height of the child's education good parents can receive outside information, especially about how to care for children. The results of this study are expected to be an input for health services to reduce the incidence of Low Birth Weight (LBW) by conducting counseling about nutritional intake in pregnant women.

CONCLUSION

1. Low Birth Weight (LBW) that of the 32 respondents most respondents had Low Birth Weight (LBW) of 29 respondents (90.6%).
2. Height of 32 respondents most of the respondents have a normal height of 20 respondents (62.5%).
3. Statistical test results showed no significant relationship between Low Birth Weight (LBW) and Height of Toddlers Age 36-48 Months in the Work Area of KaumanTulungagung Health Center with p value = 0.204

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