

The Comparison of Risk Factors for Stunting in Rural and City in Lampung

Perbandingan Faktor Resiko Stunting di Pedesaan dan Kota di Lampung

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ABSTRACT/ ABSTRAK

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Globally, Rural areas have more stunted children (40%) than urban areas (33%). In contrast, in Indonesia, In 2010-2013, the prevalence of stunting in rural areas was higher than in urban areas at 40 0% and urban areas by 31.5%. This type of quantitative research uses Cross Sectional approach with the aim of study to compare risk factors for stunting in rural areas and Lampung City in 2022. The research subjects are mothers and toddlers 30 are rural, and 30 are in town. The analysis in this study used the independent t-test, Mann-Whitney, chi-square, and Fisher tests; the results showed a comparison of birth length, exclusive breastfeeding, birth spacing, economic status, and environmental factors to the incidence of stunting in cities and villages in 2022. There was no comparison of birth weight, breastfeeding for up to 2 years, depression status, number of children, parenting, dietary, and Nutrition Patterns During Pregnancy on Stunting Incidents in Cities and Villages. The dominant factors influencing stunting in cities and villages based on the results of multivariate analysis of Birth spacing. There is a comparative risk factor for stunting in both rural and urban areas in Lampung province. Stunting prevention efforts by preventing early marriage, increasing the ease of access to health services in peripheral/remote sites to reduce the distance to reach health facilities, and preventing the occurrence of Low Birth Weight Babies through various promotional efforts in preventive.

Kata kunci:

Kota;
Perbandingan;
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Desa.

Berdasarkan Data didunia pedesaan memiliki proporsi anak stunting lebih tinggi (40%) dibandingkan perkotaan (33%), sedangkan di Indonesia pada tahun 2010-2013 prevalensi stunting di pedesaan lebih tinggi dibandingkan di perkotaan yaitu 40,0% dan perkotaan sebesar 31,5%. Jenis penelitian kuantitatif menggunakan pendekatan Cross Sectional dengan tujuan penelitian untuk mengetahui perbandingan faktor risiko stunting di pedesaan dan di Kota Lampung tahun 2022. Subyek penelitian adalah ibu dan balita dengan jumlah sampel 30 berada di pedesaan dan 30 di kota. Analisis dalam penelitian ini menggunakan independent t test, Mann Whitney, chi square dan fisher test. Hasil penelitian didapatkan bahwa ada perbandingan panjang badan lahir, pemberian ASI eksklusif, jarak kelahiran, status ekonomi dan faktor lingkungan terhadap kejadian stunting di kota dan desa tahun 2022, tidak ada perbandingan berat badan lahir, pemberian ASI sampai dengan 2 tahun, status depresi, jumlah anak, Pola Asuh, Pola Makan dan Gizi Selama Hamil pada Kejadian Stunting di Kota dan Desa Tahun 2022 serta faktor dominan yang mempengaruhi stunting di kota dan desa berdasarkan hasil analisis multivariat Jarak kelahiran paling banyak terjadi stunting. Ada perbandingan faktor risiko stunting baik di desa maupun di kota di provinsi Lampung. Perlunya upaya pencegahan stunting dengan cara mencegah pernikahan dini dengan meningkatkan capaian 9 tahun wajib belajar pada usia sekolah, meningkatkan kemudahan akses pelayanan kesehatan ke daerah pinggiran/terpencil sehingga mengurangi jarak untuk menjangkau fasilitas kesehatan dan mencegah terjadinya Bayi Berat Badan Lahir Rendah melalui berbagai upaya promosi secara preventif.

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INTRODUCTION

Health development in the era of globalization 4.0 is a movement to improve human resources' quality by improving nutrition starting when the child is still in the mother's womb. The success of health development is marked by increased human resources, which are physically, psychologically, socio-culturally, economically intelligent, capable of being competitive and productive. Sustainable development in the health sector aims to increase public understanding and awareness regarding the importance of maintaining health by increasing nutritional intake, which can affect nutritional status and impact growth and development.

The growth and development problem in children today has become a sharp international spotlight; this condition is motivated by low nutritional intake in children, especially in developing and poor countries. Children are future assets that need to be considered for survival and to become the spearhead of civilization in the future. Thus, ensuring children's nutritional needs is the most critical indicator in supporting their growth and development (Ilham & Laila, 2018).

In 2020, 149.2 million children under five globally were stunted, 45.4 million were underweight, and 38.9 million were overweight. The number of children with stunting is declining in all regions except Africa (World Health Organization, 2020). Based on data from the 2021 Indonesian Toddler Nutrition Status Survey (SSGBI) (Kementrian Kesehatan RI, 2021), the prevalence of stunting is currently still at 24.4 percent, or it is about 5.33 million children under five in Indonesia. The prevalence of stunting has decreased from previous years.

Meanwhile, based on data from the 2021 Indonesian Toddler Nutrition Status Survey (SSGBI), several areas have experienced an increase in stunting prevalence in Lampung Province, such as Pringsewu Regency by 1.24 per cent, Way Kanan by 1.75 per cent, West Coast by 2.91 per cent, Tulang Bawang West 4.71 per cent, West Lampung 0.37 per cent. According to UNICEF (2013), rural areas have a more significant proportion of stunting (40%) compared to urban areas (33%), while in Indonesia in 2010-2013, the prevalence of stunting in rural areas was higher than in urban areas, namely 40, 0% and urban areas by 31.5%. In contrast, in 2013, in rural areas, it was 42.1%, and in urban areas, 32.5% (Ministry of Health Indonesia, 2019).

Factors related to chronic nutritional status in toddlers are not the same between urban and rural areas, so efforts to overcome them must be adjusted to the influencing factors. *Stunting* is a major nutritional problem that will impact social and economic life in society (Renyoet, 2016). Bandar Lampung City has a stunting prevalence of 3,538 children, including in the top five highest prevalence in Lampung Province. It is the capital city of Lampung Province, so it is considered to be an urban area. Meanwhile, Tanggamus Regency is included in the top 2 with the highest prevalence, namely 5,763 children (Ministry of Health Indonesia, 2021), which is expected to represent rural areas.

Stunting in children under five results from several factors often associated with poverty, including nutrition, health, sanitation and the environment. Five main factors cause stunting: poverty, social and culture, increased exposure to infectious diseases, food insecurity and people's access to health services (Ministry of Health Indonesia, 2013). Factors related to chronic nutritional status in children under five are not the same between urban and rural areas, so efforts to overcome them must be adjusted to the factors that affect them.

Based on previous research conducted by Aprina and Erwandi (2021), it is known that the factors that influence the incidence of stunting are birth length, birth weight, exclusive breastfeeding, breastfeeding for up to 2 years, immunization status, birth spacing, number of children, economic status of the incidence of stunting and the dominant aspect of the influence of stunting events according to the results of multivariate analysis, economic status has the most risk factors for stunting. The issue of stunting should be a concern regarding economic access and sufficient or insufficient fulfilment of needs for families who have babies, which will later affect the increase in the quality of food consumption for family members, which is a reflection of an excellent nutritional attitude, namely by increasing the provision of data and outreach to residents about stunting and interventions needed for the health of mothers and children to reduce the risk of toddlers with stunting. This study compares stunting risk factors in rural areas and the city of Lampung in 2022.

METHOD

This type of quantitative research uses a cross-sectional approach. The research subjects were stunted mothers and toddlers with a

difference of 1:1 with a large sample of 30:30 where 30 toddlers were in rural areas and 30 toddlers in urban areas. The sampling technique used was Simple Random Sampling by looking at the research criteria of the subject, namely mothers who have toddlers with stunting. The toddler's mother has no hearing or visual impairment and is willing to be a respondent.

The research was conducted in one of the villages with the highest incidence rate, namely Central Lampung district and the city with the highest incidence rate, Bandar Lampung City. Data collection used a questionnaire about stunting, eating patterns, and the parenting style of parents who have stunted children. The variables used are seen based on the incidence of stunting, so the independent variables in this study are birth length, birth weight, exclusive breastfeeding, breastfeeding until the age of 2 years, fatigue status, gestational spacing, number of children, family economic status and environmental factors that influence the incidence Toddler stunts. In addition, the dependent variable in this study is stunting in toddlers; data analysis used the independent t test, Mann Whitney, chi square and fisher test.

RESULT

Table 1. Characteristics of Respondents

Characteristics	f	%
Age Respondents		
Late adolescents (17–25 years)	4	6.67
Early adulthood (26–35 years)	27	45.0
Late adulthood (36–45 years)	13	21.7
Old (\geq 46 years)	16	26.6
Education		
Elementary School	13	21.7
Junior High School	26	43.3
Senior High School	18	30.0
Bachelor Degree	3	5.0
Work		
Housewife	53	88.3
Farmer	1	1.7
Field	3	5.0
Honor	1	1.7
Government Employees	1	1.7
Private	1	1.7

Based on Table 1, it is known that the average age of parents of toddlers aged early adulthood (26–35 years) is 27 (45.0%). Most of the parents of toddlers with junior high school education are 26 (43.3%), and the work of parents the majority of children working as Housewife amounted to 53 (88.3%).

Table 2. Subject Frequency Distribution Based on Independent Variable Analysis of Stunting Incidents in Villages

Independent Variables	Stunting Incidents in Villages	
	n	%
Birth Length		
Short	15	50.0
Not Short	15	50.0
Birth Weight		
LBW	8	26.7
Not LBW	22	73.3
Exclusive Breastfeeding		
Exclusive	26	86.7
Not Exclusive	4	13.3
Breastfeeding Up to 2 Years		
Yes	25	83.3
No	5	16.7
Immunization Status		
Complete	22	73.3
Incomplete	8	26.7
Birth Distance		
Near	24	80.0
Far	6	20.0
Number Of Children		
Lost	14	46.7
A Little	16	53.3
Economic Status		
Low	28	93.3
Tall	2	6.7
Environmental Factor		
Good	8	26.7
Bad	22	73.7
Parenting		
Democratic	21	70.0
Permissive	9	30.0
Authoritarian	0	0.0
Dietary Habit		
Not Exactly	4	13.3
Appropriate	25	83.3
Nutrition During Pregnancy		
Weight Loss	7	23.3
Light Skinny	14	46.7
Normal	6	20.0
Fat	2	6.7
Obesity	1	3.3

In Table 2, the characteristics of respondents with short birth lengths in the village group are 50%. Respondents with LBW birth weight in the village 26.7%, respondents with non-exclusive breastfeeding in the village 13.3%, respondents who were not exclusively breastfed up to 2 years in the village 16.7%, respondents with incomplete expenditure status in the village 26.7%, respondents with close birth spacing in the village 20%, respondents with many children in the village 46.7%, respondents with low economic status in the village 93.3%, harmful environmental factors in the village 73.3%, partial parenting democracy in the village is 70%, eating patterns

are not appropriate in the village by 13.3%, while nutrition during pregnancy most of the respondents are mildly thin in the village 46.7%.

Tabel 3. Subject Frequency Distribution Based on Independent Variable Analysis of Stunting Incidents in City

Independent Variables	Stunting Incidents in City	
	n	%
Birth Length		
Short	12	40.0
Not Short	18	60.0
Birth Weight		
LBW	7	23.3
Not LBW	23	76.7
Exclusive breastfeeding		
Exclusive	19	63.3
Not Exclusive	11	36.7
Breastfeeding Up to 2 Years		
Yes	19	63.3
No	11	36.7
Immunization Status		
Complete	26	86.7
Incomplete	4	13.3
Birth Distance		
Near	18	60.0
Far	12	40.0
Number Of Children		
Lost	14	46.7
A Little	16	53.3
Economic Status		
Low	16	53.3
Tall	14	46.7
Environmental Factor		
Good	23	76.7
Bad	7	23.3
Parenting		
Democratic	19	63.3
Permissive	9	30.0
Authoritarian	2	6.7
Dietary Habit		
Not Exactly	8	26.7
Appropriate	22	73.3
Nutrition During Pregnancy		
Weight Loss	4	23.3
Light Skinny	11	36.7
Normal	7	23.3
Fat	5	16.7
Obesity	3	10.0

In table 3 it is known that the characteristics of respondents with short birth length in the city group are 40%. Respondents with LBW birth weight in the city were 23.3%, respondents with non-exclusive breastfeeding in the city were 36.7%, respondents who were not exclusively breastfed for up to 2 years in the city were 36.7%, respondents with incomplete immunization status in the city were 13.3%, respondents with close birth spacing in the city

by 40%, respondents with many children in the city by 46.7%, respondents with low economic status in the city by 53.3%, bad environmental factors in the city by 23.3%, parenting style is mostly democratic in the city by 63.3%, eating patterns are not appropriate in the city by 26.7%, while nutrition during pregnancy most of the respondents were mildly thin in the city by 36.7%.

Table 4. Independent Variable Analysis of Stunting Incidents in Cities and Villages

Independent Variable	Stunting Incidents				Mean	P-Value
	City		Village			
	n	%	n	%		
Birth Length						
Short	12	40.0	15	50.0	0.117	0.898
Not Short	18	60.0	15	50.0		
Birth Weight						
LBW	7	23.3	8	26.7	0.067	0.606
Not LBW	23	76.7	22	73.3		
Exclusive Breastfeeding						
Exclusive	19	63.3	26	86.7	0.233	0.037
Not Exclusive	11	36.7	4	13.3		
Breastfeeding Up to 2 Years						
Yes	19	63.3	25	83.3	0.200	0.082
No	11	36.7	5	16.7		
Immunization Status						
Complete	26	86.7	22	73.3	-0.133	0.203
Incomplete	4	13.3	8	26.7		
Birth Distance						
Near	18	60.0	24	80.0	-3.040	0.000
Far	12	40.0	6	20.0		
Number of Children						
Lost	14	46.7	14	46.7	0.200	0.451
A Little	16	53.3	16	53.3		
Economic Status						
Low	16	53.3	28	93.3	-2.123	0.000
Tall	14	46.7	2	6.7		
Environmental Factor						
Good	23	76.7	8	26.7	2.933	0.006
Bad	7	23.3	22	73.7		
Parenting						
Democratic	19	63.3	21	70.0	-2.367	0.267
Permissive	9	30.0	9	30.0		
Authoritarian	2	6.7	0	0.0		
Dietary Habit						
Not Exactly	8	26.7	4	13.3	-2.700	0.097
Appropriate	22	73.3	25	83.3		
Nutrition During Pregnancy						
Weight Loss	4	23.3	7	23.3	0.533	0.066
Light Skinny	11	36.7	14	46.7		
Normal	7	23.3	6	20.0		
Fat	5	16.7	2	6.7		
Obesity	3	10.0	1	3.3		

The results of data analysis on birth length for the incidence of stunting in cities and villages obtained an average of 0.117 with a p-value: of 0.898, meaning that the p-value>0.05 means that there is no difference in birth length for stunting in cities and villages.

The results of data analysis on birth weight for the incidence of stunting in cities and villages obtained an average of 0.067 with a p-value: of 0.606, meaning that the value of $p > 0.05$ means that there is no difference in birth weight for stunting in cities and villages.

The results of exclusive breastfeeding data analysis on the incidence of stunting in cities and villages obtained an average of 0.233 with a p-value: of 0.037, meaning that the value of $p < 0.05$ means that there is a difference in exclusive breastfeeding for stunting in cities and villages.

The results of ASI data analysis for up to 2 years for the incidence of stunting in cities and villages obtained an average of 0.200 with a p-value: of 0.082, meaning that a value of $p > 0.05$ means there is no difference between ASI for up to 2 years for stunting in cities and villages.

The analysis of immunization status data on stunting events in cities and villages obtained an average of -0.133 with a p-value: of 0.203, meaning that a $p > 0.05$ means there is no difference in immunization status against stunting events in cities and villages.

The results of data analysis on birth spacing for stunting in cities and villages obtained an average of -3.040 with a p-value: of 0.000, meaning that the value of $p < 0.05$ means that there is a difference between birth spacing for stunting in cities and villages.

The results of data analysis on the number of children for the incidence of stunting in the city and the village obtained an average of 0.200 with a p-value: of 0.451, meaning that the value of $p > 0.05$ means that there is no difference in the number of children for the incidence of stunting in cities and villages.

The results of data analysis on economic status for stunting incidence in cities and villages obtained an average of -2.123 with a p-value: of 0.000, meaning that the value of $p < 0.05$ means a difference in economic status for stunting in cities and villages.

The results of data analysis on environmental factors on the incidence of stunting in cities and villages obtained an average of 2.933 with a p-value: 0.006, meaning that the value of $p < 0.05$ means that there are differences in environmental factors on the incidence of stunting in cities and villages.

The results of data analysis on parenting patterns for stunting in cities and villages obtained an average of -2.367 with a p-value: of 0.267, meaning that $p > 0.05$ means that there are no differences in parenting patterns for stunting in cities and villages.

The results of the analysis of dietary data on the incidence of stunting in cities and villages obtained an average of -2.700 with a p-value: of 0.097, meaning that the value of $p > 0.05$ means that there is no difference in the diet on the incidence of stunting in cities and villages.

The results of the analysis of nutrition data during pregnancy for the incidence of stunting in cities and villages obtained an average of 0.533 with a p-value: of 0.066, meaning that the value of $p > 0.05$ means that there is no difference in nutrition during pregnancy for the incidence of stunting in cities and villages.

Table 5. Multivariate Multiple Logistic Regression Model Stage 4

Variabel	Sig.	OR	95% C.I.for EXP(B)	
			Lower	Upper
			Birth length	0.095
Birth weight	0.633	0.626	0.092	4.273
Birth distance	0.002	1.752	1.226	2.504
Number of children	0.034	0.399	0.170	0.934
Immunization	0.344	2.292	0.411	12.775
Economic status	0.617	1.022	0.938	1.113
Environmental factor	0.036	0.831	0.699	0.988
Dietary habit	0.191	1.203	0.912	1.587
Nutrition during pregnancy	0.228	0.676	0.358	1.278

Based on Table 5 above, it turns out that variables that are significantly related to stunting events have a p-value < 0.05 , namely the variable Birth Distance, Number of Children and Environmental Factors with values (P-value 0.004, 0.034, and 0.036). Based on the OR value, the Variable Birth Distance (OR:1.752), environmental factor variable (OR:0.831) while the number of children variable (OR:0.399) So the most dominant variable related to stunting is birth spacing.

DISCUSSION

Body Length at Birth for Stunting

The analysis results of the characteristics of respondents with short birth lengths in the city group were 40% and 50% in the village. The results of data analysis of birth length data on stunting in cities and villages obtained an average of 0.117 with a p-value: of 0.898, meaning that the p-value > 0.05 means there is no difference in

birth length for the incidence of stunting in cities and villages.

In line with research by Nugroho and Putri (2020), the average birth length for toddlers in rural areas is 47.2 cm with a standard deviation of 2.15cm, while the average birth length for toddlers in urban areas is 47.46 cm with a standard deviation of 1.72cm. The Mann-Whitney test results obtained $p=0.634$. This result means that there is no significant difference between the birth length of stunted children in villages and urban areas

The results of this study are in line with research by Rukmana, Briawan, and Ekayanti (2016) on 360 toddlers in the Bogor City area, showing that birth length has no relationship with stunting with a p -value of 0.707 ($p>0.05$). The results of this study are in line with Juniar's study (2019) in 46 toddlers in the working area of the Gebang Health Center, Gebang District, Purworejo Regency showed that birth length had no relationship with stunting with a p -value of 0.226 ($p>0.05$).

The baby's body length at birth describes the baby's linear growth during the womb. According to the 2018 Riskesdas, birth length categories are grouped into <48 cm, 48-52cm, and >52 cm. Short birth lengths are babies born with a length of <48 cm (Ministry of Health Indonesia, 2019).

Short-born babies can be affected by several factors, such as growth retardation or stunted growth while still in the womb caused by poverty, disease, and nutritional deficiencies suffered by pregnant women from the early trimester to the end of pregnancy. The absence of a relationship between the baby's birth weight and birth length can be influenced by other factors, such as the fulfilment of the baby's nutrition. Individual nutritional adequacy differs depending on age, activity, body size, physiological state, degree of growth, and energy requirements (Setiawan, Machmud, & Masrul, 2018).

In this study, there was no difference in birth length in the city and the village between birth length and the incidence of stunting. This is because toddlers in the city and the village monitor nutritional status every month at the posyandu so that parents get health education and health services—basic and routine weighing so that children can avoid nutritional problems.

Birth Weight for Stunting

The analysis results of the characteristics of respondents with LBW birth weight in cities

were 23.3% and 26.7% in villages. The results of data analysis on birth weight on the incidence of stunting in cities and villages obtained an average of 0.067 with a p -value: of 0.606 means that the value of $p>0.05$ means that there is no difference in birth weight for the incidence of stunting in cities and villages.

The results of this study are in line with Rahmadi (2017) on 3,129 toddlers in Lampung Province, showing that birth weight has no relationship with stunting with a p -value of 0.966 ($p>0.05$). This research is in line with Vaozia (2016) on 72 toddlers in the village Menduran, Brati District, Grobogan Regency, Central Java, which showed that birth weight had no relationship with stunting with a p -value of 0.500 ($p>0.05$).

Low birth weight is a feature of public health malnutrition, including long-term maternal malnutrition, poor health, overwork and poor health and pregnancy care. Individually, LBW is a significant predictor of the health and survival of newborns and is associated with high risk in children (Ministry of Health Indonesia, 2019).

The researchers argue that there is no difference in the birth weight of stunting toddlers in cities and villages; based on the data obtained, the incidence of LBW in villages and cities is not much different, and most toddlers do not experience LBW, but this condition needs to be addressed early considering the low birth weight of babies is a public health problem that often occurs in poor and developing countries which are closely related to mortality and morbidity for fetuses, children and future generations. If children with low birth weight receive adequate nutrition, average growth can be caught up. A history of LBW does not affect a child's growth if the child gets adequate intake and environmental conditions that support the child's growth and development.

Provision of Exclusive Breastfeeding for Stunting

The characteristics of respondents with non-exclusive breastfeeding in cities were 36.7% and 13.3% in villages. The results of exclusive breastfeeding data analysis on stunting in cities and villages obtained an average of 0.233 with a p -value: of 0.037, meaning that the p -value <0.05 means there is a difference between exclusive breastfeeding and the incidence of stunting in cities and villages.

According to Mufdlilah (2019), breast milk is milk produced by the mother and contains all the nutrients needed by the baby for the growth

and development needs of the baby. Exclusive breastfeeding is when babies are only given breast milk, without additional liquids such as formula milk, orange juice, honey, tea, or water and without other solid foods such as bananas, papaya, milk porridge, biscuits, rice porridge and team, for six months.

According to Kusumayanti and Nindya (2017), babies who get exclusive breastfeeding only receive breast milk, so no other liquids or solids are given, not even water, except oral rehydration or drops/syrups of vitamins, minerals or medicines. The United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) recommend that children should only be breastfed for at least six months. Solid food should be given after the child is 6 months old, and continued breastfeeding until the child is two years old.

According to Indrawati (2016), The success of exclusive breastfeeding can be influenced by factors such as employment status. Mothers who are not working will have a lot of time to care for their babies, including exclusive breastfeeding. The results showed that of the 144 respondents, the most significant number of respondents who did not work/IRT were in the control group, namely 35 (48.6%). Locitasari, Riana, and Rosyidah (2015) states that babies who receive formula milk have a five times greater risk of experiencing poor growth in babies aged 0-6 months than breastfed babies. Indrawati (2016) stated that breast milk is a nutritional intake by the needs that will help the growth and development of children. Babies who do not get enough breast milk mean they have poor nutritional intake, which can cause malnutrition. Based on the facts in the field, out of a total of 144 respondents, in the case group, the number of respondents who gave exclusive breastfeeding was 6 (8.3%) respondents. In contrast, in the control group, the number of respondents who gave exclusive breastfeeding was 61 (84.7%).

Researchers argue that there are differences in exclusive breastfeeding in cities and villages; this difference is obtained based on the employment status of mothers under five; where in cities, the average mother under five has a job, so the mother reasons that breast milk does not come out and the mother works so it is challenging to provide exclusive breastfeeding. The reasons for working make mothers not provide exclusive breastfeeding to their babies so that they provide food. In contrast, in the village, most mothers under five do not work, so most

mothers provide exclusive breastfeeding to their children.

Breastfeeding for Up To 2 Years for Stunting

The results of the characteristics of respondents who were not exclusively breastfed for up to 2 years in cities were 36.7% and in villages 16.7%, and the results of analysis of ASI data for up to 2 years on the incidence of stunting in cities and villages obtained an average of 0.200 with a p-value: 0.082 means that the value of $p > 0.05$ means that there is no difference in breastfeeding for up to 2 years in the incidence of stunting in cities and villages.

In line with the research by Nugroho and Putri (2020), it is known that more subjects living in rural areas did not receive exclusive breastfeeding, namely 71.9% compared to subjects living in urban areas, 50%. The results of the different test analyses between exclusive breastfeeding in villages and cities obtained a p-value of 0.124, so it can be concluded that there is no difference in exclusive breastfeeding for stunted children living in rural areas and those living in urban Cities.

Furthermore, a similar study was also conducted by Latifah, Purwanti, and Sukanto (2020) regarding the relationship between exclusive breastfeeding and the incidence of stunting in toddlers 1-5 years, where the results were obtained from 48 respondents 42 respondents gave exclusive breastfeeding, 41 respondents did not experience stunting, one respondent experienced stunting, as many as six respondents did not provide exclusive breastfeeding, five respondents experienced stunting, and one respondent did not experience stunting, so there is a relationship between exclusive breastfeeding and the incidence of stunting in toddlers 1-5 years.

The results of Sampe's research (2020) showed that 66 (91.7%) of toddlers (aged 24-60 months) were not given exclusive breastfeeding and experienced stunting and obtained $OR=61$, meaning that toddlers who were not given exclusive breastfeeding had 61 chances stunting can occur many times compared to toddlers with exclusive breastfeeding. At that age, children need nutritional intake in better quantity and quality due to a child's increased level of physical activity (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2017). According to Indrawati's research (2016) in her research, as many as 86.9% of toddlers received exclusive breastfeeding, and 73.1% of respondents were in the normal category.

Stunting can be anticipated in ways such as exclusive breastfeeding up to 6 months of age, good nutritious food, a clean and healthy lifestyle, physical activity, and child growth and development is monitored in stages (Millennium Challenge Account Indonesia, 2014). Breast milk resists diseases caused by many external factors, such as infection. Children who are given breast milk have more robust immune systems because they get antibodies and experience excellent development (Permadi, 2017).

The opinion of the researchers is that there is no difference in exclusive breastfeeding for up to 2 years in toddlers in cities and in villages. These results were obtained based on data and interviews with mothers of toddlers. They continue to provide exclusive breastfeeding for up to 2 years and always pay attention to eating patterns in toddlers. However, this remains a concern because children who are exclusively breastfed will grow and develop optimally. After all, breast milk can meet the nutritional needs of infants from birth to 24 months of age; in this study. They have high nutritional demands, and there are limitations in the quality and quantity of their food, especially after exclusive breastfeeding.

Immunization Status Against Stunting

The results of the characteristics of respondents with incomplete immunization status in cities were 13.3%, and in villages, 26.7%, and results of analysis of immunization status data on stunting events in cities and villages obtained an average of -0.133 with a p-value: 0.203 meaning that the value of $p > 0.05$ means that there is no difference in immunization status for stunting in cities and villages.

Research by Brahima, Noor, Jafar (2020) at Barebbo Hospital Contained 42 respondents and 84 respondents as controls. The results of the bivariate analysis showed that immunization status was a risk factor for stunting (OR=2.328; 95%CI:1.069–5.070) and birth spacing (OR=5.827; 95%CI:1.829-20.223). Meanwhile, the mother's education (OR=2.113; 95%CI:0.882-5.248) and complementary breastfeeding are not risk factors for stunting (OR=0.352; 95%CI:0.098-1.085).

Immunization is an effort to create or actively increase a person's immunity to a disease so that if one day they are exposed to the disease, they will not get sick or only experience a mild illness (The Ministry of Health Indonesia, 2015). Immunization is usually in the form of a vaccine. Vaccines stimulate the body to form an immune

system to fight infection or disease. When our bodies are given vaccines or immunizations, the body will be exposed to viruses or bacteria that have been weakened or killed in small amounts and are safe.

As one of the groups targeted by the immunization program, every baby must receive complete primary immunization consisting of 1 dose of BCG, three doses of DPT-HB and DPT-HB-Hib, four doses of polio, and one dose of measles. Of the complete basic immunizations required, measles is an immunization that receives more attention; this is per Indonesia's global commitment to maintaining a high and evenly distributed measles immunization coverage of 90%. This is related to the fact that measles is one of the leading causes of death in children under five. Thus the prevention of measles has a significant role in reducing child mortality (Ministry of Health Indonesia, 2015).

Data on immunization coverage and the prevalence of stunting are available in many national surveys that collect data on household composition. These two indicators reflect dimensions of child health and nutrition in which the role and position of the mother in the household may play an important role (Oraro et al., 2018). Stunting is the most common form of child malnutrition, with stark socioeconomic disparities (de Onis & Branca, 2016).

Distance between Birth and Stunting

The results of the characteristics of respondents with close birth spacing in cities by 40% and 20% in villages, and results of data analysis on birth spacing for stunting in cities and villages obtained an average of -3.040 with a p-value:0.000, meaning that the p-value<0.05 means there is a difference in birth spacing for the incidence of stunting in cities and villages.

Supported by research by Brahima, Noor, Jafar (2020) at Barebbo Hospital. There were 42 respondents and 84 respondents as controls. The results of the bivariate analysis showed that immunization status was a risk factor for stunting (OR=2.328; 95%CI:1.069-5.070) and birth spacing (OR=5.827; 95%CI:1.829-20.223). Meanwhile, the mother's education (OR=2.113; 95%CI:0.882-5.248) and complementary breastfeeding are not risk factors for stunting (OR=0.352; 95%CI:0.098-1.085).

Researchers believe that a pregnancy interval of fewer than two years can cause poor fetal growth, prolonged labour and bleeding during delivery because the condition of the uterus has not recovered properly. The results of

research in villages and cities show differences where the distance between pregnancies in villages is relatively closer than in cities, which causes the mother to have a short time to recover the condition of her uterus so that it can return to its original state. Pregnant women who are too close are at risk of developing anemia in pregnancy. Other influencing factors include lifestyle, not using contraception, and mothers not having routine checkups.

Number of Children Against Stunting

The results of the characteristics of respondents with a large number of children in cities were 46.7% and in villages 46.7%, and the results of data analysis on the number of children for stunting in cities and villages obtained an average of 0.200 with a p-value: 0.451 meaning that the value of $p > 0.05$ means that there is no difference in the number of children in the incidence of stunting in cities and villages. Other studies in Sumatra found that there is no relationship between the number of children in a family with stunting incidence (Putri et al., 2015). However, the results are different from those of (Aridiyah et al., 2015) in Jember Regency. This study's result is contrary to the existing theory.

Food availability in families with more children is generally less when compared to the number of children in sufficient families. Unequal food distribution to all family members can cause children under five to suffer from malnutrition (Oktarina & Sudiarti, 2013). Family food availability is affected by the number of children in the family. The chance of a child experiencing malnutrition is more significant in families with low economic status who have many children rather than who have fewer children. Mothers who work to help support the family's finances cause neglect toddler nutrition. Children need attention and food according to their needs, but families with poor economic conditions and many children will need help to meet these needs (Karundeng et al., 2015).

Researchers believe that stunting will be experienced by children who are born later because the burden on parents is greater with the increasing number of children they have. The first child's needs will be more fulfilled because the burden on parents is still light so that they can pay more attention and meet all the child's needs. The age of the parents when they had one child was also relatively young, so their stamina was still prime, while for the third child onwards, the parents' age was relatively not young anymore,

and their stamina was decreasing. The parents' age and physical stamina will also affect their children's upbringing.

Family Economic Status Against Stunting

The characteristics of respondents with low economic status in cities amounted to 53.3% and 93.3% in villages. The results of the analysis of Economic Status data on stunting events in cities and villages obtained an average of -2.123 with a p-value: of 0.000 means that the value $p < 0.05$ means that there are differences in economic status in the incidence of stunting in cities and villages.

In line with Nugroho and Putri (2020), rural areas' average socioeconomic (income) is IDR 1,414,000 with a standard deviation of IDR 84,330, while for urban socioeconomic areas, it averages IDR 1,896,900 with a standard deviation of IDR 59,700. The results of the Mann-Whitney test obtained a value of $p = 0.001$. There are differences between the socioeconomic families of stunted children in villages and urban areas. The socioeconomic stunting toddlers in villages have lower incomes than in urban areas.

Research abroad on the economic sector and its impact on stunting conducted by Akseer et al. (2022) found that across 95 LMICs, childhood stunting costs the private sector at least US\$135.4 billion in annual sales. Companies from Latin America, the Caribbean, and the East Asia and Pacific region experienced enormous losses; the total loss on sales to the private sector accumulated to be 0.01% to 1.2% of the national GDP across the country. The sectors most affected by childhood stunting are manufacturing (non-metallic minerals, fabricated metals, others), clothing and the food sector—the highest sales losses for larger private companies. Across the region (representing 123 LMICs), US\$700 million (Middle East and North Africa) to US\$16.5 billion (East Asia and Pacific) monthly lost income among private sector workers. Investing in stunting reduction interventions generates returns from US\$2 to US\$81 per \$1 invested annually (or 100% to 8000% countrywide). Across sectors, returns are highest among occupational SDs (US\$46) and lowest among agricultural workers (US\$8). By gender, women experience a higher risk of income penalties from childhood stunting and earn less than men; because of their relatively higher incomes, the returns to investing in stunting reduction were consistently higher for men in most of the countries studied. What was carried out by Aridiyah et al. (2015) also stated that there

was a significant relationship between family income and the incidence of stunting in children under five in both rural and urban areas.

Researchers argue that in this study, the average mother of children under five in both regions was found with a length of education of 10-12 years or can be said to have graduated from high school. This level of education can influence a person to get a job. In contrast, a higher level of education will be able to get a job that can support the family economy. In addition, this study also found that many mothers with under-fives and unemployed employment status could not provide additional income input to their families. Research has proven that in villages, the economic level is relatively low compared to income in cities; this can impact nutritional patterns—toddlers and fulfilment of toddler nutrition so that they are at risk of experiencing stunting or stunting.

Environmental Factors with Stunting Incidents

The results of the characteristics of harmful environmental factors in cities and villages were 23.3% and 73.3% in villages. The results of data analysis on environmental factors on the incidence of stunting in cities and villages obtained an average of 2.933 with a p-value: of 0.006, meaning that the p-value<0.05 means that there are differences in environmental factors in the incidence of stunting in cities and villages.

In line with the research results of Rahayu, Yulidasari, Putri, and Rahman (2015) obtained from an analysis of the relationship between environmental sanitation and the incidence of stunting, it was found that 76 respondents from poor environmental sanitation, 12 (31.6%) of respondents were stunted. The results of the p-value test of $0.000 < 0.05$ concluded that there was a relationship between environmental sanitation and the incidence of stunting in the working area of Kampung Melayu.

Stunting in children under five results from several factors often associated with poverty, including nutrition, health, sanitation and the environment. Five main factors cause stunting: poverty, social and culture, increased exposure to infectious diseases, food insecurity and community access to health services. Factors related to chronic nutritional status in children under five are not the same between urban and rural areas, so efforts to overcome them must be adjusted to the influencing factors (Ministry of Health Indonesia, 2015).

Researchers argue that there are differences in the quality of the environment both

in villages and in cities; this will affect the health of toddlers; namely, clean environmental sanitation will impact the nutritional status of these toddlers. The nutritional status of children under five who live in poor environmental sanitation is one time worse than that of children under five who live in good environmental sanitation.

Parenting Style with Stunting Incidents

The results of parenting characteristics are mostly democratic in cities by 63.3% and in villages by 70%, and the results of data analysis on parenting styles for stunting in cities and villages obtained an average of -2.367 with a p-value: 0.267, meaning that the p-value >0.05 means that there are no differences in parenting styles for stunting in cities and villages.

This is also in line with the results of research by Ni'mah and Muniroh (2015) regarding the relationship between education level, level of knowledge, and mother's parenting style in the incidence of stunting in toddlers of low-income families that parenting style has no link to stunting events, namely p-value $0.928 < 0.05$.

Researchers believe there is no difference between parenting styles in villages and cities because parenting styles have a role in toddler stunting. After all, the mother entirely controls the toddler's food consumption. Mothers who have good parenting patterns have the potential to have toddlers with good nutritional status compared to those who are less good. Nevertheless, in this study, mothers with suitable parenting styles are not necessarily likelier to have toddlers with minor stunting problems than mothers with poor parenting styles. This can be caused even though the mother's upbringing is good; in low-income families, there are limitations when fulfilling daily needs, so the mother's parenting style does not influence the occurrence of stunting.

Diet with Stunting

The characteristics of inappropriate eating patterns in cities and villages were 26.7% and 13.3% in villages. The results of the analysis of dietary data on stunting in cities and villages obtained an average of -2.700 with a p-value: of 0.097, meaning p value > 0.05 means that there is no difference in the diet on the incidence of stunting in cities and villages.

The activity that the mother usually does is feeding the child. Diet in toddlers plays a vital

role in the process of growth in toddlers because food contains lots of nutrients. Nutrition is closely related to health and intelligence. If exposed to nutritional deficiencies, children will be susceptible to infection. If the diet in toddlers is not achieved correctly, the toddler's growth will also be disrupted, thin body, malnutrition and even stunting will occur. Hence, a good diet also needs to be developed to avoid malnutrition (Purwani and Mariyam, 2013). Diet is the behaviour of a person or group of people in fulfilling food needs, including attitudes, beliefs and food choices. Eating patterns are formed due to physiological, psychological, cultural and social influences (Loka, Martini, & Sitompul, 2018).

Based on the results of the study, it was shown that there were still toddlers with poor nutritional status and that the feeding patterns of stunted children had irregular eating patterns. If the feeding pattern is not following the four healthy five perfectly and the feeding schedule is three times the main meal, and if the food is not appropriate, then the intake of balanced nutrition in children is not fulfilled, causing stunting.

In this study, there were no differences in eating patterns in the village and city. In the timing/schedule of feeding that is still irregular and inappropriate, it is obtained data from mothers who have poor parenting patterns in feeding toddlers four times more at risk of having toddlers with poor nutritional status compared to mothers who have good parenting patterns in feeding them.

Nutrition During Pregnancy with Stunting

Most respondents were lightly thin in cities, 36.7%. In villages, 46.7% and results of analysis of nutrition data during pregnancy on the incidence of stunting in cities and villages obtained an average of 0.533 with a p-value: 0.066 means that the value of $p > 0.05$ means that there is no difference in nutrition during pregnancy on the incidence of stunting in cities and villages.

This research is in line with the results of research by Sukmawati, Hendrayati, Chaerunnimah, and Nurhumaira (2018), and Alfarisi et al. (2019) that there is a relationship between the nutritional status of pregnant women based on LILA and the incidence of stunting in toddlers. Mothers who have KEK nutrition occur due to the failure of the mother's weight gain during pregnancy, so LILA also decreases. The increase in maternal weight during pregnancy with an increase in LILA has a critical role for

the baby it contains (Alfarisi et al., 2019). The nutrition of pregnant women who are deficient or experiencing CED affects the content because food is also consumed by the baby they are carrying; if there is an increase in LILA for pregnant women, the baby's development in the womb will also experience growth and development.

Researchers got the results that there was no difference between nutrition during pregnancy in cities and villages because of the nutritional status of mothers during pregnancy, which was caused by not being able to meet the needs of good and sufficient nutritional food as needed, resulting in growth and development that was not optimal and susceptible to disease infection which in the future results in a risk of stunting in toddlers. Pregnant women need to eat nutritious foods to meet their needs such as tempeh, tofu which are rich in protein, milk, fish, eggs, nuts, vegetables and fruits for weight gain when pregnant so LILA also increases, thereby reducing the risk of stunting.

Dominant Factors of Stunting in Villages and Cities

The multivariate analysis found that the variables significantly related to stunting had a p-value < 0.05 , i.e. birth spacing, number of children and environmental factors with values (p-values 0.004, 0.034, and 0.036). Based on the OR value, the birth spacing variable (OR:1,752), the environmental factor variable (OR:0.831), and the number of children variable (OR:0.399). So the most dominant variable related to stunting is birth spacing.

This is in line with research conducted by Raraningrum and Sulistyowati (2021) which shows a relationship between birth spacing and the nutritional status of toddlers with a p-value of 0.000. According to the World Health Organization, the rules for spacing optimal childbirths are two years old before the next child is born to get enough breast milk until they are two years old. Mothers provide optimal mental stimulation and attention so that children grow and develop optimally (Raraningrum & Sulistyowati, 2021)

This incident is in line with the research supported by Brahima, Noor, Jafar (2020) at Barebbo Hospital. There were 42 respondents and 84 respondents as controls. The bivariate analysis results showed that birth spacing (OR=5.827; 95%CI:1.829-20.223) was a risk factor for stunting.

Birth spacing is a consideration to determine the first and subsequent pregnancies. It takes 2-3 years to repair the reproductive organs and supplies so that they are ready to reproduce again. As a result, too close a distance will cause the inability of nutritional reserves in the mother, so during pregnancy, it causes complications, impaired fetal growth, prematurity and death (Aridiyah et al., 2015).

Of the several factors associated with the incidence of stunting, several other main factors cause stunting, namely poverty, parental knowledge, parenting style, spacing of pregnancies, teenage pregnancies, food insecurity, poverty, social and culture, increased exposure to infectious diseases and community access to health services (Aridiyah et al., 2015).

Spacing of pregnancies is one of the factors causing stunting, namely the spacing of pregnancies or also known as the difference between the age and the birth before or after the birth of the subject. Spacing of births can cause stunting because the spacing of pregnancies affects parenting styles for their children. Children who have a close birth spacing (<2 years) have a risk of stunting 11.65 times compared to children who have a birth spacing of ≥ 2 years (Candra, 2013).

The researchers argue that the spacing of pregnancies of less than two years can cause poor fetal growth; this happens in cities and villages; the spacing of births in the villages of some respondents with close birth spacing reaches 80%; this is motivated by the work of mothers who do not work and education. Pregnancy is too close for mothers of toddlers who mostly have primary education, causing the mother to have a short time to restore the condition of her uterus so

that it can return to its original state. Pregnant women who are too close are at risk of developing anemia in pregnancy. Other influencing factors include lifestyle, not using contraception, and mothers not having routine checkups.

CONCLUSIONS

The results of this study can be concluded that there is a comparison of birth length, exclusive breastfeeding, birth spacing, economic status and environmental factors to the incidence of stunting in cities and villages in 2022, there is no comparison of birth weight, breastfeeding up to 2 years, status depression, number of children, parenting style, diet and nutrition during pregnancy in stunting events in cities and villages in 2022 and the dominant factors affecting stunting in cities and villages based on the results of multivariate analysis birth spacing is the most common risk factor for stunting in cities and villages in 2022, meaning that there is a comparison of stunting risk factors in both villages and cities in Lampung province. It is hoped that mothers of toddlers and adolescents will learn and understand more about women's health and the duties of being a mother, so they can plan the age of marriage, the ideal gestational age, and manage the spacing of pregnancies and pay attention to nutritional needs during pregnancy. By keeping pregnancies apart and not getting married at an early age, it is hoped that women will give birth to healthy children and create a resilient generation.

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