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FACTORS ASSOCIATED WITH STUNTING INCIDENCE BASED ON CHILD FACTORS IN TODDLERS IN THE WAY DENTE HEALTH CENTER WORKING AREA TULANG BAWANG DISTRICT

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ABSTRAK : FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN INSIDENSI STUNTING BERDASARKAN FAKTOR ANAK PADA BALITA DI WILAYAH KERJA PUSAT KESEHATAN WAY DENTE, KECAMATAN TULANG BAWANG

Stunting adalah kondisi kekurangan gizi yang berlangsung terus-menerus dan terjadi dalam jangka waktu lama. Stunting dapat disebabkan oleh faktor ibu atau anak. Berdasarkan data dari Kabupaten Tulang Bawang tahun 2019, kejadian stunting adalah 346 anak, pada tahun 2020 kejadian stunting mencapai 27% dari 3.680 anak di bawah lima tahun dengan total 994 anak yang tersebar di 10 desa. Tujuan penelitian ini adalah untuk mengetahui faktor-faktor yang berhubungan dengan kejadian stunting berdasarkan faktor anak pada balita di Puskesmas Way Dente, Kabupaten Tulang Bawang pada tahun 2022.

Penelitian kuantitatif dengan desain cross sectional. Populasi dalam penelitian ini adalah seluruh anak di bawah lima tahun yang tercatat di Puskesmas Way Dente, Kecamatan Dente Teladas, Kabupaten Tulang Bawang, berjumlah 810 orang dengan sampel sebanyak 268 responden, sampel diambil dengan metode accidental sampling. Penelitian ini dilakukan di wilayah kerja Puskesmas Way Dente, Kabupaten Tulang Bawang pada bulan Februari-Juli 2022. Pengumpulan data menggunakan kuesioner, analisis data dilakukan secara univariat, bivariat, dan multivariat.

Hasil penelitian menggunakan analisis bivariat menunjukkan bahwa terdapat hubungan antara riwayat penyakit menular (p-value = 0,002), pemberian ASI eksklusif (p-value = 0,010), tidak ada hubungan antara panjang badan bayi saat lahir (p-value = 0,411), jenis kelamin (p-value = 0,886), dan berat badan bayi saat lahir (p-value = 1,000) dengan kejadian stunting berdasarkan faktor anak pada balita di wilayah kerja Puskesmas Way Dente, Kabupaten Tulang Bawang tahun 2022. Hasil analisis multivariat menunjukkan bahwa faktor yang paling berpengaruh terhadap kejadian stunting di wilayah kerja Puskesmas Way Dente tahun 2022 adalah penyakit menular (p-value = 0,002). Saran yang diberikan adalah konseling tentang pemberian ASI eksklusif kepada orang tua dan keluarga, serta praktik pencegahan infeksi pada balita di wilayah kerja Puskesmas Way Dente.

Kata kunci: Kejadian Stunting pada Balita

ABSTRACT

Stunting is a state of malnutrition that lasts continuously and occurs over a long period of time. Stunting can be caused by maternal or child factors. Based on data from Tulang Bawang district in 2019, the incidence of stunting was 346 children, in 2020 the incidence of stunting reached 27% of 3,680 children under five with a total of 994 children spread across 10 villages. The purpose of this study is to determine the factors associated with the incidence of stunting based on child factors in toddlers in the Way Dente Public Health Center, Tulang Bawang Regency in 2022.

Quantitative research with cross sectional design. The population in this study were all children under five who were recorded at the Way Dente Health Center, Dente Teladas District, Tulang Bawang Regency, amounting to 810 people with a sample of 268 respondents, the sample was taken by accidental sampling. The study was carried out in the working area of the Way Dente Health Center, Tulang Bawang Regency in February-July 2022. Data collection used a questionnaire, data analysis was univariate, bivariate and multivariate.

The results of the study using bivariate analysis showed that there was a relationship between a history of infectious disease (p-value = 0.002),exclusive breastfeeding (p-value = 0.010), there is no relationship between the length of the baby's body at birth (p-value = 0.411), gender (p-value = 0.886), and baby's weight at birth (p-value = 1,000) with the incidence of stunting based on the child factor in toddlers in the working area of the Way Dente Health Center, Tulang Bawang Regency in 2022. The results of the multivariate analysis obtained

that the most influential factors with the incidence of stunting in the working area of the Way Dente Health Center in 2022 were infectious diseases (p-value = 0.002). The advice given is counseling about exclusive breastfeeding to parents and families, as well as infection prevention practices in toddlers in the Way Dente Health Center Work Area.

Keywords: Stunting Incident To Toddler

INTRODUCTION

Stunting(Dwarf) is a condition where toddlers have a length or height that is less than their age. This condition is measured by a length or height that is more than minus two standard deviations of the WHO child growth standard median. Stunting toddlers is a chronic nutritional problem that will have difficulty in achieving optimal physical and cognitive development(Waroh, 2019). The problem of stunting nutrition in toddlers can hamper child development, with negative impacts that will take place in the next life such as intellectual decline, vulnerability to non-communicable diseases, decreased productivity to cause poverty and the risk of giving birth to babies with low birth weight (Ruaida, 2018).

According to the Decree of the Minister of Health Number 1995/MENKES/SK/XII/2010 concerning Anthropometric Standards for Assessment of Child Nutritional Status, the definition of short and very short is nutritional status based on the index of Body Length for Age (PB/U) or Height for Age (TB). /U) which is the equivalent of the terms undernutrition status (short) and severely undernutrition status (very short). Stunting toddlers can be identified with the 2005 WHO-MGRS (Multicentre Growth Reference Study) standard, the z-score value is less than -2SD and is categorized as very short if the z-score value is less than -3SD (Ministry of Health, 2017)

*Stunting*affects around 22.9% or 154.8 million children under 5 years of age worldwide, in Asia as many as 87 million children experience stunting, in Africa as many as 59 million children experience stunting, in Latin America and the Caribbean as many as 6 million children experience stunting. the current trend continues, it is estimated that as many as 127 million children under 5 years will be stunted by 2025. Therefore, further investment and action is needed to reduce this number (Hidayanti, 2021).

Data on the prevalence of stunting under five collected by the World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in the Southeast Asia/South-East Asia Regional (SEAR) region.The incidence of stunting (short) toddlers is a major nutritional problem faced by Indonesia. The prevalence of short toddlers has increased from 2016 which was 27.5% to 29.6% in 2017 (Indonesian Ministry of Health, 2018).

Lampung Province, based on riskesdas data In (2018), data at the Lampung Province district level is above the national average, which is 42.64%, the most stunting cases are in Tulang Bawang District with a prevalence of 52.8%, then West Lampung with a prevalence of 37.3% , and 35.1% bid. (Lampung Provincial Health Office, 2018). Based on data from the Tulang Bawang district in 2019, the incidence of stunting was 346 children, in 2020 the incidence of stunting reached 27% of 3,680 children under five with a total of 994 toddlers spread over 10 villages (Dinkes Tulang Bawang, 2020).

*Stunting*Malnutrition is a state of malnutrition that lasts continuously and occurs over a long period of time. Stunting is caused by various factors. The results of previous studies stated that the factors causing stunting were poor nutritional intake, low birth weight of children, maternal height, infectious diseases and family economic status. Stunting has started before birth due to poor nutrition during pregnancy, poor diet, poor food quality and frequent frequent illnesses. Stunting is closely related to exclusive breastfeeding and complementary feeding. The incidence of stunting under five is lower in infants who are exclusively breastfed (Aangkat, 2018).

According to UNICEF, growth in children under five is influenced by direct factors including energy intake, protein intake, low birth weight, and health conditions such as infectious diseases and indirect factors include exclusive breastfeeding, gender of toddlers, mother's height, level of maternal education and economic status (Savita, 2020).

*Stunting*It can also occur as a consequence of repeated infections thereby worsening the nutritional status of children. Interaction between malnutrition and infectionis a reciprocal state that influences each other. Malnutrition and infection can coexist. Infection can lead to malnutrition, whereas malnutrition can increase the risk of infection. Infectious diseases that are at risk in the first 2

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years of age for stunting are diarrheal diseases and ARI. In addition, children who have diarrhea have a shorter height of 0.38 cm than children who do not have diarrhea (Abdul, 2020).

Babies with LBW have a greater risk of experiencing developmental and growth disorders in childhood. Children up to the age of 2 years with a history of LBW have a risk of experiencing growth disorders and will continue in the first 5 years of life if it is not balanced with more stimulation. Premature and low birth weight babies who can survive in the first 2 years of life have a risk of malnutrition and stunting (Aangkat, 2018).

Stunting data in the Tulang Bawang District in 2021 was obtained by the Penwartama Public Health Center with 7 stunting, Gedongmeneng Health Center with 7 stunting, Way Dente Health Center with 10 stunting, Aji Baru Health Center with 1 stunting (Profile of Tulang Bawang, 2021).

Based on data from the Way Dente Health Center, it is known that in 2019 there were 21 children under the category of very short toddlers and 160 short toddlers. Way Dente Health Center Nutrition, 2020).

RESEARCH METHODS

This research is a quantitative research with cross sectional research design. The data used in this study is primary data. The target of this research is mothers who have children (toddlers) aged 12-59 months. The study was conducted at the Way Dente Health Center, Dente Teladas District, Tulang Bawang Regency in February-July 2022. Stunting was the dependent variable while the independent variables studied were infectious diseases, gender, birth weight of the baby, baby's length and exclusive breastfeeding. data collection using a questionnaire, data analysis univariate, bivariate and multivariate.

RESEARCH RESULTS AND DISCUSSION

Univariate Analysis

Table 1
Distribution of sex frequency, history of infectious diseases, birth weight, body length at birth, history of breastfeeding, stunting under five at Way Dente Health Center, Dente Teladas District, Tulang Bawang Regency in 2022

Category	N	%
Stunting		
Stunting	75	28.0
Not stunting	193	72.0
History of infectious disease		
Ever existed	158	59.0
Never	110	41.0
Gender		
Woman	118	44.0
Man	150	56.0
newborn baby weight		
Abnormal	3	1.1
Normal	265	98.9
Exclusive breastfeeding		
Not exclusive breastfeeding	177	66.0
exclusive breastfeeding	91	34.0
Body length at birth		
Abnormal	21	7.8
Normal	247	92.2

Based on table 1, it is known that 193 (72.0%), respondents with a history of infectious disease had 158 (59.0%), and 150 male respondents.

(56.0%), respondents with normal newborn weight were 265 (98.9%), respondents with non-exclusive breastfeeding were 177 (66.0%), and respondents with normal birth length were 247 (92.2%).

Bivariate Analysis

Based on table 2, it is known that out of 118 female respondents, 32 (27.1%) experienced stunting and 86 (72.9%) did not experience stunting. Of the 150 male respondents, 43 (28.7%) were stunted and 107 (71.3%) were not stunted.

Table 2
The relationship between sex and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Gender	*Stunting*				N	%	*p-value*	OR 95% CI
	Stunting		No Stunting					
	n	%	N	%				
Woman	32	27.1	86	72.9	118	100.0	0.886	0.926 (0.540-1.586)
Man	43	28.7	107	71.3	150	100.0		

The results of the statistical test showed p-value = 0.886, which means p>α (0.05), to the conclusion that there is no relationship between sex and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Table 3
The relationship between a history of infectious disease and the incidence of stunting based on factors in children under five in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

History of infectious disease	*Stunting*				N	%	*p-value*	OR 95% CI
	Stunting		No Stunting					
	n	%	N	%				
Ever existed	56	35.4	102	64.6	158	100.0	0.002	2,630 (1,454-4,754)
There never was	19	17.3	91	82.7	110	100.0		

Based on table 3, it is known that from 158 respondents with a history of disease, 56 (35.4%) experienced stunting and 102 (64.6%) did not experience stunting. Of the 110 respondents with no history of disease, 19 (17.3%) experienced stunting and 91 (82.7%) did not experience stunting.

The results of the statistical test showed p-value = 0.002, which means p<α (0.05), until it was concluded that there was a relationship between a history of infectious disease and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022 .With OR . value2.6means respondents withHave you ever had a history of illness?have risk2.6 timesgreater risk of experiencing stunting when compared to respondents with noHave you ever had a history of illness?.

Table 4
The relationship between exclusive breastfeeding and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Exclusive breastfeeding	*Stunting*				N	%	*p-value*	OR 95% CI
	Stunting		No Stunting					
	n	%	N	%				
Not exclusive	59	33.3	118	66.7	177	100.0	0.010	2,344 (1,256-4,373)
Exclusive breastfeeding	16	17.6	75	82.4	91	100.0		

Based on table 4.4, it is known that from 177 respondents with non-exclusive breastfeeding, 59 (33.3%) experienced stunting and 118 (66.7%) did not experience stunting. Of the 91 respondents with exclusive breastfeeding, 16 (17.6%) experienced stunting and 75 (82.4%) did not experience stunting.

The results of the statistical test showed p-value = 0.010, which means p <α (0.05), to the conclusion that there is a relationship between exclusive breastfeeding and the incidence of stunting based on child factors in toddlers in the Way Dente Health Center, Tulang Bawang Regency in 2022 .With OR . value2.3means the respondent by givingBreastfeeding is not exclusivehave risk2.3 timesgreater risk of experiencing stunting when compared to respondents withexclusive breastfeeding.

Table 5
The relationship between baby weight at birth and the incidence of stunting based on child factors in toddlers in the Way Dente Public Health Center, Tulang Bawang Regency in 2022

Baby's birth weight	*Stunting*				N	%	*p-value*	OR 95% CI
	Stunting		No Stunting					
	N	%	N	%				
Abnormal	1	33.3	2	66.7	3	100.0	1,000	1,291 (0.115-14447)
Normal	74	27.9	191	72.1	265	100.0		

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Based on table 5, it is known that from 3 respondents with abnormal birth weight, 1 (33.3%) experienced stunting and 2 (66.7%) did not experience stunting. Of the 265 respondents with normal birth weight babies, 74 (27.9%) were stunted and 191 (72.1%) were not stunted.

The results of the statistical test showed that p-value = 1,000, which means p>α (0.05), to the conclusion that there is no relationshipbaby's weight at birth withstunting incidence based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Table 6
The relationship between the length of the baby's body at birth and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Baby's birth weight	*Stunting*				N	%	*p-value*	OR 95% CI
	Stunting		No Stunting					
	N	%	N	%				
Abnormal	1	33.3	2	66.7	3	100.0	1,000	1,291 (0.115-14447)
Normal	74	27.9	191	72.1	265	100.0		

Based on table 4.6, it is known that from 21 respondents with abnormal birth length, 8 (38.1%) experienced stunting and 13 (61.9%) did not experience stunting. Of the 247 respondents with normal birth length, 67 (27.1%) experienced stunting and 180 (72.9%) did not experience stunting.

The results of the statistical test showed that p-value = 0.411, which means p>α (0.05), to the conclusion that there is no long relationshipbaby's body at birth withstunting incidence based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Multivariate Analysis

Based on table 7 above, the final multivariate model is known that infection is the dominant factor which has the highest OR value of 2,392. After being controlled with the variable ASI

Table 7
Late-stage multiple logistic regression multivariate model

Variable	Sig.	OR	95% CIfor OR	
			Lower	Upper
breast milk	0.025	2.070	1.095	3.910
Infection	0.004	2,392	1.312	4.363

DISCUSSION

The relationship between sex and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Based on the results of the statistical test, the p-value = 0.886, which means p>α (0.05), to the conclusion that there is no relationship between sex and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022 .

In line with Hasanah's research (2019) From the results of statistical tests with Chi-square results obtained p-value = 0.649 which means that there is no relationship between gender and the incidence of stunting in Toddlers in the Working Area of the Kotagede Health Center I. Savita's research (2020) Test results This statistically obtained p-value = 0.874 0.05, this result can be concluded that there is no significant relationship between the sex of children under five and the incidence of stunting.

Metabolically, muscle is more active than fat, so muscle will require proportionally higher energy than fat, thus, men and women with the same height, weight and age have different body compositions, so their energy needs and the nutrition will also be differentThis condition can occur because of differences in eating practices given by parents. The risk factor that influences the incidence of stunting is male children (Puspito, 2020).

From the results of the research conducted, theThe researcher argues that there is no relationship between sex and the incidence of stunting with a p value > 0.05 (0.886). However, from the results of the calculation, it was found that the percentage of males experiencing stunting was 28.7% greater than females (27.1%). Gender determines the nutritional needs of a person so that there is a relationship between nutritional status and gender. The difference in the amount of nutritional needs is influenced by differences in body composition between men and women. So the amount of intake that must be consumed is even more. However, this is not one of the risk factors that always makes men more stunted than women.

The relationship between a history of infectious disease and the incidence of stunting based on factors in children under five in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Based on the results of statistical tests, it was found that p-value = 0.002, which means p<α (0.05), to the conclusion that there is a relationship between a history of infectious disease and the incidence of stunting based on child factors in toddlers in the Way Dente Health Center, Tulang Bawang Regency in 2022. With an OR value of 2.6, it means that respondents with a history of disease have a 2.6 times greater risk of experiencing stunting when compared to respondents with no history of disease.

*Stunting*can also occur as a consequence of repeated infections that worsen the nutritional status of children. The interaction between malnutrition and infection is a reciprocal state that influences each other. Malnutrition and infection can coexist. Infection can lead to malnutrition, whereas malnutrition can increase the risk of infection. Infectious diseases that are at risk in the first 2 years of age for stunting are diarrheal diseases and ARI. In addition, children who have diarrhea have a shorter height of 0.38 cm than children who do not have diarrhea (Abdul, 2020).

Infectious diseases are diseases caused by pathogenic microbes, and are very dynamic. In general, the disease process involves three interacting factors, namely: disease-causing factors (agents), human or host factors, and environmental factors. World Health Statistics data shows that more than 70% of deaths, especially under-five children, are caused by infectious diseases (such as diarrhea, pneumonia, measles, malaria) and malnutrition. According to UNICEF, infectious diseases are the leading cause of death. Of the 9 million deaths in children under five per year in the world, more than 2 million of them die from ARI (UNICEF, 2017)

Infectious diseases that often suffer are diarrhea, typhoid fever, dengue fever, pneumonia. This shows that infectious diseases must be diagnosed quickly so that they do not get worse. Infectious diseases are infectious diseases that easily attack children, because children do not have a good immune system. Diarrhea, typhoid fever, dengue fever, upper respiratory tract infections (influenza, tonsillitis, sore throat), pneumonia, and fever of unknown cause (febrile observation) are infectious diseases that are included in the 10 most hospital diseases. in Indonesia (Mustagof, 2015).

According to Yusrianto (2010) the fulfillment of nutrition affects the health and endurance of toddlers. If the nutrition is good, the risk of toddlers getting disease decreases. The immune system called immunoglobulin comes from protein. So if there is little or no protein intake, the immune factor will not be formed. The poorer the nutrition, the weaker the immune system, the more frequent the infection, the lower the appetite and the lower the immune system. Likewise, according to UNICEF (1998) in addition to inadequate intake of nutrients, illness is one of the factors causing malnutrition in children under five. Toddlers who suffer from illness for a relatively long time will experience weight loss which has an impact on the nutritional status of the toddler.

This study is in line with Subroto's (2021) research. The results of the analysis using chi-square, obtained P-Value = 0.000 so that P-Value <α (0.000 <0.05), it can be concluded that there is a relationship between a history of infectious disease and the incidence of stunting in children aged 12 - 59 months. Sutriyawan's research (2020) shows that there is a relationship between a history of infectious diseases and the incidence of stunting in children under five (p = 0.000).

From the results of research that has been carried out in the work area of the Way Dente Health Center, the diseases that are often suffered by toddlers are ARI and diarrhea. According to researchers, a history of infectious diseases is associated with stunting, because infectious diseases can affect the growth and development of toddlers. The high incidence of infection can be related to the practice of giving MP ASI that is not timely, where the results obtained are only 34% of mothers who give exclusive breastfeeding.

The relationship between exclusive breastfeeding and the incidence of stunting

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based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Based on the results of statistical tests, it was found that p-value = 0.010, which means p <α (0.05), to the conclusion that there is a relationship between exclusive breastfeeding and the incidence of stunting based on child factors in toddlers in the Way Dente Health Center, Tulang Bawang Regency in 2022 With an OR value of 2.3, it means that respondents with non-exclusive breastfeeding have a 2.3 times greater risk of experiencing stunting compared to respondents with exclusive breastfeeding.

The nutritional content of breast milk includes energy which has a very large contribution from protein, carbohydrates and fat. Nutrients such as vitamin A, vitamin D, vitamin B6, calcium, iron and zinc are nutritional content in breast milk needed by children. Iron deficiency can lead to cognitive and physical impairment and an increased risk of death. Iron plays the role of circulating oxygen to all body tissues. If oxygenation to bone tissue is reduced, then bones will not be able to grow optimally. So that toddlers who have iron deficiency can be at risk of stunting. Changes in the pattern of feeding, initially only given breast milk into solid food or formula as a cause of failure to grow and then develop into stunting (Lamid, 2015).

In line with Indrawati's research (2016) there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers 2-3 years - value (0.000 < 0.05). SJMJ Research (2020) The results of the study used the chi-square test and continued using the odds ratio test. The results of the chi-square test p = 0.000 (0.000 < 0.05), this shows that there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers. Handayani's research (2019) The results of the chi square test obtained a p value of 0.000 with a value of 0.05 and an r value of 0.609. Because the p value < 0.05, there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers aged 24-36 months in Watugajah Village, Gunungkidul Regency, Yogyakarta.

Researchers believe that the practice of breastfeeding or exclusive breastfeeding is one way to reduce stunting. Where from the data, the percentage of stunting toddlers who were not given exclusive breastfeeding was 33.3%, while children who were given exclusive breastfeeding who experienced stunting were 17.6%. Babies who are not given exclusive breastfeeding will cause the baby to be susceptible to infectious diseases that are at risk of stunting.

The relationship between baby weight at birth and the incidence of stunting based on child factors in toddlers in the Way Dente Public Health Center, Tulang Bawang Regency in 2022

Based on the results of statistical tests, it was found that p-value = 1,000, which means p>α (0.05), to the conclusion that there is no relationship between infant weight at birth and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Bone Regency. Onion 2022.

In line with Rahmadi's research (2017)the results of the khai squared statistical test resulted in a p-value of 0.966 (greater than an alpha value of 0.05). Thus the null hypothesis is accepted, namely there is no relationship between birth weight and the incidence of stunting in children aged 12-59 months in Lampung Province.

This study is in accordance with previous research conducted by Aridiyah (2015) on Factors Affecting Stunting Incidence in Toddlers in Rural and Urban Areas, where the results of the analysis show that there is no relationship between LBW status and the incidence of stunting in children both in rural and urban areas. Likewise, the results of research by Wiyogowati (2012) stated the same thing that LBW was not associated with stunting in West Papua.

Babies with LBW have a greater risk of experiencing developmental and growth disorders in childhood. Children up to the age of 2 years with a history of low birth weight have a risk of experiencing growth disorders and will continue in the first 5 years of life if it is not balanced with more stimulation. Premature and low birth weight babies who can survive in the first 2 years of life have a risk of malnutrition and stunting (Aangkat, 2018).

According to researchers, low birth weight is not an indication of stunting if given nutritional intake according to the baby's needs. Exclusive breastfeeding and the correct practice of giving complementary feeding according to schedule will reduce the risk of stunting.

The relationship between the length of the baby's body at birth and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022

Based on the results of statistical tests, it was found that p-value = 0.411, which means p>α (0.05), to the conclusion that there is no relationship

between the length of the baby's body at birth and the incidence of stunting based on the child factor in toddlers in the Way Dente Health Center, Bone Regency. Onion 2022.

In line with Hasanah's research (2019) From the results of statistical tests with Chi-square, p-value = 0.088, which means that there is no relationship between birth length and stunting in Toddlers in the working area of the Kotagede I Health Center.

Normal newborns are babies born with a gestational age of 37 weeks to 42 weeks and a birth weight of 2500 grams to 4000 grams (Wikjosastro, 2016). According to Rohan (2013) the characteristics of a normal newborn are born at term between 37-42 weeks, weight 2500-4000 grams, birth length 48-52 cm. chest circumference 30 – 38 cm, head circumference 33 – 35 cm, arm circumference 11 – 12 cm.

According to researchers, birth length is not always a factor causing stunting, if the practice of exclusive breastfeeding and complementary feeding is given correctly. With exclusive breastfeeding and complementary feeding, the baby's development will follow the normal line. Because the nutrients in breast milk are needed in the growth period to pursue a normal height and weight.

Multivariate Analysis

The results showed that fThe dominant actor causing stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022, is a history of infectious disease (p-value = 0.004 with OR value2,392).

In line with Linawati Novikasari's research (2019), entitled the relationship between a history of infectious disease and the incidence of stunting in children aged 12-59 months in the working area of the Rama Indra Public Health Center, Seputih Raman District, Central Lampung Regency, in 2019 there were 102 respondents. The results of the analysis using chi-square obtained p value = 0.000 so that it is significant or there is a relationship between infectious diseases and the incidence of stunting.

Infectious diseases are diseases caused by pathogenic microbes, and are very dynamic. In general, the disease process involves three interacting factors, namely: disease-causing factors (agents), human or host factors, and environmental factors. World Health Statistics data shows that more than 70% of deaths, especially under-five children, are caused by infectious diseases (such as diarrhea, pneumonia, measles, malaria) and malnutrition. According to UNICEF, infectious diseases are the leading cause of death. Of the 9 million deaths in children under five per year in the world, more than 2 million of them die from ARI (UNICEF, 2017)

Infectious diseases that often suffer are diarrhea, typhoid fever, dengue fever, pneumonia. The results show that infectious diseases must be diagnosed quickly so that they do not get worse. Infectious diseases are infectious diseases that easily attack children, because children do not have a good immune system. Diarrhea, typhoid fever, dengue fever, upper respiratory tract infections (influenza, tonsillitis, sore throat), pneumonia, and fever of unknown cause (febrile observation) are infectious diseases that are included in the 10 most hospital diseases. in Indonesia (Mustagof, 2015).

According to Yusrianto (2010) the fulfillment of nutrition affects the health and endurance of toddlers. If the nutrition is good, the risk of toddlers getting disease decreases. The immune system called immunoglobulin comes from protein. So if there is little or no protein intake, the immune factor will not be formed. The poorer the nutrition, the weaker the immune system, the more frequent the infection, the lower the appetite and the lower the immune system. Likewise, according to UNICEF (1998) in addition to inadequate intake of nutrients, illness is one of the factors causing malnutrition in children under five. Toddlers who suffer from illness for a relatively long time will experience weight loss which has an impact on the nutritional status of the toddler.

According to Nareza (2020)The body gets energy from food intake. Recurrent infectious diseases experienced since infancy cause the child's body to always need more energy to fight disease. If this need is not balanced with adequate intake, children will experience malnutrition and eventually end up with stunting. The occurrence of infection is closely related to the mother's knowledge on how to prepare food for children and sanitation in the place of residence.

From the results of the multivariate analysis, the most dominant factor influencing the incidence of stunting in the work area of the Way Dente Health Center was an infectious disease, where the most common diseases suffered by children under five were ARI (87.9%) and diarrhea (64.5%). The researcher's assumption is that mStunting problems, especially those that occur in toddlers, are considered serious because stunting conditions in toddlers can cause growth and development delays. The researcher argues that the importance of health promotion and good approaches to vulnerable

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groups, infection prevention practices and exclusive breastfeeding and timely complementary feeding to prevent stunting

CONCLUSION

1. It is known that 193 (72.0%), respondents with a history of infectious disease had 158 (59.0%), male respondents were 150 (56.0%). Normal newborns were 265 (98.9%), respondents with non-exclusive breastfeeding were 177 (66.0%), and respondents with normal body length were 247 (92.2%).
2. There is no sex relationship with the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022 (p-value = 0.886).
3. There is a relationship between a history of infectious diseases and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022 (p-value = 0.002).
4. There is a relationship between exclusive breastfeeding and the incidence of stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022 (p-value = 0.010).
5. There is no relationship between baby's weight at birth and the incidence of stunting based on child factors in toddlers in the Way Dente Community Health Center, Tulang Bawang Regency in 2022 (p-value = 1,000).
6. There is no relationship between the length of the baby's body at birth with the incidence of stunting based on the child factor in toddlers in the working area of the Way Dente Health Center, Tulang Bawang Regency in 2022 (p-value = 0.411).
7. The dominant factor causing stunting based on child factors in toddlers in the working area of Way Dente Health Center, Tulang Bawang Regency in 2022, was a history of infectious disease (p-value = 0.004;OR 2,392).

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