

FACTORS RELATED TO THE INCIDENT OF STUNTING (ECONOMIC STATUS AND EXCLUSIVE BREASTFEEDING) IN TODDLER AGE 25-59 MONTHS

Andi Ria Metasari¹, Sumarni^{2*}, Kamsiar

East Kalimantan Ministry of Health Polytechnic, Indonesia¹,

Andi Sudirman University, South Sulawesi, Indonesia²

E-mail: andiriametasaribone@gmail.com¹, sumarnimangiril@gmail.com²

ABSTRACT

Stunting is one of the problems that hampers human growth and development globally and is a form of malnutrition which is marked by the Z-score of height for age (TB/U). community-based on monthly income, which usually affects the incidence of stunting. In addition, exclusive breastfeeding is only breastfeeding for babies from birth to 6 months of age without being given other food and drinks. The purpose of this study was to determine the relationship between economic factors and exclusive breastfeeding for stunting toddlers aged 25-59 months in the Awangpone District in 2021. This research method used the accidental sampling method according to the inclusion criteria. There are 80 respondents obtained from the results of the chi-square statistical test analysis showing that there is a significant relationship between economic status and exclusive breastfeeding on the incidence of stunting with $p = 0.003$ and $p = 0.002$

Keyword: Economic Status; Exclusive Breastfeeding; Stunting



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

INTRODUCTION

Stunting is one of the problems that hinders human development growth globally and is a form of malnutrition which is characterized by a Z-score value of height for age (TB/U) of less than 2 Standard Deviations (SD) based on World Health Organization (WHO) prevalence. Stunted toddlers become a public health problem if the prevalence is 20% or more (Dewey & Begum, 2011).

Currently there are around 162 million children experiencing stunting. If trends like this continue, it is projected that by 2025 there will be 127 million children under 5 years old who will experience stunting. Stunting can have a negative impact on children under five. Short-term negative impacts that can occur are disruption of brain development, intelligence, physical growth disorders and metabolic disorders in the body, while long-term impacts that can occur are decreased cognitive abilities and learning achievement, decreased immunity. the body becomes sick easily, and there is a high risk of developing diabetes, obesity, heart and blood vessel disease, cancer, stroke, and disability in old age, as well as a decline in the quality of work which results in low economic productivity (Dewey & Begum, 2011).

Stunting is the failure to achieve linear growth potential as a result of health or nutritional conditions. Basically, high levels of stunting are related to low socio-economic conditions and

increased risk increases with the presence of disease or inappropriate feeding practices. The prevalence of stunting begins to increase at the age of 3 years (Semba and Bloem, 2011).

Based on data from the World Health Organization (WHO), it is clear that in 2018 there were 21.9% of children under 5 years old in the world experiencing stunting. More than half of stunted toddlers come from Asia. The proportion of stunted toddlers in Indonesia is the second highest, namely 36.4% (WHO, 2020). The prevalence of stunting in Indonesia according to the 2018 Basic Health Research was 30.8%, a decrease from 2013 (RISKESDAS, 2018).

According to *United Nations Children's Emergency Fund* (UNICEF) more than half of stunted children or 56% live in ASIA and more than a third or 37% live in Africa. Based on data from Indonesia's health profile in 2012, the three highest stunting prevalence figures in ASEAN were Laos 48%, Cambodia 40% and Indonesia 36% (Ministry of Health, 2013a).

The prevalence of stunting in Indonesia is higher compared to other nutritional problems in children under five, such as malnutrition, malnutrition, thinness and obesity. The proportion of stunted toddlers in Indonesia is highest in East Nusa Tenggara at 42.6%, South Sulawesi at 40.6% and Aceh at 37.1% (RISKESDAS, 2018).

Data obtained from the Bone District Health Service in 2019 saw the number of stunting among toddlers aged 25-59 months as much as 8.14% and in 2020 as much as 6.30%. To prevent stunting in 2020, the Bone Regency government has designated 14 villages spread across three sub-districts, namely Limpoe, Amali and Cenrana sub-districts. Furthermore, in 2021, the Bone Regional Government will determine 50 villages spread across 12 sub-districts, namely Mare, Libureng, Bengo, Sibulue, Ulaweng, Kahu, Ajangale, Awangpone, Dua Boccoe, Kajua, West Tanete Riattang and Tanete Riattang.

In Awangpone District, especially at the Pacing Community Health Center, the number of stunted toddlers aged 25-59 months in 2019 was 5 people and in 2020 there were 9 people, while in the Awangpone Community Health Center the number of stunted toddlers aged 25-59 months in 2019 and 2020 was 33 out of 8 Village.

Poverty or economic status is one of the causes of the high problem of stunting among toddlers. Families who have economic limitations or are economically poor will experience difficulties in fulfilling household food supplies. If this continues for a long time and continues to impact the child's growth, the child will experience stunting (Kleynhans et al., 2011).

Economic status is also greatly influenced by the level of family income, if access to food at the household level is disrupted, especially poverty, then malnutrition, one of which is stunting, will definitely emerge (Adriani, 2018).

Increasing income will increase opportunities to buy food of better quality and quantity. On the other hand, a decrease in income will cause a decrease in food purchasing power both in quality and quantity (Sulistyoningsih, 2020).

One of the provinces in Indonesia that has set a minimum wage in 2021 is South Sulawesi. The minimum wage determination in South Sulawesi is carried out by the regional head or governor. The minimum wage determination that has been agreed is 3,165,876. This amount is an increase from the minimum wage in 2020 (UMP South Sulawesi, 2021).

From the results of research conducted by Anisa P (2012), the analysis results were obtained, namely a proportion coefficient (p) of 0.000. Thus p-value = 0.000 is smaller than the error level used at the $\alpha = 0.05$ level. This means that there is a significant relationship between family income and the incidence of stunting in toddlers aged 24-59 months (Anisa P, 2012).

Another cause that increases stunting is problems with breastfeeding. Ideally, a person should receive exclusive breast milk until the age of 6 months, then the toddler will experience rapid growth in both weight and height. After 6 months and above, toddlers start to receive breast milk companions and their gross motor development will begin to increase. So children need more nutrients. This study proves that socio-economics is related to the incidence of stunting. Family income will increase opportunities to buy food with quality and quantity of food (Ngaisyah, 2015).

From the results of research conducted by Mawaddah (2019), it was found that 7 toddlers (8.97%) were exclusively breastfed with stunting and 31 toddlers (39.7%) were not stunted. There were 32 toddlers who were not exclusively breastfed and stunted and 8 toddlers (10.25%) were not stunted. The statistical test results showed that the Chi-Square test value was 0.000 with a probability of 29.558. These results indicate that there is a significant relationship or association between exclusive breastfeeding and the incidence of stunting in toddlers.

RESEARCH METHODS

The type of research that will be used is *methodanalytical survey*. The design of this research was carried out randomly *cross sectional*. The population and sample for this study were toddlers aged 25-59 months who came to posyandu in the District. Awangpone. Sampling technique *accidental sampling* according to the inclusion criteria. Data collection was carried out by distributing questionnaires given to respondents. Data analysis was carried out univariate and bivariate.

RESULTS AND DISCUSSION

1. Univariate Analysis

a. Description of Respondent Characteristics

Table 1. Respondent characteristics

Characteristics	Frequency	%
Age		
a. <20 years	12	18,9%
b. 20-35 years	26	36,1%
c. >35 years	42	56,7%
Education		
a. Low	41	55%
b. Height	39	54,1%
Work		
a. Work	56	71,5%
b. Doesn't work	24	39,5%
Total	80	100%

b. Frequency Distribution of Respondents Based on the Economic Status of Toddlers' Parents

Table 2. Frequency Distribution of Respondents Based on Economic Status Parents of Toddlers in the Awangpone District Area

Economic Status	Frequency	%
Low	47	58,8%
Height	33	41,3%
Total	80	100%

Source: Primary Data

Based on the research results in table 2, it shows that of the 80 respondents there were 47 (58.8%) with low economic status, and there were 33 (41.3%) with high economic status.

c. Frequency Distribution of Respondents Based on Exclusive Breastfeeding

Table 3. Frequency Distribution of Respondents Exclusive Breastfeeding for Toddlers in the District. Awangpone

Exclusive breastfeeding	Frequency	%
Of	47	58,8%
No	33	41,3%
Total	80	100%

Source: Primary Data

Based on the research results in table 3, it shows that of the 80 respondents there were 47 (58.8%) who received exclusive breast milk, while 33 (41.3%) did not receive exclusive breast milk.

d. Frequency Distribution of Respondents Based on Stunting Incidents in Toddlers Aged 25-59 Months

Table 4. Frequency Distribution of Respondents in Stunted Toddlers Aged 25-59 Months in the Awangpone District Area

Stunting	Frequency	%
Of	30	37,5%
No	50	62,5%
Total	80	100%

Source: Primary Data

Based on the research results in table .4, it shows that of the 80 respondents 30 (37.5%) toddlers were stunted, while those who were not stunted were 50 (62.5%).

2. Bivariate Analysis

a. The Relationship between Economic Status and the Incident of Stunting in Toddlers Aged 25-59 Months

Table 5. The Relationship between Economic Status and the Incident of Stunting in Toddlers Age 25-59 Months in the District. Awangpone

Stunting

No	Economic Status	Of		No		Amount	%	P value
		F	%	F	%			
1.	Low	24	51,0 %	23	49%	47	100 %	0,003
2.	Height	6	18,2 %	27	81,8 %	33	100 %	
Total		30		50		80	100 %	

Source: *Uji Chi-Square*

Based on the research results in table 5, it shows that of the 80 respondents, there were 24 (51.0%) mothers with low economic status who had stunted toddlers and 47 (49%) who were not stunted. Meanwhile, 6 mothers with high economic status had stunted toddlers and 27 (81.8%) were not stunted. The results of the chi-square statistical test, it was obtained $P = 0.003 (< 0.05)$ which indicates that there is a relationship between economic status and the incidence of stunting.

b. The Relationship between Exclusive Breastfeeding and Stunting in Toddlers Aged 25-59 Months

Table 6. The Relationship between Exclusive Breastfeeding and Stunting Incidents in Toddlers Aged 25-59 Months in the District. Awangpone

No	Exclusive breastfeedi ng	Stunting				Amount	%	<i>P value</i>
		Of		No				
		F	%	F	%			
1.	Of	11	23,4%	36	76,5%	47	100%	0,002
2.	No	19	5,8%	14	42,4%	33	100%	
	Total	30		50		80	100%	

Source : *Chi Square Test*

Based on the research results in table 6, it shows that of the 80 respondents, 11 (23.4%) were stunted toddlers who were exclusively breastfed and 36 (76.5%) were not stunted. Meanwhile, there were 19 (5.8%) stunted toddlers who were not given exclusive breast milk and 14 (42.4%) who were not stunted. From the results of the chi-square statistical test, it was obtained $P = 0.002 (< 0.05)$ which indicates that there is a relationship between exclusive breastfeeding and the incidence of stunting.

The relationship between economic status and the incidence of stunting

In this study, economic status was grouped into 2, namely low and high. Of the 80 respondents, 24 mothers with low economic status had stunted toddlers, and 47 (49%) were not stunted. Meanwhile, 6 mothers with high economic status had stunted toddlers, and 27 (81.8%) were not stunted.

Based on this research, it was found that with low economic status, 23 (49%) did not experience stunting and with high economic status, there were 6 (18.2%) who experienced stunting due to the age factor. The age factor was found to be 42 (56.7%). Age is the length of a person's existence measured in units of time from a chronological perspective, a normal individual shows a degree of anatomical and physiological development. The older a person is, the lower the knowledge they have, so there is a relationship that occurs with stunting. From the results of the chi-square statistical test, it was obtained $P = 0.003$ (< 0.05) which indicates that there is a relationship between economic status and the incidence of stunting.

This research is in line with research conducted by Azwar (2012) which states that adequate family income will support the behavior of family members to obtain more adequate family health services. This includes health services received during pregnancy. This is because if someone experiences malnutrition, it will directly cause loss of work productivity due to physical deficiencies, and decreased cognitive function which will affect the level of education and economic level of the family.

One of the factors causing nutritional problems is low economic status. Low economic status is considered to have an important reciprocal role as a source of nutritional problems, namely poverty causes malnutrition which will slow down economic growth and encourage the process of poverty (Azwar, 2012).

The results of research conducted by Setiawan et al (2018) stated that there was a significant relationship between economic status and the incidence of stunting in toddlers.

Low economic status is considered to have a dominant influence on the incidence of stunting. Parents with adequate family income will have the ability to provide all of their children's primary and secondary needs. Families with good economic status also have access to good services. Children in families with low economic status tend to consume less food in terms of quantity, quality, and variety.

This research is in line with research conducted by Sutriyawan et al (2020) which states that the incidence of stunting is caused by low economic status. Likewise, research conducted by Nugrah et al (2018) stated that there is a close relationship between economic status and toddlers experiencing stunting.

The relationship between exclusive breastfeeding and the incidence of stunting

In this study, exclusive breastfeeding was grouped into 2 parts, namely yes and no. Of the 80 respondents, 11 (23.4%) were stunted toddlers who were exclusively breastfed and 36 (76.5%) were not stunted. Meanwhile, there were 19 (5.8%) stunted toddlers who were not given exclusive breast milk and 14 (42.4%) who were not stunted.

Based on this research, there were 11 (23.4%) who were given exclusive breastfeeding who were stunted and those who were not given exclusive breast milk were 14 (42.4%) who were not stunted. This was caused by work. It was found that 56 (71.5%) working parents. Job is the level of income a person has based on the position or job they hold to meet their needs, so the higher a person's job, the more able they are to meet their daily needs and vice versa, so there is a relationship that occurs with the incidence of stunting. From the results of the chi-square statistical test, it was obtained $P = 0.002$ (< 0.05) which indicates that there is a relationship between exclusive breastfeeding and the incidence of stunting.

This research is in line with research conducted by Nurhasanah (2020) showing that the proportion of stunted toddlers is more common in toddlers who do not receive exclusive breast milk.

Exclusive breastfeeding has an important role in meeting nutritional needs. Fulfilling the needs of babies 0-6 months can be met by breastfeeding alone. Exclusive breastfeeding is also important because, at this age, food other than breast milk cannot be digested by the enzymes in the intestines. Apart from that, the excretion of waste from burning food cannot be carried out properly because the kidneys are not yet perfect (Akombi, 2017).

The results of research conducted by Nadia (2017) stated that there is a close relationship between non-exclusive breastfeeding and the incidence of stunting.

Exclusive breastfeeding can bring benefits to the interaction between mother and child and facilitate the formation of a stronger bond, thereby benefiting the child and the child's behavior. Non-exclusive breastfeeding is one of the factors causing stunting in children. Exclusive breastfeeding is the first and main food until the baby is >6 months old to fulfill nutritional requirements to prevent stunting (Arifin, 2012)

This research is in line with research conducted by Al-Rahmad (2013) which states that the incidence of stunting is caused by non-exclusive breastfeeding. Likewise, research conducted by Arifin (2012) stated that there is a close relationship between toddlers experiencing stunting and non-exclusive breastfeeding. The benefits of this research can be a basic reference for services to reduce the incidence of stunting.

CONCLUSION

Religious moderation is an action that ensures a person does not tend to any side but has a balance in carrying out everything so as not to lead to extreme attitudes that are prohibited in religion which can lead to conflict or bad things due to excessive exaggeration of both religion and state in social life. The essence of a moderate attitude from an Islamic perspective is fairness *tawazun*, putting things in their place, as well as *tawazun* building balance.

Islamophobia is a form of fear in the form of anxiety experienced by a person or group of individuals towards Islam and Muslims which originates from a closed view of Islam and the prejudice that Islam is an inferior religion.

Forms of religious moderation from an Islamic perspective that can eliminate claims of Islamophobia include eliminating extremism in religion, preventing group fanaticism, and increasing attitudes of tolerance towards religious diversity (*tasamuh*).

REFERENCES

- Adriani M. (2018). Peranan Gizi Dalam Siklus Kehidupan Cetakan Ke 3. Jakarta : Prenada Media.
- Akombi, Blessing Jaka. Agho Kingsley E, Hall John J, Merom Dafna, Astel-Burt Thomas, and Renzaho Andre M.N. (2017). *Stunting and serve stunting among children under-5 years in Nigeria : A multilevel analysis*. Nigeria: BMC Pediatrics.
- Anindita P. (2012). Hubungan Tingkat Pendidikan, Pendapatan Keluarga, Kecukupan Protein Dan Zinc Dengan Stunting.
- Arifin, D. Z., Irdasari, S. Y., & Handayana, S.(2012). *Analisis Sebaran Faktor Resiko Stunting pada Balita di Kabupaten Purwakarta*.
- Azwar, (2012).). *Faktor-Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Balita Usia 25-59 Bulan*.
- Dewey, K.G dan Begum, K. (2011). Long-Term Concurrent Stunting On Cognition. Blackwell Publishing Ltd Maternal And Child Nutrition. 7 (1) : 397-409.
- Kemenkes RI, (2016). Situasi balita pendek. Jakarta: Pusat Data dan Informasi Kementrian Kesehatan RI.

- Kleynhas,dkk. (2011). Analisis Kondisi Status Ekonomi Dan Tingkat Pendidikan Masyarakat Dengan Kejadian Stunting. Jurnal Ekonomi dan Pendidikan Vol 7 No.1 (18).
- Mawaddah. (2019). “Hubungan ASI Eksklusif Dengan Kejadian Stunting”. Universitas Muhammadiyah Yogyakarta.
- Nadia N. (2017). *Faktor-Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Balita Usia 25-59 Bulan Di Posyandu Wilayah Puskesmas Wonosari II*. Yokyakarta: Politeknik Kesehatan Yokyakarta
- Ngaisyah, “Hubungan sosial ekonomi dengan kejadian stunting pada balita di Desa Kanigoro, Saptosari, Gunung Kidul,”*Med. Respati J. Ilm, Keshat.*, Vol. 10, no.4, 2015.
- Nugrah H,dkk. (2018). Faktor Resiko Kejadian Stunting Pada Anak Usia 12-36 Bulan di Kecamatan Pati, Kabupaten Pati. Eprints Undip.
- Nurhasanah,E. (2020). Riwayat Pemberian ASI Eksklusis Pada Balita Stunting.
- RISKE SDAS. Laporan Hasil Riset Kesehatan Dasar Indonesia Tahun (2010) dan 2013. Jakarta: Departemen Kesehatan RI, 2011 dan 2014.
- Semba dan Bloem. (2011). “Effect Of Parental Formal Education On Risk Of Child Stunting in Indonesia and Bangladesh : A Cross Sectional Study”. The Lancet Article, 371 : 322-328.
- Setiawan, dkk. (2018). Hubungan Tingkat Pendapatan Terhadap Kecukupan Status Gizi Dengan Stunting.
- Sulistyoningsih. (2020). Gizi Untuk Kesehatan Ibu dan Anak. Yogyakarta : Graha Ilmu.
- Sutriyawan A,dkk. (2020). Hubungan Status Ekonomi Dengan Kejadian Stunting.
- World Health Organization, (2013). Childhood Stunting Challangers and Opportunities. Switzerland of Nutrition for Health and Development.