Risk Factors That Influence the Incidence of Stunting Reviewed from Pregnancy History Bululawang Health Center Area

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ABSTRACT

Efforts to indirectly prevent stunting incidents, namely through sensitive intervention efforts, are various development activities outside the health sector targeting the general public, activities include providing clean water, various poverty alleviation efforts, food and nutrition security, and others. The incidence of stunting at Bululawang Health Center reached 15.32% while in Krebet Village it was 15.13%. Based on the increasing incidence of stunting at Bululawang Health Center, researchers are interested in examining the risk factors that influence the incidence of stunting in terms of pregnancy history at Tunas Bangsa PAUD, Krebet Village, Bululawang Health Center work area.
The research design uses correlational analytics with a cross-sectional approach.
Population All mothers who have children at Paud Tunas Bangsa, Krebet Village, Bululawang Health Center Working Area, purposive sampling technique. The independent variables in this study are Risk Factors, while the dependent variable is stunting. Data analysis using the Chi Square test
The results of the study obtained testing of risk factors affecting stunting in toddlers are the Asymp. Sign value <0.05. Based on the table above, the value that is <0.05 is questions 2,3, 4. It is interpreted that there are 3 risk factors during pregnancy that affect stunting in toddlers. While the other 4 factors in the questionnaire do not affect stunting in infants.
Based on the results of research and discussion on risk factors that influence stunting during pregnancy at Bululawang Health Center on May 12, - May 18, it can be concluded as follows: Respondents were 30 people, with the characteristics of toddler respondents who were indicated as stunting as many as 11 toddlers and risk factor analysis as many as 7 questions. The test results used the chi-square method on each risk factor for stunting indications with a significance level of 0.05. The results showed that Lila, Anemia, and Pregnancy Complications were risk factors that influenced the incidence of stunting at Bululawang Health Center.

I. Introduction

The incidence of stunting in Bululawang Health Center reached 15.32% while in Krebet Village it was 15.13%. Based on the increasing incidence of stunting in Bululawang Health Center, researchers are interested in examining the risk factors that influence the incidence of stunting in terms of pregnancy history at Tunas Bangsa PAUD, Krebet Village, Bululawang Health Center work area. Stunting is a form of growth retardation in children. This condition reflects the failure to achieve linear growth potential and is the main indicator of malnutrition (Fenske et al., 2013). Efforts to

indirectly prevent stunting, namely through sensitive intervention efforts, are various development activities outside the health sector with targets

general public, its activities include the provision of clean water, sanitation facilities, various poverty alleviation, food and nutrition security, food fortification, nutrition education and IEC, health education and IEC, gender equality, and others in collaboration with cross-sectors. Based on the problem in the background of the Stunting incident at Bululawang Health Center caused by several factors, therefore the researcher is interested in conducting a study entitled "Risk Factors Affecting Stunting Incidents Reviewed From

Pregnancy History in Bululawang Health Center Area". The purpose of this study was to determine the risk factors that influence the incidence of stunting in terms of pregnancy history in the Bululawang Health Center Work Area.

II. Methods

This research design uses Retro sectional, namely research to study the dynamics of the correlation between risk factors and effects, by means of a retrospective Cohort approach, observation or data collection at once at one time or Point Time Approach. (Notoatmodjo, 2013.) The research was conducted on May 12, - May 18, at PAUD Tunas Bangsa, Krebet Village, Bululawang Health Center working area.

The research variables consist of independent variables (X), namely risk factors for stunting, while the dependent variable is the incidence of stunting. The population in this study were all mothers who had children at the Tunas Bangsa Paud, Krebet Village, Bululawang Health Center Work Area. The measuring instrument used was a questionnaire sheet. The data collection process in this study was to submit a cover letter from the Faculty of Nursing, DIV Midwifery Study Program, IIK Strada to be submitted to the head of the Bululawang Health Center to request permission to collect initial data. After obtaining permission, the researcher then asked for permission from the respondents to be used as research subjects to determine the Risk Factors That Influence the Incidence of Stunting Reviewed from Pregnancy History in the Bululawang Health Center Area. In collecting data from respondents, the next step taken by the researcher was data processing by editing, coding, scoring, tabulating, data entry and cleaning. The results of the study were tested using the Chi Square test with the interpretation that if the p value > level of significance (0.05) then the conclusion is that Ho is accepted and H1 is rejected, meaning that there is no relationship between risk factors that influence the incidence of stunting in terms of pregnancy history in the Bululawang Health Center area, and if the p value < level of significance (0.05) then the conclusion is that Ho is rejected and H1 is accepted, meaning that there is a relationship between risk factors

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III. Results and Discussion

The results presented must be sequential from the main results to the supporting results. Use units of measurement based on applicable international standards. You can add diagrams, tables, pictures, and graphs by completing them with narration.

1. The Respondent Characteristics pregnancy check up

The following table, table 1, shows the frequency distribution of the learner characteristics based on Pregnancy examination

Table 1. The Characteristics based on pregnancy examination

Question	Yes	Presentation	No	Presentation
Pregnancy checkup	13	43,3%	17	56,7%
N large number of respondent				
Pregnancy as many as 17 respondents (56.7%). LILA < 23.5cm				

Source: The primary data,

Based on research from 30 respondents at Bululawang Health Center. The results showed that

respondents who did not undergo pregnancy check-ups were 33.3% with children in the short stunting classification, 26.7% who underwent check-ups were also in the short stunting classification.

The results of statistical testing obtained chi square results of 0.2> 0.05 which can be interpreted that there is no relationship between Antenatal Care and the incidence of Stunting. This study is not in line with the study conducted by Amini (2016) which stated that there is a relationship between Antenatal Care and the incidence of stunting. Antenatal care is less than three times and does not check. Basically, antenatal care is one of the preventions carried out by health workers to detect complications early so that they can intervene earlier.

Pregnancy checks are used to obtain data that is used to determine whether the pregnancy is going well or not (Sumarni, 2014). Knowing the symptoms of pregnancy early is very useful in making decisions when heading towards labor such as the mother's medical history, the baby's condition, etc. The nutritional status of pregnant women is very

affect the health and development of the fetus. Growth disorders in the womb can cause low birth weight (WHO, 2014). Research in Nepal shows that babies with low birth weight have a higher risk of stunting (Paudel, et al., 2012). The length of a baby's birth is also related to the incidence of stunting. Research in Kendal shows that babies with short birth lengths are at high risk of stunting in toddlers (Meilyasari and Isnawati, 2014).

At the time of the study, the lack of public interest in conducting pregnancy check-ups due to being embarrassed about their pregnancy occurred in primiparous mothers, while multiparous mothers did not undergo check-ups because they stated that they were too busy working and had difficulty dividing their time to conduct ANC visits. The solution to prevent stunting is to conduct antenatal care check-ups at least 4 times in normal mothers, while high-risk mothers must undergo pregnancy check-ups at least 7 times. If the mother does not undergo antenatal care, we must ask the mother for her number and address to conduct a home visit.

Table 2 respondent characteristics based on LILA <23,5cm

Question	Yes	Presentation	No	Presentation
LILA <23,5cm	8	26,7%	22	73,3%

Source : primary research data

Arm circumference of less than 23.5 cm is 16.7% or the majority are in a state of malnutrition, while arm circumference of more than 23.5 cm means the majority of children are in a state of malnutrition.

Arm circumference in pregnant women is an energy reserve for pregnant women. Knowing the risk of KEK in pregnant women can also be done by measuring the arm circumference. According to the Indonesian Ministry of Health, the normal limit for arm circumference is 23.5 cm. Pregnant women who have an arm circumference of less than 23.5 cm are considered to be malnourished and have KEK.

In this study, the chi square test results were obtained at 0.05 <0.05, which stated that there was a significant relationship between maternal lila and the incidence of stunting. This study is in line with research conducted which stated that the results of the statistical test p value 0.01 <0.05, which means that there is a significant relationship between the nutritional status of pregnant women based on LILA and the incidence of stunting in toddlers. Nutritional problems often faced by pregnant women are Chronic Energy Deficiency (CED) and nutritional anemia. Mothers who experience Chronic Energy Deficiency (CED) mean that the mother has experienced malnutrition for a long time, if this happens, the nutritional needs for the fetal growth and development process are hampered so that the mother is at risk of giving birth to a LBW baby.

Many pregnant women have a lila < 23.5 cm because there are still mothers who like certain foods and are afraid that if they eat more than usual the baby will be big. This causes the mother to experience KEK and causes the child to experience stunting. This was found when researchers conducted a study.

The solution for pregnant women who experience a lila of less than 23.5 cm is to provide PMT counseling and recovery PMT so that the mother does not experience Chronic Energy Deficiency (CED) with an indicator of an increase in LILA > 23.5 cm.

Table 3. respondent characteristics based on anemia

Question	Yes	Presentation	No	Presentation
Anemia	11	36,7%	19	63,3%

Source : primary research data 2020

Analysis of the research at Bululawang Health Center showed the results of Asymp. Significance 0.032 or <0.05. The results obtained were Ho rejected and Ha accepted, thus Anemia during pregnancy affects stunting in infants. These results were obtained from data that the majority of pregnant women in the Bululawang Health Center area had experienced anemia.

Nutritional problems are still a concern in developing countries including Indonesia. Malnutrition in the form of protein energy can be acute (wasting), chronic (stunting) and acute and chronic. Chronic malnutrition (stunting) can be at risk of disease and death, children who survive tend to have poor performance in school.

In addition to cognitive problems and school achievement, stunting also affects economic productivity in adulthood and maternal reproductive outcomes.

Anemia is a condition where the hemoglobin (Hb) level in the blood is lower than the normal value for a group of people according to age and gender (Ministry of Health, 2001). Hemoglobin is a coloring substance in the blood that functions to transport oxygen and carbon dioxide in the blood (Alamsteir, 2002).

When the research was found, not a few pregnant women chose to choose food that they liked without seeing whether the food met the requirements for balanced nutrition so that there were still pregnant women who experienced iron deficiency. One example of a pregnant woman who did not like to eat vegetables

The solution to prevent anemia in pregnant women is to carry out early integrated ANC, provide and explain how to take iron supplements, at least 90 tablets during pregnancy, and provide education on fulfilling balanced nutrition.

Table 4. respondent characteristics based on pregnancy complications

Question	Yes	Presentation	No	Presentation
Pregnancy complication	10	33,3%	20	66,7%

Pregnancy complications caused 29.7% of stunting cases in preschool children at Bululawang Health Center. 36.7% who did not experience complications were also in a state of stunting.

The statistical test results obtained a p-value of 0.037 <0.05 which can be interpreted that there is a relationship between pregnancy complications and stunting. Basically, pregnancy complications cause stunted growth and development of the fetus so that the fetus will experience delays. Stunted fetal growth and development cause complications in babies during childbirth, namely LBW. The occurrence of LBW can cause stunted growth and development of babies if not closely monitored.

When conducting research, it was found that pregnant women felt that they were healthy, whereas in reality the mothers had high risks and complications during pregnancy.

To prevent complications from occurring, we need to collaborate with doctors to provide therapy to pregnant women with complications and, if necessary, we can refer them to the hospital so that they can be treated by an obstetrician-gynecologist.

Table 5 respondent characteristics based on weight gain < 10kg

Question	Yes	Presentation	No	Presentation
Weight gain < 10kg	9	30%	21	70%

Source : primary research data

Only 26.7% of respondents experienced stunting due to weight gain of less than 10 kg. While 43.3% of stunting was caused by normal pregnancy or more than 10 kg.

In the chi square statistical test, the results were 0.163 > 0.05, which means that there is no significant relationship between maternal weight gain and the incidence of stunting.

During the research, it was found that pregnant women still only choose the foods they like and the portion sizes they eat still do not meet the nutritional needs of a pregnant woman, which causes a lack of weight gain in the mother.

The solution for pregnant women who experience a weight of less than 10 kg is to provide PMT counseling and PMT recovery so that nutritional needs are met so that the mother's weight gain can exceed 10 kg during the pregnancy period.

Table 6 respondent characteristics based on height <145 cm

Question	Yes	Presentation	No	Presentation
Height <145 cm	8	26,7%	22	73,3%

Source : primary research data

Height less than 145 cm only contributed 16.7% of stunting cases, while height more than 145 cm contributed 43.3% of stunting cases.

In the chi square statistical test, the result was 0.056> 0.05, which means that there is no significant relationship between maternal height and the incidence of stunting. This study is not in line with the study conducted by Husni (2016) which obtained the chi square p-value test result of 0.001. This shows that there is a significant relationship between the variable of maternal height and the incidence of stunting.

Table 7 respondent characteristics based on distance < 2 years

Question	Yes	Presentation	No	Presentation
Distance < 2 years	6	20%	24	80%

Source : primary research data 2020

Birth spacing of less than 2 years only has a stunting incidence presentation of 13.3%, while 46.7% is caused by birth spacing of more than 2 years. The statistical test results state that the p-value is 0.212> 0.05 which can be interpreted that there is no significant relationship between pregnancy spacing <2 years and stunting incidence.

It turned out that during the research, there were still pregnant women who did not use birth control because they did not get permission from their husbands and the mothers were afraid of getting fat if they used birth control. Advise mothers to use family planning as one solution to regulate pregnancy spacing so that mothers can focus more on raising their previous children. Stunting Incident at Bululawang Health Center

The results of the study from respondents at Bululawang Health Center are based on z-score analysis. It is said to be in a stunting condition if the child's condition is in the category of undernutrition and severe malnutrition, with the results of severe malnutrition of 23.3%, undernutrition 60% and good nutrition 5%.

Stunting is caused by several factors, namely low energy intake (93.5%), infectious diseases as much as 80.6%, low protein intake by 45.2% and not exclusive breastfeeding by 32.3%. In addition, Stunting is also caused by external factors such as education, namely maternal education by 48.8% and father's education by 32.3%. The assumption of researchers is that stunting is largely caused by internal factors and only a few percent are caused by external factors.

2. Characteristics of stunting cases at bululawang health center

The researchers conducted the univariate analysis on cognition, attitude, practice, and nutritional status. Table 1 shows the results.

Table 1. stunting data results

Stunting	Amount	Presentation
Normal	5	16,7%
Short	18	60%
Very short	7	23,3%

Source: primary research data

From the table above, it can be concluded that the presentation of toddlers who experience stunting can be categorized as follows: normal classification there are 5 respondents (16.7%) short

classification obtained the results of 18 respondents (60%). While the last is the classification of stunting with very short TB of 7 people (23.3%).

3. Cross tabulation of pregnancy history with the occurrence of stunting

Table 1. cross tabulation of pregnancy history with the occurrence of stunting

Factors affecting stunting		Stunting status					
		Normal		pendek (f)		Very short	
		(f)	(%)	(f)	(%)	**(f)**	**(%)**
Pemeriksaan Kehamilan	Ya	3	10	8	26,7	2	6,7
	Tidak	2	6,7	10	33,3	5	16,7
LILA < 23,5	Ya	1	3,3	5	16,7	2	6,7
	Tidak	4	13,3	13	43,3	5	16,7
Anemia	Ya	2	6,7	6	20	3	10
	Tidak	3	10	12	40	4	13,3
Komplikasi Kehamilan	Ya	1	3,3	7	23,3	2	6,7
	Tidak	4	13,3	11	36,7	5	16,7
Kenaikan BB	Ya	1	3,3	5	16,7	3	10
	Tidak	4	13,3	13	43,3	4	13,3
Tb < 145	Ya	1	3,3	5	16,7	2	6,7
	Tidak	4	13,3	13	43,3	5	16,7
Jarak < 2 Tahun	Ya	-	-	4	13,3	2	6,7
	Tidak	5	16,7	14	46,7	5	16,7

Source: The primary data,

From the table above there are 7 factors that influence stunting, namely: from the cross-tabulation data we can see that pregnancy check-ups are the first factor that influences stunting where out of 30 respondents who underwent pregnancy check-ups, there were 13 respondents with a normal height classification of 3 people (10%), short height 8 people (26.7%) and very short height 2 people (6.7%). For pregnant women who did not check their pregnancy, there were 17 people with a classification of 2 (6.7%) respondents with normal child height, 10 (33.3%) respondents with short child height while 5 (16.7%) respondents had children with very short height.

The second factor that affects stunting is LILA 23.5 cm, out of 30 respondents there are 8 respondents who have LILA <23.5 cm with a normal height classification of 1 person (3.3%), short height 5 people (16.7%), and very short height 2 people (6.7%). In pregnant women who have LILA> 23.5, there are 22 people with a normal height classification of 4 people (13.3%), short height 13 people (43.3 cm), and very short height 5 people (16.7%).

Pregnancy complications are the third factor that influences stunting, out of 30 respondents, 10 people had pregnancy complications during pregnancy where data showed that 1 person (3.3%) had normal height and 7 people (23.3%) had short height and very short height amounted to 2 respondents. For mothers who did not have a history of complications during pregnancy, there were 20 respondents with the results that 4 people (13.3%) had normal height, 11 people (36.7%) had short height, there were 5 respondents (16.7%).

Furthermore, the fifth factor that influences stunting is the increase in pregnant women's weight <10 kg. Data obtained from 30 respondents showed that 9 respondents had a weight gain of <10 kg, where the normal height of toddlers was 1 person (3.3%), short height 5 people (16.7%), and very short height 3 people (10%). The rest of the respondents had toddlers with normal height totaling 4 (13.3%), short height 13 people (43.3%) and very short height 4 people (13.3%).

Maternal height <145 cm is the sixth risk factor where the percentage of respondents who have a height <145 is 8 respondents with a normal height classification of 1 (3.3%), short height 5 people (16.7%) and very short height 2 people (6.7%). While the maternal height >145 cm is 22 respondents with a normal height classification of 4 people (13.3%), short height 13 people (43.3%), and very short height 5 people (16.7%).

The last pregnancy history factor that affects stunting is the pregnancy interval <2 years. Data obtained from mothers who have a pregnancy interval <2 years have children with a short height

classification of 4 people (13.3%) while short height is 2 people with a percentage of 6.7%. Meanwhile, 24 respondents have a child interval of more than 2 years with a normal height classification of 5 people (16.7%), short height 14 people (46.7%) and very short height 5 people (16.7%).

4. Chi-Square Test Results

The results of the Chi-Square test with a significance level of 0.05 produced a P-value of 0.023 so it can be concluded that Ho is rejected and Ha is accepted. So the risk factors mentioned in the questionnaire affect the incidence of stunting at Bululawang Health Center

5. Relationship between Pregnancy History and Stunting Incidence at Bululawang Health Center

Based on the chi-square analysis, the p-value was 0.023 or below the significance level. The interpretation obtained in this study is that pregnancy history greatly influences the incidence of stunting in the Bululawang Health Center area.

Stunting is a condition that is closely related to internal factors, pregnancy history is an internal factor that has a significant influence. This happens because during pregnancy, the formation of body systems occurs through risk factors obtained during pregnancy. Things that happen during pregnancy can influence the growth and development of babies into adulthood.

IV. Conclusion

Based on the results of research and discussion on risk factors that influence stunting during pregnancy at Bululawang Health Center on May 12, - May 18, it can be concluded as follows: Respondents were 30 people, with the characteristics of preschool children respondents who were indicated as stunting as many as 11 people and risk factor analysis as many as 7 questions. The test results using the chi-square method on each risk factor for stunting indications with a significance level of 0.05. The results showed that there was an influence between, Lila, Anemia, and pregnancy complications with the incidence of stunting at Bululawang Health Center.

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