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The Relationship between Family Nutrition Awareness (KADARZI) and the Incidence of Stunting in Toddlers 24-59 Months of Age

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A B S T R A C T

Stunting is a condition in which toddlers have a height or length below the standard for their age. Stunting in toddlers is a chronic nutritional problem, and one of the reasons for the high prevalence of stunting is the lack of KADARZI (nutritionally aware families) behaviors. This study aims to determine the relationship between KADARZI behaviors and the incidence of stunting among toddlers aged 24-59 months in the working area of Telaga Jaya Health Center. This research is a quantitative study with an analytic survey design using a cross-sectional approach. The population consists of mothers and toddlers aged 24-59 months in Telaga Jaya Health Center's working area, with 596 toddlers. The sampling technique used is stratified random sampling, with a total sample size of 120 respondents. Data analysis was performed using the Chi-Square test with a questionnaire as the instrument. The study results showed a significant P-value = 0.000 (Asymp. Sig 2-tailed) with $\alpha = 0.05$. The conclusion is that there is a relationship between KADARZI behaviors and the incidence of stunting among toddlers aged 24-59 months in the working area of Telaga Jaya Health Center. This study is expected to provide input or serve as a reference in educating families about the importance of KADARZI behaviors to prevent toddler stunting.

BACKGROUND

Stunting is a condition in which a toddler has a height or length that is lower than the standard that should be based on age. This condition is measured using standard deviation, where the length or height of the toddler is below minus two or minus three of the median child growth standards according to WHO (World Health Organization). Stunting in toddlers is a chronic nutritional problem that is influenced by various factors, such as maternal nutrition during pregnancy, social and economic conditions, illness in infants, and lack of nutritional intake in infants. Toddlers who experience stunting in the future will face difficulties in achieving optimal physical and cognitive development (1).

Indonesia is ranked fourth in the world with the highest number of stunting sufferers, after India, Pakistan, and Nigeria. The number of stunting sufferers in Indonesia is recorded at 8.8 million. Based on the 2018 Riskesdas data, the national prevalence of stunting in that year was 30.8%, with 11.5% of toddlers classified as very short and 19.3% short. Compared to the 2013 Riskesdas data, which recorded a stunting prevalence of 37.2%, the incidence of stunting shows a decline. However, the problem of stunting in Indonesia is still a significant concern because its prevalence is still above the WHO standard, which sets a maximum limit for stunting prevalence of 20% (2).

According to stunting prevalence data in Gorontalo Province, the stunting rate reached 32.5%. Among the regencies in Gorontalo Province, Boalemo Regency ranked first with a stunting prevalence of 34.59%, followed by Gorontalo Regency with the exact prevalence namely 34.59%. Of this prevalence, 19.83% of toddlers were classified as stunted, while 14.76% were classified as severely stunted. Gorontalo Regency was chosen for this research based on several considerations, including ease of access to the research location by researchers in terms of human resources, budget, and time efficiency. In addition, the implementation of research at this location did not cause obstacles related to the ability and readiness of research personnel (3).

Gorontalo Regency has 21 sub-districts, and the sub-district that contributes the highest stunting rate is Telaga Jaya Sub-district, with the number of very short toddlers as many as 87 (10.1%) and short toddlers as many as 171 (19.8%), the second largest sub-district is Batudaa Pantai with the number of very short toddlers as many as 88 (11.4%) and short toddlers as many as 112 (14.6%), and the sub-district that contributes the lowest stunting rate

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is Bilato Sub-district, which is No. stunted toddlers (4). According to data from the Telaga Jaya Health Center, as of December 2020, 97 stunted toddlers were recorded in the Telaga Jaya Health Center's work area (5).

The causes of the still high prevalence of stunting in toddlers are: 1) Level of nutritional knowledge of toddler mothers, 2) Parenting patterns (history of breastfeeding, appropriateness of MP-ASI, KADARZI behavior), 3) Availability of food in the family: (level of household food security, level of consumption), 4) Maternal health services during pregnancy: (toddler mothers who receive TTD during pregnancy, mothers who receive vitamin A during childbirth), 5) Access to clean water and family sanitation, 6) economic level of toddler families (6). KADARZI is one of the risk factors for stunting. KADARZI refers to families that implement a balanced diet and can recognize, prevent, and overcome nutritional problems in each family member. A family is said to have good KADARZI behavior if they have implemented five leading indicators: routinely weighing, providing exclusive breastfeeding, consuming various foods, using iodized salt, and consuming nutritional supplements.

According to the Indonesian Ministry of Health 2009 and Law No. 17 of 2007 concerning National Long-Term Development Planning 2005-2025, one of the government's steps in overcoming nutritional problems is to improve the quality of human resources. This is done through increasing health development and improving community nutrition, one of which can be achieved by improving families' nutritional status, namely by developing nutritional services through the KADARZI program. Although various mitigation efforts have been made, the KADARZI rate in Indonesia is still relatively low. (2). Gorontalo Province is one of 10 provinces with more than 50% of its territory included in the Community Health Development Index category, making it a priority area for the Ministry of Health (1).

Households that practice poor nutritional awareness are 1.22 times more likely to experience stunting in toddlers than households that implement good KADARZI behavior (6). Toddler weighing is an important indicator to monitor toddlers' nutritional status. There is a relationship between the frequency of toddler weighing and poor or insufficient nutritional status, where toddlers who are not weighed regularly have a 1.5 times greater risk of experiencing growth disorders than those who are weighed routinely. In addition, children who do not receive exclusive breastfeeding have a higher risk of lacking the nutrients needed in their growth process. This growth disorder can lead to stunting in children (7). Providing proper food for toddlers can help reduce nutritional problems, where children who consume various foods tend to have better health. In addition, iodine deficiency can cause multiple health problems, and if it occurs in infants, it can inhibit their growth and development, known as stunting. In addition to iodized salt, vitamin A nutritional supplements are also needed for toddler growth (8).

Suppose the Stunting problem is not immediately addressed. In that case, it can cause several impacts, including Disturbances in brain development, physical growth, intelligence, and body metabolism can cause the body to become more susceptible to disease. This also increases the risk of diseases such as diabetes, heart disease, blood vessel disorders, obesity, cancer, stroke, disability in old age, and decreased productivity (9).

According to previous research conducted by Saenal (2019) in a study entitled The Relationship between Nutrition-Aware Family Behavior and the Incidence of Stunting in Toddlers in Tarowang Village, Tarowang District, Jeneponto Regency, which involved 108 toddlers, a significant relationship was found between nutrition-aware family behavior and the incidence of stunting in toddlers (10). This study shows that the five KADARZI indicators are related to the incidence of stunting in toddlers. In addition, research conducted by Widad (2019) in a study entitled The Relationship between the Implementation of KADARZI Behavior and the Incidence of Stunting in Toddlers Aged 24-59 Months, involving 74 respondents, found that there was a significant relationship between the implementation of KADARZI behavior, especially in terms of consuming diverse foods and using iodized salt, with the incidence of stunting in toddlers (11).

integrated health posts in the Telaga Jaya Health Center work area on April 6, 2021, through interviews with five mothers registered in the area and having stunted toddlers, obtained information that three out of five mothers did not weigh their toddlers more than four times in the last six months, due to being busy at home and forgetting the integrated health post schedule. Regarding the provision of Exclusive Breastfeeding, the five mothers did not provide Exclusive Breastfeeding to their toddlers. In addition, the five mothers also admitted that they did not consume vegetables and fruits every day. The iodine test found that the five mothers used-acceptable salt (iodized) for cooking. Three out of five mothers stated that their toddlers received nutritional supplements according

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to recommendations. This study aims to determine the relationship between KADARZI and the incidence of stunting in toddlers aged 24-59 months in the Telaga Jaya Health Center work area.

METHODS

Using a cross-sectional approach, this study was conducted in the Telaga Jaya Health Center working area from July 5 to June 16, 2021. The population in this study consisted of mothers and toddlers aged 24-59 months in the Telaga Jaya Health Center working area, totaling 596 toddlers, and a sample of 120 respondents using the Stratified Random Sampling technique. The inclusion criteria include mothers willing to be respondents and mothers with toddlers aged 24-59 months. The exclusion criteria are mothers who do not have a KMS/KIA book, toddlers with physical disabilities (who do not have legs), and respondents who do not follow through to the final stage of the study. The instrument used in this study was the KADARZI questionnaire comprising 15 questions equipped with a nutritional indicator Checklist sheet from the Ministry of Health in 2008. To measure the incidence of stunting, an assessment instrument was used as an observation sheet of anthropometric measurements of TB/U using a Microtoise. The research ethics considered in this study include informed consent, autonomy, confidentiality, and benefit. Data analysis using the Chi-Square Test to see the relationship between KADARZI and the incidence of stunting in toddlers aged 24-59 months. This study has been declared ethically healthy by the Research Ethics Committee with letter number 084A / UN47.B7 / KE / 2024.

RESULT AND DISCUSSION

RESULT

Responden characteristics

Table 1. Distribution of Respondent Characteristics

Characteristics		Total	
		n	%
Age			
	Late Adolescence	53	44,2
	Early Adulthood	53	44,2
	Late Adulthood	14	11,7
Job			
	Housewife	104	86,7
	self-employed	13	10,8
	contract employees	3	2,5
Education			
	elementary school	37	30,8
	Junior High School	43	35,8
	Senior high school	46	30,0
	Bachelor	4	3,3

Source : Primary Data 2021

Based on Table 1, the majority of respondents in this study are in the late adolescent and early adult age categories, with 53 people (44.2%). A few respondents are in the late adult age category, with 14 people (11.7%). Most respondents work as housewives, with 104 people (86.7%), while a small number work as honorariums, namely 3 people (2.5%). Based on the table, most respondents have a junior high school education level, with 43 people (35.8%).

Table 2. Indicator Distribution KADARZI

Characteristics		Total	
		n	%
Weight			
	Yes	85	70,8
	No	35	29,2
Breast Milk			

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Yes	72	60
No	48	40
Eating a Variety of Foods		
Yes	58	48,3
No	62	51,7
Iodized Salt		
Yes	94	78,3
No	26	21,7
Provide Nutritional Supplements/Vit. According to Recommendations		
Yes	118	98,3
No	2	1,7

Source : Primary data 2021

Based on Table 1, it can be seen that the majority of respondents in this study are in the late adolescent and early adult age categories, each with a total of 53 people (44.2%). A few respondents are in the late adult age category, with 14 people (11.7%). Most respondents work as housewives, 104 people (86.7%), while a small number work as honorariums, namely 3 people (2.5%). Based on the table, most respondents have a junior high school education level, with 43 people (35.8%).

Univariate Analysis

Table3. Respondent KADARZI

Variable	Total	
	n	%
KADARZI		
KADARZI	44	36,7
No KADARZI	76	63,3
Stunting		
No Stunting	70	58,3
Stunting	50	41,7

Source: Promary Data 2021

Table 3 shows that most Telaga Jaya Health Center Work Area respondents are not yet KADARZI with 76 toddlers (63.3%). In contrast, the incidence of stunting shows that most toddlers in the Telaga Jaya Health Center Work Area do not experience stunting, with a total of 70 toddlers (58.3).

Bivariate Analysis

Table 4. KADARZI and Stunting Relationship

KADARZI	Bivariate Analysis						
	Stunting				Total		*ρ Value*
	No *Stunting*		*Stunting*				
	n	%	n	%			
KADARZI	44	100	0	0.0	44	100	0,000
No KADARZI	26	34.2	50	65.8	76	100	
Total	70	58.3	50	41.7	120	100	

Source : Primary Data, 2021

Based on Table 4, the results show that respondents in the Telaga Jaya Health Center working area who implemented KADARZI and their toddlers did not experience stunting were 44 people (100%). Meanwhile, respondents who did not implement KADARZI and their toddlers did not experience stunting 26 people (34.2%), and respondents who did not implement KADARZI and their toddlers experienced stunting 50 people (65.8%). The chi-square statistical test showed a p-value = 0.000, meaning it is smaller than $\alpha = 0.05$. By the provisions of the chi-square test, a significance value smaller than 0.05 indicates a relationship between the two variables. Therefore, H0 is rejected, and H1 is accepted, which concludes that there is a relationship between KADARZI and the incidence of stunting in the Telaga Jaya Health Center working area.

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DISCUSSIONS

KADARZI Behaviour at Working area Telaga Jaya Public Health Center

The study results showed that 44 respondents (36.7%) had implemented KADARZI. This was because respondents implemented the five KADARZI indicators, as seen in Table 2. The KADARZI indicator most frequently implemented by respondents was the provision of nutritional supplements in the form of Vitamin A, according to recommendations, which was carried out on 118 toddlers (98.3%). In addition, 94 toddlers (78.3%) used iodized salt, 85 toddlers (70.8%) weighed themselves regularly, 72 toddlers (60%) received exclusive breastfeeding (only breast milk without additional food or other drinks), and 58 toddlers (48.3%) consumed a variety of foods, consisting of energy sources such as rice, tubers, flour, and bananas, regulating substances such as vegetables and fruits, and building substances such as fish, eggs, chicken, meat, or milk.

This aligns with the theory Wijayanti et al. (2019) put forward that a family is said to be KADARZI if it can implement the 5 KADARZI indicators in line with the theory that the factors that determine whether a family is said to be KADARZI are seen from how the family can implement the 5 KADARZI indicators. (12).

The study's results also showed that most respondents, namely 76 people (63.3%), had not implemented KADARZI because respondents did not implement one or more KADARZI indicators. As in table 2, it can be seen that the highest KADARZI indicator was not implemented by respondents was consuming a variety of foods 62 toddlers (51.7%), providing exclusive breastfeeding 48 toddlers (40%), weighing toddlers regularly 35 toddlers (29.2%), using iodized salt 26 toddlers (21.7%), and providing nutritional supplements/vitamin A 2 toddlers (1.7%). Factors that influence this include the mother's education level. Based on the study's results, data shows that parental knowledge influences the implementation of KADARZI. According to the researcher, the level of parental education plays a vital role, as expressed in the statement (13). Parental education is an essential factor in child development because, with adequate education, parents will find it easier to receive various information, especially regarding good parenting methods, maintaining children's health, and supporting children's education and development as a whole.

Based on the study results, 76 (63.3%) respondents who have not KADARZI have an education, namely 21 respondents from elementary school, 32 from junior high school, 21 from high school, and 2 from undergraduate degrees. This means that most respondents have a low level of education. The level of education of parents, especially mothers, significantly influences family behavior in managing the household. This is in line with the findings of research conducted by Apriani (2018). The study showed that families with higher levels of education tend to find it easier to understand and accept nutrition information, especially in choosing and processing nutritious foods, so the nutritional needs of all family members can be met. (14).

This result is also supported by Hartono's research (2017). The study showed that if the level of family education, especially the mother, is low, then they tend to have difficulty choosing and processing nutritious food, so the family's nutritional needs are unmet. This condition can increase the risk of other health problems. Mothers with low education will be more vulnerable to causing their families to experience health problems that have a broader impact (13). This is also in line with the findings of research conducted by Nasution (2017), which states that individuals with higher education levels tend to desire to take appropriate action according to their family's needs. Better-educated people are generally able to think objectively and rationally (15). By reasoning, they will find it easier to accept new things considered beneficial for themselves and their families.

From the results of the study, it was also found that there were 2 respondents with higher education, namely S1, who had not yet completed Kadarzi; this could be influenced by the mother's work factor, based on the results of the study it was found that 2 respondents who had not completed KADARZI had jobs as private employees, this caused respondents to have less time with toddlers so that it could affect the implementation of KADARZI in the family, such as in the first indicator in KADARZI, namely weighing toddlers, this can be proven by the statements of respondents in the study stating that they did not weigh toddlers routinely or rarely visited the integrated health post. This result is in line with the theory that the role of working mothers who have toddlers will have an impact on the mother's lack of time to be active in visits to the integrated health post so that the weight of toddler development cannot be monitored, including 5 KADARZI indicators (16). This is in line with research by Isnoviana (2020), which shows that working mothers have low visits to Posyandu. (17).

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Stunting Case at Working Area Telaga Jaya Public Health Center

The results of the study showed that most toddlers, 70 (58.3%), did not experience stunting because the Zscore ranged from -2 SD to +3 SD; the respondent's work factor can influence this, based on the demographic data obtained, most respondents have the status of homemakers, which means they do not have work outside the home so they can focus more on caring for children, this is in line with the theory put forward by Mentari (2018) a mother who works outside the home tends to have limited time to carry out household tasks compared to mothers who do not work (18). This can impact child-rearing patterns, which in turn can interfere with the child's development and growth.

This finding is in line with research conducted by Wanimbo (2020), which showed that mothers who do not work have more time in the morning to visit the integrated health post, get additional food, and receive health education compared to working mothers. This allows mothers to better understand and meet the nutritional needs of their toddlers (19).

In this study, the frequency of respondents' visits to the integrated health post can be seen in Table 2. This shows that most respondents carried out the first KADARZI (nutrition-aware family) indicator, namely weighing toddlers more than four times in a row in the last six months, with a percentage of 70.7%. This result is in line with research conducted by Destiadi (2016), which showed that toddlers who are weighed regularly will have their nutritional and health status monitored (20).

The study also showed that 50 toddlers (41.7%) experienced stunting because the Zscore value ranged from -3.0 to Zscore <-2.0. The mother's education factor can influence the incidence of stunting in this study; a deeper analysis shows that the education level of 50 respondents who have stunted toddlers consists of 22 elementary school respondents, 14 junior high school students, and 2 S1 respondents, this shows that the majority have less education. This is in line with the theory that the higher a person's education level, the broader their knowledge. In line with the theory by Sulastri (2012), mothers with a low level of education will find it difficult to absorb information compared to mothers with higher education, so with a sufficient level of education, a mother is expected to be willing and able to behave well to improve her child's nutritional condition (21). This is supported by research by Picauly (2013) the study showed that mothers with low levels of education have a 0.049 times greater chance of their children experiencing stunting compared to mothers with higher education (22). The results of the study also showed that there were 2 respondents with a high level of education (S1) who had toddlers who experienced stunting, these results indicate that there are other factors that can influence the incidence of stunting besides the mother's education, namely the mother's job factor. From the research results, it can be seen that 2 respondents with a Bachelor's degree have jobs in the private sector. In line with the theory by Berg in Olsa (2017), working mothers often do not have enough time to ensure that their children's food meets adequate and appropriate nutritional needs and tend to be less focused on childcare (23). This is in line with the research findings by Picauly (2013) research in Kupang and East Sumba, NTT, which showed that working mothers are more likely to have children who experience stunting compared to mothers who do not work, with an increase in the incidence of stunting of 3.623 times in working mothers (22).

KADARZI and Stunting at Working Area Telaga Jaya Public Health Center

Based on the bivariate analysis results using the chi-square test, the p-value = 0.000 was obtained, meaning it is smaller than $\alpha = 0.05$. This shows a significant relationship between KADARZI and the incidence of stunting in the Telaga Jaya Health Center work area. The analysis showed that 44 respondents (100%) who implemented KADARZI had toddlers who did not experience stunting. This indicates that the better the mother implements KADARZI behavior, the greater its influence on preventing toddler stunting. This finding is in line with research conducted by Simatupang (2016) that there is a relationship between KADARZI (Nutrition Aware Family) behavior and the incidence of stunting in toddlers in Sorkam District, Aek Raso Village, Central Tapanuli Regency in 2016 (24). If families understand the importance of meeting nutritional needs, they will be more motivated to meet their children's dietary needs. The same thing is shown in a study conducted by Saenal (2019) that there is a significant relationship between KADARZI behavior. When nutrition in the family is good, child growth will be good, so it can minimize the risk of children experiencing stunting. This is because nutrition is an essential factor in supporting child growth. Nutrition awareness in the family will affect how the family serves food, where families who are

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nutrition-aware tend to be more selective in choosing food so that the family's nutritional needs can be met appropriately.

The results of the study also showed that there were 50 respondents (65.8%) who were not KADARZI (nutrition-aware families) who had toddlers with stunting. This finding aligns with research conducted by Hariyadi (2017) the study showed a relationship between KADARZI behavior and the incidence of stunting in toddlers in West Kalimantan Province. In his study, it was also explained that families who did not implement KADARZI behavior had a 1.22 times greater risk of experiencing stunting compared to families who implemented KADARZI behavior (25).

Further research results showed that there were 26 respondents (34.2%) who were not yet KADARZI (nutrition-aware families) but had toddlers who were not stunted when viewed from the results of data analysis based on the KADARZI indicator (nutrition-aware families) the factor of providing exclusive breastfeeding influenced this, exclusive breastfeeding is one of the critical Kadarzi indicators, the results of the study showed that 26 respondents who were not yet KADARZI (nutrition-aware families) but toddlers were not stunted were respondents who implemented the KADARZI indicator (nutrition-aware families) providing exclusive breastfeeding. These results are in line with Habimana (2019) that breast milk is an essential indicator of the success of KADARZI (nutrition-aware families) and can reduce the risk of stunting in toddlers (26). Also, in line with Pramulya (2021), one of the main benefits of exclusive breastfeeding is supporting infant growth, especially regarding height, which can help reduce the risk of stunting in toddlers (27). Babies who do not get enough breast milk tend to have inadequate nutritional intake, which can lead to malnutrition and potentially stunting (28).

Babies who get exclusive breast milk tend to have a more optimal height and are in accordance with their growth curve compared to babies who are given formula milk. This finding is in line with the results of a study conducted by Anjani (2018), which showed that the percentage of stunting in toddlers aged 12-35 months was higher in toddlers who were not given exclusive breast milk (51.4%) compared to toddlers who received exclusive breast milk (19%) (29). This is because toddlers who do not get exclusive breast milk tend to have difficulty meeting their nutritional needs properly, so their growth is hampered. Similar findings were also found in a study by Sujendran (2015). The survey conducted showed that exclusive breastfeeding has a significant relationship with stunting because breast milk is one of the essential sources of nutrition to support toddler growth (30).

Further research showed that none (0.0%) of KADARZI (Keluarga Sadar Gizi) respondents had stunted toddlers. This is because most families with stunted toddlers have implemented the five KADARZI indicators: regularly weighing the child, providing exclusive breastfeeding, consuming a variety of foods, using iodized salt, and providing nutritional supplements/vitamin A as recommended.

CONCLUSION

Most respondents in the Telaga Jaya Health Center work area have not implemented KADARZI, and the majority of respondents have toddlers who do not experience stunting, there is a significant relationship between the implementation of KADARZI and the incidence of stunting in the Telaga Jaya Health Center work area. This study is expected to be an input for improving and developing more effective nutrition education programs, especially for families with toddlers, and strengthening the role of Posyandu cadres and health workers to routinely monitor the nutritional status of toddlers.

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REFERENCES

1. Ministry of Health Indonesia. Promosi Kesehatan Di Daerah Bermasalah Kesehatan Panduan bagi Petugas Kesehatan di Puskesmas. Jakarta: Kementerian kesehatan Republik indonesia; 2011.
2. Ministry of Health. Kementerian Kesehatan Republik Indonesia. Laporan Riskesdas 2018 Nasional. Lembaga Penerbit Balitbangkes. 2018.
3. Provincial Health Office Gorontalo. Rekapitulasi Stunting Provinsi Gorontalo. Gorontalo; 2018. retreived from: https://dinkes.gorontaloprov.go.id/percepat-penurunan-stunting-di-provinsi-gorontalo-penjagub-berharap-perkuat-kemitraan/
4. Provincial Health Office. Rekapitulasi Balita Stunting Kabupaten Gorontalo. Gorontalo; 2019. Retreived from: https://dinkes.gorontaloprov.go.id/percepat-penurunan-stunting-di-provinsi-gorontalo-penjagub-berharap-perkuat-kemitraan/
5. Amalia L, Yunginger R. Laporan Akhir Kuliah Kerja Nyata (KKN) – Tematik Lembaga Penelitian Dan Pengabdian Kepada Masyarakat Universitas Negeri Gorontalo. Vol. 21. Gorontalo: Universitas Negeri Gorontalo; 2021. 1–9 p.
6. Uliyanti, Tamtomo DG, Anantanyu S. Faktor Yang Berhubungan Dengan Kejadian Stunting Pada Balita Usia 24-36 Bulan. J Vokasi Kesehat. 2017;11(2):148.
7. Azwar S. Sikap manusia teori dan pengukurannya. Yogyakarta: Pustaka Pelajar; 2010.
8. Zainal N, A A, Patimah S. Analysis of Specific Nutrition Intervention Programs for Breastfeeding Mothers on Stunting Incidents in Children Aged 25-36 Months in the Work Area of the Antang Health Center, Makassar City. An Idea Health Journal. 2021;1(03):142-54.
9. Puspitasari A, Abdullah N, Alimuddin H. Environmental Sanitation and Levels of Animal Protein Intake on the Incident of Stunting in Toddlers. An Idea Health Journal. 2024;4(02):45-50.
10. Saenal SW. Hubungan Perilaku Keluarga Sadar gizi dengan Kejadian Stunting pada Balita di Desa Tarowang Kecamatan Tarowang Kabupaten Jeneponto. 2019;1–23.
11. Widad Z. Hubungan Penerapan Perilaku KADARZI (Keluarga Sadar Gizi) dengan Kejadian Stunting Pada Balita Usia 24-59 Bulan. Jurnal Kesehatan Masyarakat. 2019. i–125.
12. Wijayanti S, Nindya TS. Hubungan Penerapan Perilaku Kadarzi (Keluarga Sadar Gizi) dengan Status Gizi Balita di Kabupaten Tulungagung. Amerta Nutr. 2017;1(4):379.
13. Hartono H, Widjanarko B, EM MS. Hubungan perilaku Keluarga Sadar Gizi (KADARZI) dan Perilaku Hidup Bersih Sehat (PHBS) pada tatanan rumah tangga dengan status gizi balita usia 24-59 bulan. J Gizi Indones (The Indones J Nutr. 2017;5(2):88–97.
14. Apriani L. Hubungan Karakteristik Ibu, Pelaksanaan Keluarga Sadar Gizi (KADARZI) dan Perilaku Hidup Bersih Sehat (PHBS) dengan Kejadian Stunting. JKM. 2018;6:1–23.
15. Nasution SZ, Purba WD. Pengaruh Dukungan Keluarga Terhadap Motivasi Mahasiswa Reguler Menjalani Pendidikan Di Fakultas Keperawatan Universitas Sumatera Utara. 2017;JPPNI vol.:83–94.
16. Notoatmodjo S. Promosi Kesehatan & Ilmu Perilaku. Jakarta: Rineka Cipta. 2012.
17. Isnoviana M, Yudit J. Hubungan Status Pekerjaan dengan Keaktifan Kunjungan Ibu dalam Posyandu di Posyandu X Surabaya. J Ilm Kedokt Wijaya Kusuma. 2020;9(2):112.
18. Mentari S, Hermansyah A. Faktor-Faktor Yang Berhubungan Dengan Status Stunting Anak Usia 24-59 Bulan Di Wilayah Kerja Upk Puskesmas Siantan Hulu. Pontianak Nutr J. 2019;1(1):1.
19. Wanimbo E, Wartiningsih M. Hubungan Karakteristik Ibu Dengan Kejadian Stunting Baduta (7-24 Bulan) Relationship Between Maternal Characteristics With Children (7-24 Months) Stunting Incident. J Manag Kesehat . 2020;6(1):83–93.
20. Destiadi A, Nindya TS, Sumarmi S. Frekuensi Kunjungan Posyandu Dan Riwayat Kenaikan Berat Badan Sebagai Faktor Risiko Kejadian Stunting Pada Anak Usia 3 – 5 Tahun. Media Gizi Indones. 2016;10(1):71–5.
21. Sulastri D. Faktor Determinan Kejadian Stunting Pada Anak Usia Sekolah Di Kecamatan Lubuk Kilangan Kota Padang. Maj Kedokt Andalas. 2012;36(1):39.
22. Picauly I, Toy SM. Analisis Determinan Dan Pengaruh Stunting Terhadap Prestasi Belajar Anak Sekolah Di Kupang Dan Sumba Timur, Ntt. J Gizi dan Pangan. 2013;8(1):55.
23. Olsa ED, Sulastri D, Anas E. Hubungan Sikap dan Pengetahuan Ibu Terhadap Kejadian Stunting pada Anak Baru Masuk Sekolah Dasar di Kecamanatan Nanggalo. J Kesehat Andalas. 2018;6(3):523.
24. Azriani D, Masita, Qinthara NS, Yulita IN, Agustian D, Zuhairini Y, Dhamayanti M. Risk factors associated with stunting incidence in under five children in Southeast Asia: a scoping review. J Health Popul Nutr. 2024;43(1):174.
25. Didik H, Ikeu Ekayanti. Analisis Pengaruh Perilaku Keluarga Sadar Gizi terhadap Stunting di Provinsi Kalimantan Barat. Teknol dan Kejuru. 2011;34(1):71–80.

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26. Habimana S, Biracyaza E. Risk Factors Of Stunting Among Children Under 5 Years Of Age In The Eastern And Western Provinces Of Rwanda: Analysis Of Rwanda Demographic And Health Survey 2014/2015. Pediatr Heal Med Ther. 2019;Volume 10:115–30.
27. Chyntaka M, Putri NY. Riwayat Pemberian ASI Eksklusif dengan Kejadian Stunting pada Balita Usia 24-60 Bulan. JIDAN (Jurnal Ilm Bidan). 2020;7(1):8–13.
28. Indrawati S. Hubungan pemberian ASI eksklusif dengan kejadian stunting pada anak usia kejadian stunting pada anak usia 2-3 tahun di Desa Karangrejek. Fak Ilmu Kesehat Di Univ _Aisyiyah Yogyakarta. 2016;6–7.
29. Mulyaningsih T, Mohanty I, Widyaningsih V, Gebremedhin TA, Miranti R, Wiyono VH. Beyond personal factors: Multilevel determinants of childhood stunting in Indonesia. PLoS One. 2021;16(11):e0260265.
30. Sujendran S, Senarath U, Joseph J. Prevalence of Stunting among Children Aged 6 to 36 Months , in the Eastern Province of Sri Lanka Journal of Nutritional Disorders & Therapy. J Nutr Disord Ther. 2015;5(1):1–6.

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