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FACTORS RELATED TO STUNTING INCIDENCE IN TODDLERS IN THE WORKING AREA OF THE WABOROBO HEALTH CENTER, BETOAMBARI DISTRICT, BAUBAU CITY IN 2023

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ABSTRACT

Stunting in children is the impact of nutritional deficiencies during the first thousand days of life. This causes irreversible disturbance of the child's physical development, thus causing a decrease in cognitive and motor skills and a decrease in work performance. The purpose of this study was to determine the factors associated with stunting in toddlers in the work area of the Waborobo Health Center, Betoambari District, BauBau City in 2023. The type of research used in this study was an analytic survey study by taking non-random cluster sampling using a cross-sectional study design. by using the chi-square test in the SPSS program. The population in this study was 136 people, while the sample was 99 people. The results of this study found that there was a significant relationship between energy intake (P Value = 0.011 <0.05), protein intake (P Value = 0.007 <0.05), calcium intake (P Value = 0.001 <0.05), and administration Exclusive breastfeeding (P Value = 0.001 <0.05) with stunting. The conclusions of this study show that there is a significant relationship between energy intake, protein intake, calcium intake, and exclusive breastfeeding with the incidence of stunting in toddlers in the work area of the Waborobo Health Center, Betoambari District, BauBau City in 2023. The research suggestion is that the puskesmas needs to provide personal education to pregnant women and mothers with toddlers regarding the importance of nutritional intake during pregnancy and the toddler's growth period, as well as providing education regarding the nutritional status of toddlers, especially stunting, to the community or cadres.

Keywords: *exclusive breastfeeding, toddlers, energy, calcium, protein, stunting*

INTRODUCTION

Stunting is a problem that Indonesia is currently facing. Stunting can be interpreted as a problem of malnutrition caused by a lack of intake for a long time so it can cause difficulties in achieving optimal physical and cognitive development in the future (Saragih, 2021). The state of stunting is presented by the z-score value of body length or height according to age <-2 SD (Rosmalina et al., 2018).

Based on analytical data published by UNICEF, WHO, and the World Bank Group, stunting is estimated to affect 22% or 149.2 million children under 5 years globally in 2020. This figure has increased from 2019 which shows that stunting globally affects 21 .3% or 144 million children. In 2020, more than half a percent globally of children under 5 years of age are stunted in the Asian Region with the highest stunting case rate of 53%, followed by the African Region with 41%. The largest cases were found in the Asian Region, namely as many as 79 million cases. Southeast Asia has the second highest ranking of stunting cases, namely 15.3 million, below South Asia which reached 54.3 million cases. Where Indonesia is ranked fifth with the highest prevalence of stunting under five after Pakistan, Nigeria, China, and India. Until now, the prevalence of stunting in South Asia is estimated at 38% (UNICEF, 2021).

The Ministry of Health of the Republic of Indonesia through the Health Research and Development Agency (Litbangkes), reports the results of the 2021 Indonesian Toddler

Nutrition Status (SSGI) study which describes a reduction in the stunting rate nationally. In general, it is known that the trend of nutritional status has decreased from year to year. Where the prevalence of stunting in 2019 was 27.7% to 24.4% in 2021, meaning there was a decrease in cases of stunting under five by 3.3%. However, evaluation is still needed, especially if the stunted rate (short for age) is linked to the wasted rate (thin for height) based on WHO provisions. So only Bali is the only province with a low stunted rate (good category), namely 10.9% (⩽ 20%) and waste by 3% (⩽ 5%). While provinces with low stunted and high wasted rates (chronic category), include Bangka Belitung, Lampung, Riau Islands, Yogyakarta, and DKI Jakarta. The province with high stunted and low wasted rates (acute category) is Bengkulu (Ministry of Health Research and Development Agency, Republic of Indonesia, 2022).

Based on the results of the Indonesian Nutrition Study (SSGI), in 2021 the prevalence of stunting under five (TB/U) by Province in Indonesia, namely Southeast Sulawesi, the prevalence of stunting is 30.2% and in 2022 the prevalence of stunting decreases by 27.7% from 32 provinces (Ministry of Health of the Republic of Indonesia Indonesia, 2021; Ministry of Health of the Republic of Indonesia, 2022)

Based on the results of the Indonesian Nutrition Study (SSGI), in 2021 the prevalence of stunting under five (TB/U) based on districts/cities in Southeast Sulawesi Province, BauBau City was ranked 8th with a prevalence of 27.6% (Ministry of Health of the Republic of Indonesia, 2021). In 2022 BauBau City is ranked 13th with a prevalence of 26.0% based on Regency/City (Ministry of Health of the Republic of Indonesia, 2022).

Based on data from the BauBau City Health Office in 2021, according to the District and the prevalence of stunting (TB/U) Health Centers, the highest cases were the Waborobo Health Center (53.5%), the second place was the Katobongke Health Center (46.6%), and in third place, namely the Kampeonaho Health Center (40.9%) from 8 Districts (BauBau City Health Office 2021).

Then based on data from the Waborobo Health Center in 2022 stunting (TB/U), with the target number of Waborobo Village 113 4 people and 17 toddlers (13.5%) experiencing stunting, and the target Labalawa Village with a target number of 138 people experiencing stunting 33 toddlers (24.8%), so the Waborobo Health Center has 50 toddlers affected by stunting (Waborobo Health Center, 2022).

Stunting is caused by many factors, and these factors are related to unbalanced food intake which is the main cause of stunting, which is related to the nutrients contained in food, namely carbohydrates, proteins, fats, minerals, vitamins, and water, in addition to the risk factors namely a history of low birth weight (LBW) and previous illnesses (Oktavianisya et al., 2021). The UNICEF framework explains the factors that cause malnutrition. The two direct causes of stunting are disease and nutritional intake. These two factors are related to parenting style, access to food, access to health services, and environmental sanitation. However, the basic cause of all of this is at the individual and household level, such as education level, and household income (Rosmalina et al., 2018).

Based on the results of observations and interviews with the head of the Waborobo Health Center, it was found that the parents' jobs varied, some worked as civil servants, self-employed, and construction workers and most worked as farmers and housewives. So, parents who work as farmers have very low incomes so it will be difficult to meet the nutritional intake needs

such as energy intake, protein intake, and calcium intake which will hinder growth and development in toddlers. This is influenced by the lack of knowledge of mothers about family nutrition, and parenting patterns of mothers towards children.

The general objective of this study is to determine the factors associated with stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, BauBau City in 2023.

METHOD

This type of research is observational research and the research design used is a cross-sectional study. This research will be carried out in the Work Area of the Waborobo Health Center which will take place April - May 2023. The population in this study were toddlers aged 0-59 months in the Work Area of the Waborobo Health Center as many as 136 toddlers and the data taken was from the Waborobo Health Center in the nutrition poly room. The research sample was calculated using the Lemeshow formula so that the sample size of this study was 56.44 rounded up to 56 toddlers plus 40% to overcome dropouts to 99 toddlers. Taking the type of sample in this study is using a non-random technique.

The data used in this research are primary data and secondary data. The primary data in this study were data on nutrient intake (energy, protein, and potassium) and exclusive breastfeeding. Secondary data for this study were obtained from the Head of the Waborobo Health Center in the form of the number of toddlers who would become respondents. The data analysis used in this research is univariate analysis and bivariate analysis. The data obtained is then presented in tabular form and interpreted for one variable independently.

RESULTS AND DISCUSSION

Characteristics of Respondents

Age

Table 1. Distribution of Respondents by Toddler Age in the Work Area of the Waborobo Health Center

Age	Total (n)	%
0-11 Months	28	28,3
12-59 Months	71	71,7
Total	**99**	**100%**

Based on Table 1. It is known that the average percentage of respondents is in the age group of 12-59 months as many as 71 people (71.7%), while the age of the smallest group of respondents is aged 0-11 months as many as 28 people (28.3%)

Gender

Table 2. Distribution of Respondents Based on the Gender of Toddlers in the Work Area of the Waborobo Health Center

Gender	Total (n)	%
Boy	46	46,5
Girl	53	53,5
Total	**99**	**100%**

Based on Table 2. It is known that of the 99 toddlers of the female sex, there were more, namely 53 toddlers (53.5%) compared to toddlers of the male sex, 46 toddlers (46.5%).

Univariate analysis

Stunt

Stunting is stunted growth due to long-term malnutrition with a PB/U Z-Score value of – 3 standard deviations (SD) to less than – 2 standard deviations (SD) and < - 3. The distribution of respondents based on the incidence of stunting in this study is presented in the table following:

Table 3 Distribution of Respondents Based on Stunting Incidents in the Work Area of the Waborobo Health Center

Stunting events (TB/U)	Total (n)	%
Stunting	34	34,3
Not Stunting	65	65,7
Total	**99**	**100%**

Based on table 3. It is known that out of 99 toddlers who are not stunted, there are 65 toddlers (65.7%). Meanwhile, there were 34 children under five (34.3%) who experienced stunting.

Energy

The amount of energy intake is the average consumed within 2 x 24 hours which contains energy for toddlers aged 0-5 months as much as 550 kcal, toddlers aged 6-11 months as much as 800 kcal, toddlers 12-36 months as much as 1350 kcal and toddlers 48-60 months as much as 1400 kcal compared to the RDA. The distribution of respondents based on energy intake in this study is presented in the following table:

Table 4. Distribution of Respondents Based on Energy Intake in the Work Area of the Waborobo Health Center

Energy Intake	Total (n)	%
Low	41	41,4
Enough	58	58,6
Total	**99**	**100%**

Based on table 4. It is known that out of 99 toddlers with adequate energy intake, there are 58 toddlers (58.6%). While energy sources with low energy intake are as many as 41 toddlers (41.4%).

Proteins

The amount of protein intake is the average consumed within 2 x 24 hours which contains protein for toddlers aged 0-5 months as much as 9 grams, toddlers aged 6-11 months as much as 15 grams, toddlers 12-36 months as much as 20 grams and toddlers 48-60 months as much as 25 grams compared to the RDA. The distribution of respondents based on protein intake in this study is presented in the following table:

Table 5 Distribution of Respondents Based on Protein Intake in the Work Area of the Waborobo Health Center

Protein Intake	Total (n)	%
Low	40	40,4
Enough	59	59,6
Total	**99**	**100%**

Based on table 5. It is known that out of 99 toddlers with adequate protein intake, there are 59 toddlers (59.6%). While protein sources with low protein intake are as many as 40 toddlers (40.4%).

Calcium

The amount of calcium intake is the average consumed within 2 x 24 hours which contains protein for toddlers aged 0-5 months as much as 200 mg, toddlers aged 6-11 months as much as 270 mg, toddlers 12-36 months as much as 650 mg, and toddlers 48-60 months as much as 1000 compared to the RDA. The distribution of respondents based on calcium intake in this study is presented in the following table:

Table 6 Distribution of Respondents Based on Calcium Intake in Toddlers in the Work Area of the Waborobo Health Center

Asupan Kalsium	Jumlah (n)	%
Rendah	44	44,4
Cukup	55	55,6
Total	**99**	**100%**

Based on table 6. It is known that out of 99 toddlers with adequate calcium intake, there are 55 toddlers (55.6%). While the sources of calcium with low calcium intake were 44 toddlers (44.4%).

Exclusive Breastfeeding

Exclusive breastfeeding is the provision of breast milk or breast milk for babies from birth to 6 months of age without being replaced by other drinks and foods. The distribution of respondents based on exclusive breastfeeding in this study is presented in the following table:

Table 7 Distribution of Respondents Based on Exclusive Breastfeeding in the Work Area of the Waborobo Health Center

Exclusive Breastfeeding	Total (n)	%
Non Exclusive Breastfeeding	57	57,6
Exclusive Breastfeeding	42	42,4
Total	**99**	**100%**

Based on table 7. It is known that of the 99 toddlers who did not get exclusive breastfeeding, there were 57 toddlers (57.6%). Meanwhile, there were 42 toddlers (42.4%) who received exclusive breastfeeding.

Bivariate analysis

Bivariate analysis is used to prove the research hypothesis between the independent variables and the dependent variable. The research variables were analyzed using the chi-square test to see the relationship between the independent variables, namely energy, protein, calcium intake, and exclusive breastfeeding, while the dependent variable was stunting.

The relationship between energy intake and the incidence of stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Table 8. The Relationship Between Energy Intake and Incidence of Stunting in Toddlers in the Work Area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Energy Intake	Stunting events				Total		*P Value*
	Stunting		*Normal*				
	n	*%*	*n*	*%*	*n*	*%*	
Low	20	20,2%	21	21,2%	41	41,4%	
Enough	14	14,1%	44	44,4%	58	58,6%	**0.011**
Total	**34**	**34,3%**	**65**	**65,7%**	**99**	**100%**	

Source: Primary Data, May 2023

Based on table 8. It can be seen that out of 99 toddlers, namely 41 toddlers, have low energy intake with children experiencing stunting, namely 20 toddlers (20.2%) and respondents who do not experience stunting (Normal), namely 21 toddlers (21.2%). While 58 toddlers have sufficient energy intake with 14 toddlers experiencing stunting (14.1%) and toddlers who are not stunted (Normal) namely 44 toddlers (44.4%). Based on the results of statistical tests using the Pearson Chi-Square Test, a value was obtained (P Value = 0.011 <α = 0.05) so that H1 was accepted, H0 was rejected, meaning that there is a significant relationship between energy intake and the incidence of stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, Kota BauBau.

The Relationship between Protein Intake and the Incidence of Stunting in Toddlers in the Work Area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Table 9. Relationship Between Protein Intake and Incidence of Stunting in Toddlers in the Working Area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Protein Intake	Stunting events				Total		*P Value*
	Stunting		*Normal*				
	n	*%*	*n*	*%*	*n*	*%*	
Low	20	20,2%	20	20,2%	40	40,4%	
Enough	14	14,1%	45	45,5%	59	59,6%	**0.007**
Total	**34**	**34,3%**	**65**	**65,7%**	**99**	**100%**	

Source: Primary Data, May 2023

Based on Table 9. It can be seen that out of 99 toddlers, namely 40 toddlers who have low protein intake, 20 toddlers (20.2%) are stunted and 20 toddlers are not stunted (Normal) are 20

toddlers (20.2%). %). Meanwhile, 59 toddlers had sufficient protein intake with 14 toddlers (14.1%) experiencing stunting and 45 toddlers (45.4%) not experiencing stunting (Normal). Based on the results of statistical tests using the Pearson Chi-Square Test, a value was obtained (P Value = 0.007 < α = 0.05) so that H1 was accepted, H0 was rejected, meaning that there is a significant relationship between protein intake and the incidence of stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, Kota BauBau.

Correlation between Calcium Intake and the incidence of stunting in toddlers in the Working Area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Table 10. The Relationship Between Calcium Intake and Stunting Incidence in Toddlers in the Working Area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Calcium Intake	**Stunting events**				**Total**		***P Value***
	Stunting		***Normal***				
	n	*%*	*n*	*%*	*n*	*%*	
Low	23	23,2%	21	21,2%	44	44,4%	
Enough	11	11,1%	44	44,4%	55	55,6%	**0.001**
Total	**34**	**34,3%**	**65**	**65,7%**	**99**	**100%**	

Source: Primary Data, May 2023

Based on table 10. It can be seen that out of 99 toddlers, namely 44 toddlers, have low calcium intake with children experiencing stunting, namely 23 toddlers (23.2%) and toddlers who are not stunted (Normal), namely 21 toddlers (21.2%). Meanwhile, 55 toddlers had sufficient calcium intake with 11 toddlers (11.1%) experiencing stunting and 44 toddlers (44.4%) not experiencing stunting (Normal). Based on the results of statistical tests using the Pearson Chi-Square Test, a value was obtained (P Value = 0.001 <α = 0.05) so that H1 was accepted, H0 was rejected, meaning that there is a significant relationship between calcium intake and the incidence of stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, Kota BauBau.

The relationship between exclusive breastfeeding and the incidence of stunting in toddlers in the working area of the Betoambari District Health Center, BauBau City, in 2023

Table 11. The relationship between exclusive breastfeeding and stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District, BauBau City in 2023

Breastfeeding	**Stunting events**				**Total**		***P Value***
	Stunting		***Normal***				
	n	*%*	*n*	*%*	*n*	*%*	
Non Exclusive Breastfeeding	22	22,2%	20	20,2%	42	42,4%	**0.001**
Exclusive Breastfeeding	12	12,1%	45	45,4%	57	57,6%	
Total	**34**	**34,3%**	**65**	**65,7%**	**99**	**100%**	

Source: Primary Data, May 2023

Based on Table 11. It can be seen that out of 99 toddlers, namely 42 toddlers did not get exclusive breastfeeding with 22 toddlers experiencing stunting (22.2%) and 20 toddlers (20.2%) not experiencing stunting (Normal). Meanwhile, 57 toddlers received exclusive breastfeeding with 12 toddlers (12.1%) experiencing stunting and 45 toddlers (44.4%) not experiencing stunting (Normal). Based on the results of statistical tests using the Pearson Chi-Square Test, a value was obtained (P Value = 0.001 <α = 0.05) so that H1 was accepted, H0 was rejected, meaning that there is a significant relationship between exclusive breastfeeding and the incidence of stunting in toddlers in the working area of the Waborobo Health Center, Betoambari District. Baubau City.

The Relationship Between Energy Intake and The Incidence of Stunting in Toddlers in The Working Area of The Waborobo Health Center, Betoambari District, Baubau City In 2023

Inadequate energy intake is associated with the risk of stunting in toddlers. Apart from causing poor nutritional status, energy intake is also related to the developmental level of stunting children. Toddlers with stunting have a low level of development compared to children who have normal nutritional status (Adani & Nindya, 2017).

Based on 2x24 hour food recall interviews, based on observations of the number of calories in energy intake of 1,290.05 with a percentage of intake (92.14%) that has sufficient RDA values ⩾70% with a toddler age range of 12-59 months. Then, the types of food most often consumed are white rice, rice porridge with a mixture of carrots, sun bananas and green beans with an average total energy intake of 265.5 kcal. It is also known that the condition of toddlers whose energy intake is sufficient is caused by the amount of food intake consumed by toddlers that meets the total calorie needs of the average energy intake. Meanwhile, the condition of toddlers whose energy intake is lacking is caused by consuming small amounts of food, appetite also affects the amount of food intake consumed by toddlers so that it affects the amount of energy intake in toddlers. adequacy of the energy intake needs of the toddler.

Meanwhile, toddlers who have sufficient energy intake but are still at risk of stunting, this is caused by the wrong way of feeding. The source of energy that toddler mothers often give is noodles as a source of carbohydrates. Noodles are not recommended for consumption by toddlers because they contain high levels of MSG. The sources of carbohydrates consumed can be varied or replaced with other types of carbohydrates, such as potatoes, sweet potatoes and corn which contain good protein for the growth of toddlers.

This is in line with research conducted by (Jati & Nindya, 2017) which states that inadequate energy intake is associated with the risk of stunting in toddlers. Apart from causing poor nutritional status, energy intake is also related to the developmental level of stunting children. Children under five with stunting have a low level of development compared to children who have normal nutritional status.

Insufficient energy intake can cause an energy imbalance. Prolonged energy imbalance causes nutritional problems. Toddlers with low levels of energy intake affect the function and structure of brain development and can result in stunted growth and cognitive development.

Energy derived from food can be obtained from several macronutrients, namely sources of carbohydrates, protein, and fat. Energy has function as a support for growth processes, and body metabolism and plays a role in the process of physical activity (Ayuningtyas et al., 2018).

The Relationship Between Protein Intake and The Incidence of Stunting in Toddlers in The Working Area of the Waborobo Health Center, Betoambari District, Baubau City, in 2023

The protein content in toddler food must be a concern for the family, the habit of consuming protein is the most dominant factor influencing the incidence of stunting in toddlers. Continuous protein deficiency will cause symptoms, namely poor growth, decreased immune system, and susceptibility to disease. Low body length usually indicates a state of malnutrition due to a lack of protein. Impaired growth (Growth Faltering) indicates a risk of experiencing stunting in the next age period (Saragih, 2021).

Based on 2x24-hour food recall interviews, based on observations of the number of calories in protein intake of 24.15 with a percentage of intake (96.6%) that has sufficient RDA values ⩾80% with a toddler age range of 12-59 months. Then, the types of food most often consumed are mackerel, tuna, fried fish, and eggs with an average protein intake of 18.6 g. It is also known that toddlers who have sufficient protein intake consume foods that contain high protein such as fish, eggs, tofu, tempeh, and so on and other conditions that have an influence on the adequacy of protein in toddlers is the level of parents' knowledge of nutritional needs in toddlers. Whereas toddlers who have low protein intake are caused by a lack of appetite and most toddlers are picky about food, making it difficult for parents to complete the nutritional needs of toddlers because of economic factors, and apart from toddlers parents are also often given snacks such as packaged snacks that are sold in stalls, and always follow the wishes of toddlers who consume instant noodles with the reason that their children want to eat, this is the reason for a lack of protein intake in toddlers will experience slower growth compared to toddlers with sufficient protein intake and will be at risk of stunting.

This is in line with research conducted by (Aisyah & Yunianto, 2021) in Karanganyar Village, Kawalu District, Tasikmalaya City which shows protein intake is related to the incidence of stunting in toddlers (24-59) in Karanganyar Village, Kawalu District, Tasikmalaya City with OR = 5.160, meaning toddlers with Inadequate protein intake has a risk of 5,160 times experiencing stunting compared to toddlers with sufficient protein intake.

Protein deficiency or lack of protein intake is caused by the variety of foods consumed is very less. From working mothers' days and holidays, the types and types of food consumed are almost the same, the level of consumption of children who are less than the recommended adequacy rate is more at risk of becoming stunted compared to children whose level of consumption of nutrients is more than 80% (Simanjuntak, 2010).

Protein has a major role in growth in toddlers. Protein intake is related to effects on plasma levels of insulin growth factor I (IGF-I), bone matrix protein, and growth factors, as well as calcium and phosphorus which play an important role in bone formation (Sari et al., 2016). This is consistent with research which states that stunted children have a lower protein intake compared to normal children (Hary Cahyati et al., 2019). Protein intake is related to serum transthyretin (TTR), serum amino acids, and serum insulin-like growth factor-1 (IGF-1) which

have a role in the growth and linear development of toddlers. Therefore, quality protein intake is needed to increase the linear growth of stunted toddlers (Sari et al., 2016).

The Relationship Between Calcium Intake and the Incidence of Stunting in Toddlers in the Working Area of the Waborobo Health Center, Betoambari District, Baubau City, in 2023

Based on 2x24-hour food recall interviews, based on observations of the number of calories in calcium intake of 994.6 with a percentage of intake (99.46%) that has sufficient RDA values ⩾80% for toddlers aged 12-59 months. Then, the types of food most often consumed are spinach and moringa vegetables with an average amount of calcium intake of 34.4 mg. It is also known that toddlers have sufficient calcium intake because toddlers consume foods or drinks that contain high calcium such as milk. Whereas toddlers who have low calcium intake are caused by a lack of consuming foods or drinks that are high in calcium such as milk, cheese, yogurt, and other fish. Where the food is still lacking for consumption in the Work Area of the Waborobo Health Center due to economic factors the parents of toddlers are mostly farmers and housewives.

Meanwhile, toddlers who have adequate calcium intake but are still at risk of stunting are caused by wrong feeding patterns. One source of calcium is formula milk which is often given by toddler mothers as a substitute for breast milk. However, this formula has a high enough sugar content that makes children addicted and not in the mood to eat other healthy foods.

This is in line with research conducted by (Wati, 2021) showing that there is a relationship between calcium intake and stunting. Calcium is also related to the incidence of stunting. In addition, OR = 5.400 (95% CI = 0.941-30.980), meaning that the risk of stunting in toddlers with insufficient calcium intake is 5.400 times greater than toddlers with sufficient calcium intake.

Deficiency of micronutrients as a cause of intellectual disability has become a concern, especially in developing countries with low average incomes. Micronutrients that have been proven to be very important for preventing stunting are zinc, iron, vitamin A and iodine. However, several other micronutrients such as vitamin D, calcium and phosphorus also play a very important role in children's linear growth (Chairunnisa et al., 2018).

Adequate calcium intake is needed to maintain several physiological functions of the body, especially in terms of bone growth and development. This is very important to note in children who are still growing, because it can affect their growth and health condition as adults and in their next lives. Calcium deficiency will affect the bones which have an impact on growth disorders. In infants, a lack of calcium in the bones can cause bone abnormalities, whereas in children, a lack of calcium deposits can cause growth retardation (Chairunnisa et al., 2018).

The Relationship Between Exclusive Breastfeeding and the Incidence of Stunting in Toddlers in The Working Area of the Waborobo Health Center, Betoambari District, Baubau City in 2023

Breast milk is the food needed by babies and has a complete content to meet the needs of babies because the nutritional content in breast milk is unmatched by artificial food if given during the first 6 months without additional food. Breastfeeding is very important because it

contains nutrients that are needed for optimal growth and development. If there are problems with the child's growth and development, it can be caused because the child does not get enough nutrition which can be given with exclusive breastfeeding which causes stunting in the child (Tessema et al., 2018).

Based on field observations, it is known that the conditions that cause mothers not to give exclusive breastfeeding to their babies in the Waborobo Health Center Work Area are giving complementary foods to toddlers who are under 6 months old and to newborns being given formula milk for help during breast milk (ASI). that doesn't come out, babies who don't want to receive breast milk and prefer formula milk.

Then based on observations in the field it is known that some toddlers get food other than breast milk at the age of <6 months, namely as many as 15 toddlers. The impact of this feeding is that when babies are given complementary feeding before the age of 6 months, they will be at risk of developing infectious diseases due to bacterial contamination, especially when they are in an environment with contaminated water and their mothers cannot provide quality complementary foods, be it drinking bottles that are not sterile, water that is not boiling, cooking utensils and eating utensils that are not clean (SJMJ et al., 2020). The introduction of solid food at the age of less than 6 months is not recommended because developmentally the child is not yet ready enough to accept solid food and of course causes exclusive breastfeeding (Chiang et al., 2020).

This is in line with research conducted by (SJMJ et al., 2020), showing that there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers. Exclusive breastfeeding has a very important role in preventing toddlers from experiencing stunting. Breastfeeding is given to children up to 6 months of age, in this case, not providing other additional food to children. In this study, mothers who did not provide exclusive breastfeeding to their children caused stunting, not giving exclusive breastfeeding to their children was also caused by a lack of knowledge of mothers about exclusive breastfeeding.

One of the benefits of exclusive breastfeeding is to support the growth of the baby because breast milk contains high calcium compared to the calcium content in formula milk (Ministry of Health RI, 2016). Exclusive breastfeeding contains antibodies that can make the baby's immune system better than babies who are not given exclusive breastfeeding so babies rarely suffer from illness or nutritional problems. Imbalance in nutritional fulfillment can have a negative impact on the quality of human resources as a result of not being optimal in the growth and development of infants (Bahriyah et al., 2017).

Exclusive breastfeeding is given before 6 months because the baby's digestive system before 6 months is not perfect, the function of the baby's digestive tract is not ready to receive food or process food. When there is food other than breast milk, the digestive tract will experience digestive disorders which are characterized by diarrhea or difficulty defecating (Simbolon, 2019). Toddlers who do not get exclusive breastfeeding tend to have less nutritional intake and can be at risk of stunting (Elba & Putri, 2021).

CONCLUSION

Based on the results of the research and discussion, it is concluded that there is a relationship between Energy Intake and the incidence of stunting in toddlers in the Working Area of the Waborobo Health Center, Betoambari District, BauBau City, in 2023. There is a relationship

between Protein Intake and the incidence of stunting in toddlers in the Working Area of the Waborobo Health Center, Betoambari District, BauBau City Year 2023. There is a relationship between calcium intake and the incidence of stunting in toddlers in the Work Area of the Waborobo Health Center, Betoambari District, BauBau City, in 2023. There is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers in the Work Area of the Betoambari District Health Center, BauBau City, in 2023.

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