EAS Journal of Nutrition and Food Sciences
Abbreviated Key Title: EAS J Nutr Food Sci
ISSN: 2663-1873 (Print) & ISSN: 2663-7308 (Online)
Published By East African Scholars Publisher, Kenya

OPEN ACCESS

Volume-1 | Issue-3 | May-Jun-2019 |

Research Article

The analysis of relationship between birth distance and exclusive breastfeeding with stunting incidence in toddler ages of 6-59 months at Community Health Center of Palakka Kahu, Bone Regency

Sumiati[1], A. Arsunan Arsin[2] and Muhammad Syafar[3]

[1]Postgraduate Program, Faculty of Public Health, Hasanuddin University, Indonesia
[2]Department Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia
[3]Department of Health Promotion and Behavioral Sciences, Faculty of Public Health, Hasanuddin University, Indonesia

*Corresponding Author
Sumiati

Abstract: Stunting is a condition of a toddler experiences a condition of failure to thrive with a height that is too short for a child of his age. This study aims to look at the relationship between birth interval and exclusive breastfeeding with the incidence of stunting in children aged 6-59 months in the Work Area of Palakka Kahu Health Center, Bone Regency. This type of research is a cross sectional observational study in the Palakka Kahu District Health Center Working Area Bone involving 165 children selected proportionally cluster random sampling. Instrument of this study used questionnaires and gauges of baby length board (<2 years) and microtoise (> 2 years). Analysis using univariate and bivariate analysis with (chi-square test). The results of this study indicate that based on the characteristics of toddlers obtained that male sex 53.94%, female 46.06%, the average age group of infants aged 6-15 months 20.61%, normal birth weight 70.30%, and Low Birth Weight 29.70%. Based on the bivariate test results it was found that there was a relationship between birth interval (p = 0.010) and exclusive breastfeeding (p = 0.006) with the incidence of stunting in children aged 6-59 months in the Palakka Kahu Health Center Working Area. It is hoped that efforts will be made to improve the understanding of the community, especially mothers, about the importance of breastfeeding without additional food and / or drinks until the child is 6 months old.

Keywords: Stunting, Birth Interval, Exclusive Breastfeeding, Low Birth Weight.

INTRODUCTION

Nutritional problems related to public health in general. Malnutrition attracts the attention of many countries including Indonesia today. WHO said that since 2014 the problem of malnutrition has become a double burden of malnutrition. Nutritional problems faced by this group are underweight, stunting, and wasting. Under-five mortality is almost half caused by malnutrition (WHO, 2014). Stunting is a condition in which a toddler experiences a condition of failure to thrive with a height that is too short for his age child, a child who is stunted can suffer severe physical and cognitive damage that will last a lifetime and cannot be restored, even affecting his offspring. In addition, the long-term impact on children with stunting will face difficulties in learning at school, will hamper income because of difficulties in finding jobs, and face obstacles to participating in their groups (TNP2K, 2017; UNICEF, WHO, & World Bank Group, 2018) The incidence of stunting was 22.2% or around 150.8 million under-fives in 2017 in the world. Most stunting occurs in children under 5 years and occurs in Sub-Saharan Africa and Central Asia to South Asia. In 2017, stunting toddlers more than half of the world came from Asia (55%), while more than one third (39%) came from Africa.

Toddlers experience stunting of 83.6 million toddlers in Asia, the highest proportion coming from South Asia (58.7%) and the smallest proportion in Central Asia (0.9%) (Ministry of Health, 2018a; Matsungo *et al.*, 2017; Saaka *et al.*, 2015; UNICEF, WHO, World Bank Group, 2018). The results of the 2018 Basic Health Research, showed a decline in the prevalence of stunting in Indonesia from 2013 by 37.2%, down to 30.8% in 2018. Despite the decline,

Quick Response Code

Journal homepage:
http://www.easpublisher.com/easjnfs/

Article History
Received: 10.05.2019
Accepted: 05.06.2019
Published: 20.06.2019

Indonesia is still among countries experiencing acute-chronic nutrition problems according to WHO prevalence standards region, the prevalence of short toddlers should be ≤ 20%. (Ministry of Health, 2018b). Whereas based on the results of Nutrition Status Monitoring in 2017 shows that the percentage of stunting in Indonesia in infants aged 0-59 months is 29.6% (Ministry of Health, 2017).

Indonesia monitors nutritional status in 2017 in 34 provinces in Indonesia, showing that the prevalence of stunting in South Sulawesi Province is 34.8%, while according to basic health research, 2018 is 35.7% higher than the national prevalence in 2018 (30.8%). Stunting incidence in South Sulawesi was highest in Enrekang District at 45.9%, while in Bone District the prevalence of stunting was 40.1%, the prevalence was higher than the provincial (35.7%) and national (30.8%) prevalence (Ministry of Health, 2017; Ministry of Health, 2018b).

The Indonesian government seeks to reduce the incidence of stunting by inviting all village people from religious leaders, traditional leaders, community leaders, village governments, village institutions, Family Welfare Development (PKK), youth organizations, posyandu cadres, village cadres, village midwives, PAUD teachers and people who care about health and education play an active role in monitoring all stunting targets on 1,000 First Days of Life (HPK) in obtaining nutritional interventions.

Stunting risk factors are clearly not only caused by one factor, but there are several factors. The UNICEF theory (2007), illustrates that the incidence of stunting can be seen from three sides, namely from toddlers, families, and communities that are interconnected. Several studies conducted in various countries show that exclusive breastfeeding has an effect on the incidence of stunting (Fikadu *et al.*, 2014; Okky *et al.*, 2015; Setiawan *et al.*, 2018; Paudel et al, 2012). Mothers who have children with birth spans <24 months with previous births with a risk of 1.38 times (95% CI: 1,061.79) are more at risk of experiencing stunting than births> 24 months (Abeway *et al.*, 2018; Kismul at al., 2018). Toddlers who do not get exclusive breastfeeding have a 5.51 risk of stunting compared to children given exclusive breastfeeding. If children who are breastfed less than two years are more likely to experience stunting than children who are given ASI more than or equal to 2 years (Sakti, 2018). The purpose of this study was to determine the relationship between birth distance and exclusive breastfeeding with the incidence of stunting in infants aged 6-59 months in the Work Area of Palakka Kahu Health Center, Bone Regency.

METODOLOGY

Research Design

The type of research used in this study is a cross-sectional study (Cross Sectional Study). This type of research is one type of research that is analytical in nature and is included in the type of observational research. The study was conducted in the Palakka Kahu Health Center District of Bone.

Population and Sample

The population in this study were all toddlers in the Palakka Kahu Health Center District of Bone. A sample of 165 toddlers who were selected by proportional cluster random sampling that met the criteria, namely toddlers aged 6-59 years, mothers could communicate well, live in villages in the area of Palakka Kahu Health Center, Bone Regency, mothers of toddlers are willing to be respondents and can communicate well, and are willing to sign the appropriate informed consent agreed upon by the Ethics Committee of the Hasanuddin University Faculty of Public Health.

Data Collection Technique

Primary data collection was obtained from the results of interviews in the field with the respondent's mother respondents using a research instrument in the form of a questionnaire. Data collection was in the form of a questionnaire regarding stunting risk factors which included data on age, height, exclusive breastfeeding, LBW, and pregnancy rates. Data was obtained using STATA Version 12.1 to determine the frequency of toddler characteristics and research and to assess the relationship of independent variables with the dependent variable with chi-square test.

RESULTS

Univariate Analysis

Table 1: Distribution of Characteristics of Toddlers in the Work Area of Palakka Kahu Health Center, Bone Regency

Characteristics	Frequency	
	N	%
Gender		
Male	89	53,94
Female	76	46,06
Age		
6-15	41	24,85
16-25	34	20,61
26-35	34	20,61
36-45	28	17,97
46-55	18	10,91
>=56	10	6,06
Birth Weight		
No LBW	116	70,30
LBW	49	29,70

Source: Primary Data, April - June 2019

Table1. Shows that based on the distribution of characteristics of children under five in the community health center Palakka Kahu working area, the male sex is higher, that is equal to 53.94% compared to toddlers of female sex that is equal to 46.06%. The highest age group of children under five at the age of 6-15 months was 24.58%, while the lowest in the age group ≥ 56 months was 6.06%. Toddlers who did not experience birth weight were 70.30%, while those who experienced low body weight at birth were 27.70%.

Table 2: Distribution of Research Variables in the Palakka Kahu Working Area of Bone Regency

Characteristics	Frequency	
	n	%
Nutritional status		
Stunting	54	32,73
Normal	111	67,27
Exclusive breastfeeding		
Not	88	53,33
Yes	77	46,67
Birth Distance		
Dense	57	34,55
Not dense	108	65,45

Source: Primary Data, April - June 2019

Table2. Shows that based on the distribution of research variables on stunting incidence in infants aged 6-59 months in the working area of Palakka Kahu Health Center in Bone District, toddlers who were stunted were 32.73%, while those without stunting were 67.27%. The mother's birth distance of a toddler who is tight is 34.55% while the non-tight birth distance is 65.45% and a toddler who does not get Exclusive Breastfeeding is 53.33% while 46.67% of those who get Exclusive Breastfeeding.

Bivariate Analysis

Table 3: Relationship between Birth Distance and exclusive breastfeeding with the incidence of stunting in the working area of Palakka Kahu Health Center, Bone Regency

Independent Variables	Dependent Variable				P_Value
	Stunting		Normal		
	n	%	n	%	
Exclusive breastfeeding					
No	37	42,05	51	57,95	0,006
Yes	17	22,08	60	77,92	
Birth Distance					
Dense	26	45,61	31	54,39	0,010
Not dense	28	25,93	80	74,07	

Source: Primary Data, April - June 2019.

Table3. Shows that the results of the previous birth distance variable analysis showed that the birth distance of the meeting who experienced the incidence of stunting in infants was 45.61% while the distance of the previous non-meeting births that experienced stunting in infants was 25.93%. The results of statistical tests using chi-square were obtained ρ value 0.010 <0.05, so Ha was accepted. This means that there is a significant relationship between the distance of the previous birth and the incidence of stunting in children aged 6-59 months in the Health Center Palakka Kahu working area in Bone Regency. The results of exclusive breastfeeding variable analysis in this study indicate that toddlers who did not get exclusive breastfeeding experienced a higher incidence of stunting at 42.05%, compared to toddlers who received exclusive breastfeeding who were stunting at 22.08%. The results of the statistical test using chi-square obtained a value of ρ value 0.006 <0.05, so Ha is accepted. This means that there is a meaningful relationship between exclusive breastfeeding for infants and stunting in infants aged 6-59 months in the working area of Palakka Kahu Health Center, Bone Regency.

DISCUSSION

This study found that the incidence of stunting in the Work Area of Palakka Kahu Health Center in Bone district was 32.73%. When compared with the Stunting incident report in the Bone District Health Office based on Nutrition Status Monitoring (PSG) in 2017 which is 30.54%, the findings are almost the same. The results are also not much different from the results of 2018 Basic Health Research, Ministry of Health prevalence of stunting in South Sulawesi province at 35.7% and the national prevalence in 2018 which is equal to 30.8%. Birth distance is one that can affect child care. Families with more than one toddler in the family will have an impact on parenting parents for their children, because most of the oldest toddlers will get less attention so they do not get good parenting. The results of this study indicate that there is a relationship between birth distance and the incidence of stunting.

This research is in line with the research conducted by Suriana *et al.*, (2012), in Timor Tengah Selatan showing that there is a relationship between the distance of birth as much as the incidence of stunting. Research conducted by Kurunziza et al. (2017), the results show that families with a number of toddlers (> 2) are significantly different from the incidence of stunting. This shows that birth distance has an adverse effect on parenting. According to Warnyana (2010), more attention to children aged <5 years is very important, because at the age of 0-59 months is a very rapid process of growth and development in children. At this time, you will need more nutrients and quality because at this time toddlers are very vulnerable to suffering from nutritional disorders if food needs are not met. So that the disruption of growth and development tends to be experienced by children born later, because the burden borne by parents increases with the increasing number of children owned, but does not cover the possibility that the previous child will be

improved both in terms of fulfilling nutritional needs because the child. So that it can cause exclusive breastfeeding to be very low.

Exclusive breastfeeding is the most important thing in the first 1000 days of life to meet nutritional needs because exclusive breastfeeding for six months contributes greatly to the growth and development of the child's immune system. The results of this study indicate that there is a significant relationship between exclusive breastfeeding and the incidence of stunting in the working area of Palakka Kahu Health Center, Bone Regency. The results of this study are in line with the research conducted by Sakti (2018), in poor residential areas in the city of Makassar that there is a relationship between exclusive breastfeeding and the incidence of stunting (p = 0,000) and toddlers who do not get exclusive breastfeeding at risk of stunting compared to infants who get breast milk Exclusive. Based on the results of other studies also found that non-exclusive breastfeeding (0.003) was significant with the incidence of stunting in infants with a risk of 3.23 times experiencing the incidence of stunting (Larasati *et al.*, 2018).

Based on the results of the findings in this study, it was shown that breastfeeding was not exclusive in the Working Area of Palakka Kahu Health Center, Bone Regency, which was still very high. This means that toddlers who do not get exclusive breastfeeding can have an impact on stunting or the growth of a child's height slowly. Basically, the staff's understanding and application of Early Penal Initiation (IMD) aims to increase sensitivity before 12 hours and more milk production if the contact between the baby and the mother is faster and faster. Giving colostrum to children is already good enough and has been understood to mothers and families in the Palakka Kahu Health Center Working Area. But the problem is the understanding of the mother and family to provide additional food / drink when the new baby is born.

Generally, the mother who is just born will get out about 2-3 days, because most of the mothers and families of the baby take the initiative to provide other drinks so that their child does not starve. Additional food given by water, honey water, formula milk, and some others. This affects the low rate of exclusive breastfeeding. The mother's knowledge of exclusive breastfeeding itself is still very lacking and also the family habit of giving extra drinks such as honey shortly after birth. So that the big impact of breastfeeding is not exclusive is the slow growth of toddlers. Thus there is a need for assistance and understanding pregnant women and families about the right exclusive breastfeeding, because most of them say that they give exclusive breastfeeding, but when they are new and their mother's milk has not come out. Another intervention that can be done is to increase knowledge about the nutritional status of infants by participating in educational activities in making weaning or obtaining information from print and electronic media so that they can provide the right nutrition for their babies (Fatmawati *et al.*, 2016).

CONCLUSION

In this research, it can be concluded that there is a relationship between the distance of birth and exclusive breastfeeding with the incidence of stunting in children aged 6-59 months in the work area of Palakka Kahu Health Center in Bone Regency, so it is recommended that the family planning and family planning programs be disseminated. benefits for families and especially children so that in addition to being able to regulate the birth distance of their children they can also help families to be more prosperous. efforts to increase the coverage of exclusive breastfeeding need to be improved by providing knowledge of the importance of exclusive breastfeeding by increasing the awareness of mothers and families not to provide food / drink cloth other than breast milk before the age of 6 months.

REFERENCES

1. Abeway, S., Gebremichael, B., Murugan, R., Assefa, M., & Adinew, Y. M. (2018). Stunting and its determinants among children aged 6-59 Months in Northern Ethiopia: A cross-sectional study. *Journal of Nutrition and Metabolism*, *2018*. https://doi.org/10.1155/2018/1078480
2. Fatmawati, Arsunan A, A., Syafar, M., & Bahar, B. (2016). Sciences : Basic and Applied The Effect Of The Baby ' S Mother Information in Providing Complementary Breastfeeding on The Prevention of Potential Stunting in Kendari. *Ijsbar*, *4531*(25), 76–83.
3. Fikadu, T., Assegid, S., & Dube, L. (2014). Factors associated with stunting among children of age 24 to 59 months in Meskan district, Gurage Zone, South Ethiopia: a case-control study. *BMC Public Health*, *14*(1), 800. https://doi.org/10.1186/1471-2458-14-800
4. Sakti, H. (2018). *Faktor Risiko Kejadian Stunting Pada Balita Usia 24-59 Bulan Di Permukiman Kumuh Kota Makassar*. Thesis, Makassar: Universitas Hasanuddin.
5. Ministry of Health. (2017). *Results of 2017 Nutrition Status Monitoring*. Jakarta: Directorate of Community Nutrition Directorate General of Public Health Ministry of Health of the Republic of Indonesia.
6. Ministry of Health. (2018a). *Buletin Stunting*. Jakarta: *Center for Data and Information of the Ministry of Health of the Republic of Indonesia*, (Vol. 301).
7. Ministry of Health. (2018b). *Basic Health Research*. Jakarta: Ministry of Health of the Republic of Indonesia.
8. Kismul, H., Acharya, P., Ali Mapatano, M., & Hatløy, A. (2018). Determinants of childhood

stunting in the Democratic Republic of Congo: further analysis of Demographic and Health Survey 2013-14. *BMC Public Health*. https://doi.org/10.1186/s12889-017-4621-0

9. Kurunziza, S., Meessen, B., Van geertruyden, J. P., & Korachais, C. (2017). Determinants of stunting and severe stunting among Burundian children aged 6-23 months: Evidence from a national cross-sectional household survey, 2014. *BMC Pediatrics*, *17*(1). https://doi.org/10.1186/s12887-017-0929-2
10. Larasati, D. A., Nindya, T. S., & Arief, Y. S. (2018). Hubungan antara Kehamilan Remaja dan Riwayat Pemberian ASI Dengan Kejadian Stunting pada Balita di Wilayah Kerja Puskesmas Pujon Kabupaten Malang. *Amerta Nutrition*, *2*(4), 392. https://doi.org/10.20473/amnt.v2i4.2018.392-401
11. Matsungo, T. M., Kruger, H. S., Faber, M., Rothman, M., & Smuts, C. M. (2017). The prevalence and factors associated with stunting among infants aged 6 months in a peri-urban South African community. *Public Health Nutrition*. https://doi.org/10.1017/S1368980017002087
12. Okky, F. O., Rohmawati, N., & Ririanty, M. (2015). Faktor-faktor yang Mempengaruhi Kejadian Stunting pada Anak Balita di Wilayah Pedesaan dan Perkotaan (The Factors Affecting Stunting on Toddlers in Rural and Urban Areas). *E-Jurnal Pustaka Kesehatan*, *3*(1), 163–170. https://doi.org/10.1007/s11746-013-2339-4
13. Paudel, R., Pradhan, B., Wagle, R. R., Pahari, D. P., & Onta, S. R. (2012). Risk factors for stunting among children: a community based case control study in Nepal. *Kathmandu University Medical Journal*, *10*(3), 18-24.
14. Saaka, M., Wemakor, A., Abizari, A.-R., & Aryee, P. (2015). How well do WHO complementary feeding indicators relate to nutritional status of children aged 6-23 months in rural Northern Ghana? https://doi.org/10.1186/s12889-015-2494-7
15. Setiawan, E., Machmud, R., & Masrul, M. (2018). *Faktor-Faktor yang Berhubungan dengan Kejadian Stunting pada Anak Usia 24-59 Bulan di Wilayah Kerja Puskesmas Andalas Kecamatan Padang Timur Kota Padang Tahun 2018*. *Jurnal Kesehatan Andalas* (Vol. 7).
16. Suriana, Hadju, V., As'ad, S., & Bahar, B. (2012). Determinan stunting anak 6 - 24 bulan di kabupaten timor tengah selatan. *Penelitian Poltekkes Kemenkes Kendari*, 1–10.
17. TNP2K. (2017). *100 Kabupaten/Kota Prioritas untuk Intervensi Anak Kerdil (Stunting)*. Jakarta: Tim Nasional Percepatan Penanggulangan Kemiskinan.
18. UNICEF/WHO/World Bank Group. (2018). Levels and trensds in child malnutrition 2018. *Joint Child Malnutrition Estimates 2018 Edition*, 1–15. https://doi.org/10.1016/S0266-6138(96)90067-4
19. UNICEF. (2007). *Unicef Framework, A schematic overview of the factors known from international experience to cause chronic malnutrition, or stunting*, available from http://siteresources.worldbank.org/INTLACREGTOPNUT/Resources/UNICEF_Framework.pdf
20. UNICEF, WHO, & World Bank Group. (2018). *Levels and trends in malnutrition*, available from https://www.who.int/nutgrowthdb/2018-jme-brochure.pdf
21. Warnyana. (2010). *Gizi Reproduksi* (Pertama). Yogyakarta: Pustaka Rihama.
22. WHO. (2019). Nutrition -Double burden of malnutrition, available from https://www.who.int/nutrition/en/