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Factors Affecting the Incidence of Stunting in Toddlers in the Working Area of the UPTD Health Center, Rawat Lagari Hospital Nabire Regency

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Abstract, ***Background:****Stunting reflects the condition of children under the age of five, due to malnutrition especially in the first 1000 days of life (HPK), children are very short for their age. In Indonesia, stunting is a major and major problem that is being faced. Toddlers are children over one year old and children under 5 years old. Objective: To determine the factors associated with stunting in toddlers in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency. Method: The type of research used in this study is quantitative and the design used is observational analytic. Results: analysis test using the chi-square test p-value> 0.05, 0.82 indicates that there is no relationship between education and stunting in toddlers. Analysis test using the chi-square test p-value> 0.05, namely 0.09 indicates that there is no relationship between work and stunting in toddlers. Analysis test using the chi-square test p-value <0.05, namely 0.04 indicates that there is a relationship between income and stunting in toddlers. Analysis test using chi-square test p-value <0.05, which is 0.05 indicates that there is a relationship between knowledge and the incidence of stunting in toddlers. Analysis test using chi-square test p-value <0.05, which is 0.05 indicates that there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers. Conclusion: Factors that influence stunting in toddlers include: education, employment, income, knowledge and exclusive breastfeeding. There is no relationship between education and employment with the incidence of stunting in toddlers, and there is a relationship between employment, knowledge and exclusive breastfeeding with the incidence of stunting in toddlers. Suggestion: Create a program on stunting, especially the factors that influence stunting to reduce stunting rates and need to increase counseling activities on stunting for mothers of toddlers to increase awareness and understanding of stunting.*

Keywords: *Education, Occupation, Income, Knowledge, Exclusive Breastfeeding, Stunting.*

1. INTRODUCTION

Stunting is a condition where children under the age of five do not grow due to malnutrition and the child's height is not the same as children of the same age (Pem, 2017). This malnutrition occurs in the first 1000 days of life (HPK), namely from the beginning of pregnancy to the second year. Stunting can be divided into two categories: short stunting if the z-score is -2 standard deviations (SD) to -3 standard deviations (SD) and very short stunting if the z-score is <-3 SD. According to the World Health Organization (WHO), stunting is short or very short growth defined as height/age less than -2 standard deviations (SD) on the growth curve. This is caused by malnutrition and chronic diseases in the first 1,000 days of life (Ministry of Health 2023).

Globally, in 2020, 149.2 million people, around 22.0% of children under the age of five were affected by stunting (WHO, 2021). In Indonesia, according to the 2023 Research

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Results (Riskesdas), the prevalence of this disease in Indonesia is currently 21.6%, the target in 2024 is to reach 14%. At the Asian level, in 2022, Indonesia was ranked the fifth highest in stunting. If the stunting problem is greater than 20% according to the World Health Organization (WHO) it is a public health problem. The impact of stunting on children is an increase in morbidity and mortality in children. Stunting increases the risk of mental and developmental disorders including obesity and metabolic disorders. The effects of stunting affect quality. Public health promotion efforts are needed to prevent growth retardation. (Dorsey, et, al., 2018).

Stunting is a major health problem in Indonesia. Stunting reflects the condition of children under the age of five, due to malnutrition especially in the first 1000 days of life (HPK), children are very short for their age. The prevalence of stunting in Indonesia is 37% in toddlers. The impact of stunting is divided into two categories: short-term and long-term impacts (Hall, et, al., 2018).

Based on the results of the 2023 Health Survey (Riskesdas), the prevalence of this health problem in Indonesia is currently 21.6%, and is estimated to reach 14% in 2024. In Asia, in 2022 Indonesia will occupy the fifth highest growth failure rate. Risk factors for stunting are various, one of which is the poor diet of pregnant women and babies. There are many risk factors for birth control based on data sources, and evidence that explains that hazardous substances can kill children under five years old, including family problems, unhealthy eating habits, breastfeeding practices, diseases and social norms (Beal, Tumilowicz, et al., 2018).

Addressing and controlling stunting is a global problem. This action is the second priority of the sustainable development goals (SDGs) is to end hunger (Goyal and Canning, 2018). This has been implemented by the Indonesian government for a comprehensive plan including steps and programs to prevent stunting. The program includes the public health program (STBM) and the Indonesian family welfare program (PIS-PK) to combat the disease (Ministry of Development Migration Crisis Areas, 2017).

Social empowerment is one of the activities to increase community awareness and ability to handle stunting generation. This social empowerment includes identifying problems, planning and deciding to solve individual problems. Community empowerment in the health sector leads to general autonomy which leads to efforts to prevent and overcome growth failure (Brown & Brown, 2017). Stunting is caused by long-term conditions including poverty, inappropriate parental attitudes and many diseases due to lack of cleanliness and

dirt. Stunting in toddlers indicates chronic nutritional status that shows rapid life expectancy in the first year and the first 1,000 days of life (HPK) does not change (Rahayu, et, al., 2018).

Stunting occurs since the fetus is still in the womb and most often occurs in children under the age of two, deficiencies in young people increase the risk of death in infants and children, making them more vulnerable to disease and physical injury than adults. Mental capacity decreases due to disease and death in Indonesia (Sutarto, et, al., 2018).

The percentage of stunted toddlers (short) in Papua Province according to the SSGI report in 2021, the number of toddlers was 29.55% and will be 34.6% in 2022 and the prevalence rate of stunting in the last 2 years in Papua Province from 29 districts/cities, the highest stunting case was Asmat Regency, there was an increase, namely in 2021 by 38.1 percent, increasing to 54.5 percent in 2022 (SSGI, 2022).

Data from the Nabire Regency Health Office shows that 415 toddlers out of 3,449 toddlers experienced stunting. Based on data from the Lagari Inpatient Health Center UPTD, 35 toddlers experienced stunting out of 273 toddlers (Lagari Inpatient Health Center UPTD, 2023). Based on the definition above, the researcher wants to conduct a study entitled "Factors Affecting Stunting in Toddlers in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency".

2. METHODS

The type of research used in this study is quantitative and the design used is observational analytic. This study uses a cross-sectional approach. This study was conducted in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency on March 25 to May 1, 2024.

The sampling method in this study is the non-probability sampling method and the total sampling method using the entire population as a sample. The reason for sampling is because the population is below 100 toddlers, which is 35 stunted toddlers. The instruments used are questionnaires and anthropometric tools. The data in this study are primary data and secondary data.

Data analysis is the process of processing data to find useful information that can be used as a basis for decision making to solve problems (Nur Al-faida, 2023). In quantitative data analysis, two parts of the work are research results and SPSS statistics version 16. The data is tested using chi-square analysis with significance, p-value 0.05 and rejected if p-value> 0.05.

3. RESULTS AND DISCUSSION

Results

1. Overview of Research Location

This study was conducted in the working area of the Lagari Inpatient Health Center UPTD starting from March 25 to May 4, 2024 with 35 respondents. The Lagari Inpatient Health Center UPTD is located in Makimi District, Biha Village and the Lagari Inpatient Health Center UPTD is located on 2 (two) hectares of land. The Lagari Inpatient Health Center borders the Napan District to the north and east, the southern district borders the Siriwo District and the western district borders the Teluk Kimi District and Uwapa District.

Health facilities in Makimi District are the Lagari Care Health Center UPTD and 3 (three) Assistant Health Centers. The Lagari Care Health Center consists of several rooms, 2 (two) inpatient rooms, a Ka room, an executive room, a counter room, a medical room, a laboratory room, a KIA room, a doctor's room, an emergency room, an officer's guard room, a patient's toilet, and a kitchen. The inventory of the Lagari Care Health Center includes a paramedic house, a doctor's house, and an ambulance. The assistant health centers located in the Lagari Health Center's working area are the Lagari Jaya, Makimi and Nifasi Health Centers. The condition of the Legari Jaya Health Center is currently in a state of severe damage.

Health services at the Lagari Care Health Center UPTD are carried out every working day, starting from 08.00 WIT to 14.00 WIT, as well as 24-hour inpatient and emergency services.

1) The relationship between education level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

   The results of data analysis from the Statistical Program for Social Sciences version 16.0 program (SPSS) are to determine the relationship between education level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

   The following is a table of the relationship between education level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Table 1. Relationship between education level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

Education	Stunting	P-value

	Very Short		Short		
	f	%	f	%	
No school	1	2.8	4	11.4	0.82
SD	1	2.8	10	28.5	
JUNIOR HIGH SCHOOL	1	2.8	8	22.8	
SENIOR HIGH SCHOOL	2	2.8	6	17.1	
Bachelor	0	0	2	5.7	
Amount	**5**	**11.2**	**30**	**85.5**	

Source: Primary Data, 2024

Based on Table 1 above, the results of the analysis show that the p-value (0.82) > 0.05 means that there is no relationship between education and stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

2) The relationship between work and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The results of data analysis from the Statistical Program for Social Sciences version 16.0 program (SPSS) are to determine the relationship between employment levels and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The following is a table of the relationship between employment levels and stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Table 2 Relationship between employment level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

Work	Stunting				P-value
	Very Short		Short		
	f	%	f	%	
housewife	4	11.4	28	80	0.09
Farmer	1	0	0	0	
Private	0	0	1	2.8	
civil servant	0	0	1	2.8	
Amount	**5**	**11.4**	**30**	**85.6**	

Source: Primary Data, 2024

Based on table 2 above, it states that the analysis results obtained a p-value (0.09) > 0.05, meaning that there is no relationship between work and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

3) The relationship between income and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

The results of data analysis from the Statistical Program for Social Sciences version 16.0 program (SPSS) are to determine the correlation between income levels and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The following is a table of the relationship between income levels and stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Table 3 Relationship between income level and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

Income	Stunting				P-value
	Very Short		Short		
	f	%	f	%	
Low	5	14.2	12	34.2	0.04
Currently	0	0	14	40	
Tall	0	0	4	11.4	
Amount	**5**	**14.2**	**30**	**85.6**	

Source: Primary Data, 2024

Based on table 3 above, it states that the results of the analysis obtained a p-value (0.04) <0.05, which means that there is a relationship between income and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

4) The relationship between knowledge and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

The results of data analysis from the Statistical Program for Social Sciences version 16.0 program (SPSS) are to determine the relationship between the level of knowledge and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The following is a table of the relationship between the level of knowledge and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Table 4.Relationship between level of knowledge and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Income	Stunting				P-value
	Very Short		Short		
	f	%	f	%	
Not enough	1	2.8	21	60	
Good	4	11.4	9	25.7	0.05
Amount	**5**	**11.3**	**30**	**85.7**	

Source: Primary Data, 2024

Based on table 4 above, it states that the results of the analysis obtained a p-value (0.05) <0.05, which means that there is a relationship between knowledge and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

5) The relationship between exclusive breastfeeding and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The results of data analysis from the Statistical Program for Social Sciences version 16.0 program (SPSS) are to determine the relationship between the level of exclusive breastfeeding and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The following is a table of the relationship between the level of exclusive breastfeeding and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Table 5. Relationship between the level of exclusive breastfeeding and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

Giving Exclusive Breastfeeding	Stunting				P-value
	Very Short		Short		
	f	%	f	%	
Yes	1	8	21	60	
No	4	11.4	9	25.7	0.05
Amount	**5**	**22.4%**	**30**	**85.7%**	

Source: Primary Data, 2024

Based on table 4.13 above, it states that the results of the analysis that have been carried out obtained a p-value (0.05) <0.05, which means that there is a relationship between exclusive breastfeeding and stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Discussion

According to the World Health Organization (WHO), short or very short is defined as Length/height for age less than -2 standard deviations (SD) on the WHO growth curve, this occurs due to nutritional deficiencies and chronic diseases that appear to be irreversible and occur in the first 1000 days of life (Ministry of Health Review, 2023).

Globally, in 2020, around 149.2 million children or around 22.0% of children under the age of five experienced stunting (WHO, 2021). In Indonesia, according to the results of the Basic Health Research Assessment (Riskesdas) in 2023, the prevalence of stunting in Indonesia is currently 21.6%, and the target is to reach 14% in 2024. At the Asian level, in 2022, Indonesia became the country with the fifth highest inflation rate. According to the World Health Organization, if the stunting problem exceeds 20 percent then it is a public health problem.

1. The relationship between education and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

   Based on Table 4.9, that out of 35 respondents, not attending school with very short stunting 1 (2.8%), short 4 (11.4%), elementary school with very short stunting 1 (2.8%), short 10 (28.5%), junior high school with very short stunting 1 (2.8%), short 8 (22.8%), high school with very short stunting 2 (5.7%), short as many as 6 (17.1%). Bachelor's degree with very short stunting as many as 0 (0%), short 2 (5.7%). The results of the Chi-Square analysis test obtained p = 0.82 > p = 0.05, then Ho is accepted and Ha is rejected which indicates that there is no relationship between educationwith stunting in toddlers in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

   The results of this study indicate that mothers who have toddlers in the working area of the Lagari Inpatient Health Center UPTD still have low education, but high and low education do not have an effect on stunting in toddlers because they can manage the household, choose quality food in the family, especially food to give to toddlers, through education.informally, namely from health workers, when health workers

convey information about health, especially regarding stunting, through socialization and counseling during integrated health post days and through counseling.

This research is in line with researchRizcewaty, et, al., (2021) entitled the research "The Relationship between Education Level and Knowledge about Nutritional Status with the Incidence of Stunting in Children Aged 12-59 Months in the Work Area of the Pulau Kupang Health Center, Kapuas Regency" which shows a p-value = 0.75> 0.05 so that Ho is accepted and Ha is rejected which indicates that there is no relationship between education level and the incidence of stunting in the Pulau Kupang Health Center area, Kapuas Regency.

Maternal education is important in improving infant nutrition. A person's level of education makes it easier for mothers to get information about nutrition and health from outside. Mothers with less education play an important role in the nutritional well-being of children. This is because parents know how to prepare the right food for optimal growth and development. The reason for preventing stunting is the level of education (Rahmawati, S and Rasni, 2019).

This research is in line with researchDian Rahmawati, et, al., (2020) showed that there was no relationship between education level and stunting chi-square test results p = 0.52 > p = 0.05. Mothers with low education do not always give birth to stunted children, mothers can manage their families through knowledge from information from other people about health. High and low education levels are not related to good nutrition. Maternal education affects the mother's behavior and attitude to meet the child's nutritional needs which in turn affects the family's eating habits.Mothers with higher education choose healthy foods and foods to give to their children to ensure good nutrition (Ainin, et, al., 2023)

The level of maternal education during secondary school is very concerning because it affects the knowledge, attitudes and behavior of parents towards their children. Providing complementary foods to children without proper nutrition can cause stunting (Fauzi, Wahyudin, & Aliyah, 2020).

Parental education can affect eating habits, one of which is stunting. Research shows that low parental education increases the risk of children developing eating disorders compared to educated parents. Education level is related to stunting but not significant because of the community's ability to access information, both from parents and health services about children's nutritional needs (Rahmawati, S & Rasni, 2019).

This study is not in line with the study (Yesi Nurmalasari, et, al, 2020), the results of the Chi-square statistical test showed a p-value = 0.00 <0.05 which indicates that there is a relationship between the level of maternal education and the incidence of stunting for children aged 5-59 months in Mataram Ilir Village, Seputih District, Surabaya, Central Lampung.

A mother's education affects the welfare of the child because the mother is the main health worker who regulates the family's diet and plays an important role in the welfare of family members. (Noviyanti, et, al., 2020).

Children of low-educated mothers grow slower because society values education more and there is less family support for secondary school. The mother's education level can affect the mother's knowledge and ability regarding health, especially nutritional knowledge. A person cannot choose high-quality food because high-quality food is not very effective, and starting from expensive food, there are also many low-quality foods to meet nutritional needs (Subarkah, et, al., 2019).

The role of mothers is important in developing children's eating habits because mothers are the cooks, shoppers, preparers and sharers. On the other hand, educated mothers often work outside the home and leave their children with their families. A mother's education in achieving good child nutrition is related to her ease in accessing nutritional and health information compared to mothers with less education. Parenting is very important for the healthy growth and development of children at an early age, and children still depend on their mother's care. The level of maternal education affects the level of health and has the potential to influence society to make decisions about healthy behavior (Lestari & ZR, 2023).

2. The Relationship between Employment and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Based on table 4.10, from a total of 35 samples of work as housewives (IRT) with very short stunting 4 (8.5%), short 28 (80%), farmer work with very short stunting 1 (2.8%), short 0 (0%), private sector work with very short stunting 0 (0%), short 1 (2.8%), civil servant work with very short stunting 0 (0%), short 1 (2.8%).

The results of the analysis test using the Chi-Square test showed a p value of 0.09> 0.05, so Ha was rejected and Ho was accepted, indicating that there was no relationship between work and stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The results of the study showed that there are still many mothers who have toddlers in the working area of the Lagari Inpatient Health Center UPTD, many of whom work as housewives. Although mothers work and the majority of their work is housework, the family's eating patterns are not always stable, but are based on awareness of education and health.

This study is in line with the study by Suartini, NM (2023) that there is no relationship between maternal employment and the incidence of stunting in Beldingan Village, the working area of Kintmani V Health Center with a p-value of 0.11> 0.05.

Working mothers are often separated from their families, which can affect childcare patterns and children's eating habits. This in turn affects the nutritional status of the family, especially in children under the age of five who need adequate nutrition for their growth and development (Suantini, NM 2021).

The condition of the mother deserves attention because the delay is usually caused by long-term conditions such as poverty or parenting that does not meet the needs because the parents are very busy with work. The mother's low knowledge about food is due to the mother's low education, often attacked by disease due to poor hygiene. This is related to the provision of non-exclusive breastfeeding to her child because the mother works as a farmer and helps her husband to work in the garden, especially during planting time, because most of the mother's work is in the garden when they work, mothers leave their children at home and others take care of their children. Related to this, most mothers stop breastfeeding their children before the age of six months (Leo, et, al., 2018).

This study is in line with the research of Aprizah, A. (2021) the results of the Chi-Square test obtained p = 0.103 > 0.05, indicating that there is no relationship between the mother's employment status and the occurrence of stunting.Working mothers do not have time to cook for their family members because they are busy, but they do not always forget to arrange food for their families because they depend on community knowledge. The problem of work is related to knowledge, people who work have more knowledge than people who do not work, because people who work have more information. This is different from mothers who work outside the home to support themselves and their families (Pooruti and Nisa, 2022). The mother's employment status determines the mother's behavior during breastfeeding. Working mothers affect the mother's time with the child, so that eating patterns are not managed properly, the mother's attention is lacking in the child's growth and development (Amelia, 2020).

Unemployed parents have a negative impact on family finances. People's purchasing power for healthy food and nutrition affects children's nutritional rights. Thus, employment factors affect stunting in children or infants (Sulistyawati, 2018).

This study is similar to Najah's study (2022) using the chi-square statistical test, a p-value of 0.80> 0.05 was obtained, indicating that there was no relationship between maternal employment and the incidence of stunting in toddlers.

There is no relationship between work and stunting, because even though the mother does not work there is no benefit or does not get a good example from her parents, the mother spends a lot of time in learning that focuses on the child's diet but not the amount of food the child receives. The length of time affects the mother's knowledge of what to eat and what to give to her baby. In addition, economic factors also affect the mother's preparation of food for children, so the type of work does not affect the fulfillment of nutrition for stunted toddlers.

According to Kendra (2020), her book explains that working mothers are no longer able to pay attention to their children because of their busy lives and work, so mothers pay less attention to preparing quality food for their children/toddlers.

According to Zulfianto and Rahmat (2017), the nature of working mothers is not the main cause of food problems in children, but work can have a strong impact on food and child care. Sutarto's research (2020) explains that unemployed mothers pay more attention to their children than working mothers.

3. The relationship between income and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency

Based on Table 4.11, from a total of 35 respondents, those with low income with very short stunting were 5 (14.2%), short were 12 (34.2%), those with medium income with very short stunting were 0 (0%), short were 14 (40%), those with high income with very short stunting were 0 (0%), short were 4 (11.4%).

This study is in line with the research of Wulandari, et, al., (2021), using the Chi Square test, obtained a p value of 0.00 (p = <0.05), meaning that there is a correlation between family income and the incidence of stunting in Pagardin Village, Ulok Kupay District, North Bengkulu Regency.

Families with low economic status have children who are more likely to experience growth failure. This happens because families with low incomes have difficulty buying food that meets the nutritional needs of toddlers compared to families with high economic status (Sari, et, al., 2020).

Thin and short children are considered to have low income. A good family income can support the growth and development of children because it is able to meet both primary and secondary needs of their children. Income level determines the type of food, poor people buy more wheat and rich people consume more milk (Sari, et, al., 2020). The family's purchasing power for useful food affects family income because the decision to buy what food depends on the family's income level. With sufficient income, the food needs of all family members are met. On the other hand, low family income decreases household food purchasing power (Illahi, RK 2017).

Children in families with low economic status tend to get less intake in terms of quality, quantity and variety. Economic status can make people sort and buy healthy and diverse foods (Sari, et, al., 2022).

This study is not in line with the study (Hasmaul Husana, et, al., 2023) from the chi square statistical test p-value = 0.20, namely the α-value = > 0.05 which means there is no relationship between family income and the incidence of stunting in toddlers aged 24-36 months in the Sukajaya Health Center Work Area, Sabang City. This happens because the income is not really used for food needs, but the rest is used for other purposes. High income does not guarantee good nutrition for children, because the level of income does not correlate well with nutritional needs (Hasmaul Husana, et, al., 2023).

Family income depends on the family's ability to meet its primary, secondary, and tertiary needs. High household income makes it easier to meet family needs, but low household income makes it very difficult to meet family needs. Low income can affect the quantity and quality of family food intake. Low income and limited purchasing power can suppress eating habits and hinder nutritional improvements, especially in children. Many types of food are less varied and smaller in size, especially sources of protein, vitamins and minerals for the growth of children who are seriously ill. This resistance increases the risk of family members being infected (Hapsari, et, al., 2018).

The availability of more varied foods, especially foods that are sources of protein, vitamins, and minerals for child growth, results in a lower risk of malnutrition. This limitation increases the risk of stunting (Yoga, et, al., 2020).

Low-income families tend to be malnourished or unable to obtain a variety of foods due to low income and limited cooking options. Most poor people spend their money on buying food. Income can determine the type and intake of food (Hedayt and Ismawati, 2019).

Family economic status is one of the risk factors affecting the family's ability to meet the nutritional needs of young children, food choices and meal times, and family health (Aprilawana and Fikavati, 2018). The main strength of the economy is how to choose and order healthy food and various types of food. Likewise, low socioeconomic status has a significant impact on the incidence of depression and child mortality (Raharja, et, al., 2019).

Household purchasing power for healthy/natural food is caused by household income because the decision to buy food depends on the income level. Family purchasing power depends on family income, because a high economy is able to meet the food needs of all family members, but a low economy cannot meet the family's food needs. Low purchasing power for quality food does not meet children's nutritional needs (Paramashanti, 2019).

Low-income families choose animal protein and vegetables at prices that suit their financial needs. Sometimes the processed vegetables are taken from vegetables in the garden or poor animals, so it is not easy to do daily activities, it is different again. This situation causes children's eating patterns to decrease which will indirectly reduce children's food intake (Millward, 2017).

4. The relationship between knowledge and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Based on Table 4.12, from a total of 35 respondents, knowledge is lacking with stunting very short 1 (2.8%), short 21 (60%), Good knowledge with stunting very short 4 (11.4%), short 9 (25.7%). The results of the Chi-Square test obtained a p value = 0.05 <0.05 indicating that Ha is accepted and Ho is rejected which means there is a relationship between knowledge and the incidence of stunting in the work area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The results of this study indicate that there are still many mothers in the working area of the Lagari Inpatient Health Center UPTD who have insufficient knowledge, so thatmother's lack of understanding regardingstunting,so there are still many toddlers who experience stunting in the short category.

Good maternal awareness can support efforts to prevent growth retardation. If the mother's knowledge is lackingin a short period of time in the family, to meet needs during pregnancy and understand the impact and prevention of stunting, then cases of stunting increase (Ministry of Health of the Republic of Indonesia, 2018).

It is undeniable that differences in the level of maternal knowledge that occur in the community are caused by many factors such as age, education, income, occupation and travel to the integrated health post. Behavioral and environmental factors influence the level of maternal awareness in providing and even serving food as an effort to prevent growth retardation (Karsona, et, al., 2019).

Maternal education affects the shortness of children. Basic education can improve the nutritional status of children and adults. Ignorance of food and lack of adequate knowledge determine the mother's attitude and behavior in preparing food, including the types and quantities needed for the growth and development of children/toddlers. The higher the mother's knowledge of food, the better the assessment of her food will be, but families with low knowledge choose foods that do not meet their nutritional needs (Umiarsih Purnama AL, et, al., 2021).

This research is in line with research (Amalia, et, al, 2021) which uses the Chi-square test.so that p=0.00 (<0.05) is obtained, it can be said that there is a relationship between maternal knowledge about nutrition and the incidence of stunting in toddlers in Planjan Village, Saptosari Health Center working area, Gunung Kidul Regency.

According to Notoadmodjo (2017), people with low education have little knowledge. Education can be improved not only through formal education but also through informal education. Non-formal education is obtained through health workers, when health workers socialize and provide counseling about stunting on posyandu days and so on.

Knowledgeable people can change behaviors that can prevent stunting. The high rate of stunting means that someone needs to be aware and increase their knowledge about stunting (Ramdhani, et, al, 2020).

Well-informed mothers have the opportunity to update and add to the latest knowledge so that younger mothers receive new information by being presented with new information.

This study is in line with the study by Calista Sarli Nenobahan (2023), which used the chi-square statistical test p = 0.00 less than 0.05 because the significant value of (p = 0.00 less than 0.05) indicates that there is a relationship between the level of maternal knowledge about the incidence of stunting in toddlers at the Oesapa Health Center.

Education is important for society, especially for mothers, because educated mothers are aware of their children's health. The lack of knowledge of mothers in this

study was due to the lack of information such as how to meet children's nutritional needs. The knowledge obtained automatically comes from educational factors. Knowledge is closely related to education, the more knowledge a person has, the more knowledge he or she has, but that does not mean that his or her knowledge decreases, increasing knowledge is not only through formal knowledge, but also through informal education. Knowing someone about something has good and bad qualities. Both factors influence human behavior. The more positive the situation and possessions owned by a person, the more positive it is towards a person's attitude (Wawan, et, al., 2018).

This study is not in line with the research of Fitriani & Darmawi 2022, the results of the Chi-square statistical test obtained a p-value = 0.69> 0.00 indicating that there is no correlation between maternal knowledge and the incidence of stunting in toddlers with results. The researchers hypothesized that because most mothers are high school graduates, they have greater access and understanding of information. However, good knowledge and science cannot guarantee a person's life, nor can it guarantee good attitudes and behavior. If the mother is aware but her financial situation is not enough to eat, then there is no balance to implement a healthy lifestyle (Fitriani and Darmawi, 2022).

Understanding the key mechanisms of behavioral change to improve nutritional status, so that knowledge can be used to influence behavioral change. Mothers' knowledge of nutrition determines mothers' attitudes and behaviors to ensure the right type of food for children's growth and development (Yuliana, et, al., 2019).

A mother's knowledge is the foundation for a child's positive development. Especially the problem of preparing and serving food for the family. Knowledge is an indirect factor that influences children's eating habits and this is important. Malnutrition in children/toddlers is caused by a lack of understanding of nutritional needs. Knowledge about nutritious food is the most important mechanism for behavioral change to improve nutritional status, so knowledge is an intrinsic factor that influences behavioral change. Mothers' nutritional knowledge determines mothers' attitudes and behavior in preparing food, as well as the right types and quantities, to encourage child growth and development and prevent stunting (Olesa, et, al., 2018).

5. The relationship between exclusive breastfeeding and stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

Based on table 4.13, from a total of 35 respondents, those who provided exclusive breastfeeding with very short stunting were 1 toddler (2.8%), short were 21 toddlers

(60%) and those who did not provide exclusive breastfeeding with very short stunting were 4 toddlers (11.4%), short were 9 toddlers (25.7%).

The results of the chi-square statistical test analysis obtained p = 0.05 <0.05, so Ha was accepted and Ho was rejected, meaning that there was a relationship between exclusive breastfeeding and the incidence of stunting in the working area of the Lagari Inpatient Health Center UPTD, Nabire Regency.

The results of the study indicate that there are mothers of toddlers in the working area of the Lagari Inpatient Health Center UPTD, most of whom provide exclusive breastfeeding. Even though babies are given exclusive breastfeeding at the age of 0 to 6 months, if the quality of breast milk is not good, the baby will not grow, develop, and can result in stunting in toddlers.

This study is in line with the research of Mirza Refky Pratama (2021), showing that the results of the chi-square test conducted to see the relationship between exclusive breastfeeding and the incidence of stunting obtained a p-value (p<0.05), meaning that there is a relationship between exclusive breastfeeding and the incidence of stunting.

Breast milk is the best food for babies. Mufadallah (2017), breast milk is milk produced by the mother and contains all the nutrients needed by the child for the child's growth and development. Exclusive breastfeeding is the provision of exclusive breastfeeding to babies for six months without complementary foods such as formula milk, orange juice, honey, tea juice, water and solid foods such as bananas, papaya, milk porridge, biscuits, rice porridge.

Exclusive breastfeeding is breast milk given to babies who have not received food since six months (Ema Yuliana and Indriani, 2022). Children who do not receive breast milk are at risk of not getting the nutrients needed for their growth and development. Growth failure causes stunting (Vivi Sumanti, et, al., 2021). The nutrition obtained from the birth of a baby can have a significant impact on its growth and development. Failure to carry out early initiation of breastfeeding (IMD), inability to provide separate breasts and early lactation are the causes of low growth. Factors that need to be considered in providing complementary foods (MP-ASI) are the quality, quantity and safety of the food provided (Ministry of Health, Indonesia, 2018).

Exclusively breastfed babies are babies who only get breast milk so they do not get liquid or solid food, even water, except for oral rehydration, vitamins, minerals, and medicines. The United Nation Children's Fund (UNICEF) and the World Health

Organization (WHO) recommend exclusive breastfeeding for at least six months (Kusomayanti and Nindia, 2017).

This study is in line with the study (Pratama, et, al., 2021) through the chi-square statistical test, a p value of 0.000 <0.05 was obtained, meaning that there is a relationship between the status of exclusive breastfeeding and the incidence of stunting in toddlers in Tulung Kakan Village, Bumiratu Nuban District, Central Lampung Regency in 2019.

The link between exclusive breastfeeding and stunting is in line with the theory that breastfeeding affects the nutritional status of children. Breast milk is the best food for six months. Breast milk alone can meet all the nutritional needs of children from birth to six years. Breast milk is not only an important nutrient needed for the growth and development of the child's brain and nerves, but also a protective substance that protects children from disease (Kumalasari, et, al., 2020).

Short stature (Stunting) in children must be taken seriously because it interferes with the physical and mental development of children. Stunting is associated with increased risk of disease and even death, as well as decreased motor development, cognitive, productivity, and number of diseases (Prihutama, et, al., 2018).

Short children are more susceptible to infectious diseases. As a result of the lack of breast milk in Indonesia, 5 million children/toddlers died due to malnutrition, so it can be said that the health and nutrition of Indonesian children are considered problematic. This condition is caused by the high child mortality rate each year, approximately 132,000 children die before reaching the age of one year. According to WHO, more than all child deaths are related to malnutrition and infectious diseases. In addition, malnutrition in children also has a negative impact on their growth and development, namely due to psychological and social problems and developmental problems (Vivi Sumanti Manalu, et, al., 2021).

This study is not in line with the study (Hasmaul Husana, et, al., 2023) with the chi-square test obtained P-value = 0.204, namely the α-value => 0.05, indicating that there is a relationship between exclusive breastfeeding of families and the incidence of stunting in toddlers aged 24-36 months in the Sukajaya Health Center Work Area, Sabang City. Exclusive breastfeeding can improve children's mental development, because the nutritional composition of breast milk is right, meets the needs of children, and exclusive mothers can meet their sufficiency for six months without additional food (Hasmaul Husana et, al., 2023).

The increasing incidence of stunting at the age of 6 months to 2 years indicates that Indonesian children are not getting enough food and breast milk. More than 40% of babies receive complementary foods since childhood (before 6 months), children aged 6 to 24 months as many as 40% of children have not changed before, 28% of children do not know where to eat. Consequently, all these children receive less food and experience malnutrition (UNICEF, 2020).

Babies are exclusively breastfed but are not safe and unsafe because the quality of breast milk is poor due to poor diet, stress, anxiety, smoking and use of birth control pills. This includes practical reasons such as poor hygiene, such as changing underwear, not washing breasts before breastfeeding, and not washing hands after breastfeeding. Low access to healthy/natural food patterns is one of the causes because the diet is low in vitamins and minerals and lacks animal protein sources. Maternal problems and inappropriate parenting patterns, especially child support, are short-term problems. Mothers who do not feed their children properly, especially breastfeeding, are at risk of stunted growth. Mothers who are malnourished during adolescence, even during pregnancy and breastfeeding, can affect the physical and brain development of children. Other causes include maternal disease, teenage pregnancy, maternal mental illness, premature birth and high blood pressure, and limited access to health services, including access to clean water (Maryam, et, al., 2023).

4. CONCLUSION AND SUGGESTIONS

Conclusion

1. There is no relationship between Education and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency with a p-Value (0.82) > 0.05.
2. There is no relationship between Employment and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency, p-Value (0.09) > 0.05.
3. There is a relationship between Knowledge and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD p-Value (0.04) < 0.05
4. There is a relationship between Knowledge and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency with a p-value (0.05) < 0.05.
5. There is a relationship between Exclusive Breastfeeding and Stunting in the Work Area of the Lagari Inpatient Health Center UPTD, Nabire Regency with a p-Value (0.05) <0.05.

Suggestion

1. **For the Health Department**

   Create a program about stunting, especially the factors that influence stunting to reduce stunting rates.

2. **For Health Centers**

   It is necessary to increase outreach activities about stunting for mothers of toddlers to increase knowledge about stunting.

3. **For the Community**

   Mothers of toddlers should frequently take their toddlers to health services to find out their health status and need to implement good parenting patterns so that the child grows and develops optimally.

4. **For Further Researchers**

   Researchers hope that this study can be used as a basis for further research. Further research can choose different variables related to factors that influence stunting in toddlers and choose a wider location.

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