JKM (Jurnal Kebidanan Malahayati),Vol 10, No. 12. Desember 2024,
ISSN (Print) 2476-8944 ISSN (Online) 2579-762X, Hal 1243-1252

OBSERVATION OF THE GROWTH AND DEVELOPMENT OF STUNTED TODDLERS

Lisni[1], Aida Fitriani[2*], Yenni Fitri Wahyuni[3], Serlis Mawarni[4], Hafsah Us[5], Ika Friscila[6]

[1,2,3,4,5]Poltekkes Kemenkes Aceh, Lhokseumawe, Aceh
[6]Faculty of Midwifery, Sari Mulia University, Banjarmasin, Kalimantan Selatan
*Email correspondence aida.fitriani@poltekkesaceh.ac.id

ABSTRAK : **OBSERVASI TUMBUH KEMBANG BALITA STUNTING**

Latar Belakang: Anak dengan keadaan stunting memiliki aktivitas motorik yang rendah, perkembangan motorik dan mental yang terlambat dan kemampuan kognitif yang terhambat. Keterlambatan tumbuh kembang anak sangat membahayakan jika terjadi pada periode emas atau golden periode, dimana pada masa tersebut anak sedang mengalami pertumbuhan pesat yang menjadi bekal ketika remaja dan dewasa.

Tujuan: memberikan hasil observasi tumbuh kembang balita stunting di wilayah kerja Puskesmas Bebesen Kabupaten Aceh Tengah.

Metode: penelitian kuantitatif deskriptif dengan desain cross sectional. Sampel sebanyak 33 anak menggunakan Teknik purposive sampling.

Hasil: Hasil penelitian yang dilakukan pada 33 anak di wilayah kerja Puskesmas Bebesen, dari aspek rasio berat badan/usia, dominan anak dalam kondisi normal. Dari aspek tinggi badan/usia, dominan dalam kondisi "Sangat Pendek" dan "Pendek". Dari aspek berat badan/tinggi badan dominan dalam kondisi "Gizi Baik". Hasil observasi DDST II pada keseluruhan sampel, baik dari sisi personal sosial, motorik kasar, bahasa, dan motorik halus, semua dominan mengalami keterlambatan.

Kesimpulan: Bahwa anak dengan stunting mengalami keterlambatan tumbuh kembang baik dari sisi personal sosial, motorik kasar, bahasa, dan motorik halus.

Saran: Pencegahan kejadian stunting lebih tepat dilakukan untuk menghindari keterlambatan tumbuh kembang pada anak yang dapat membahayakan.

Kata Kunci : Stunting, Tumbuh Kembang, Observasi, Balita

ABSTRACT

Background: Children with stunting have low motor activity, delayed motor and mental development and inhibited cognitive abilities. Delayed growth and development of children is very dangerous if it occurs during the golden period, where at that time the child is experiencing rapid growth which becomes provisions for adolescence and adulthood.

Purpose: To provide the results of observations of the growth and development of stunted toddlers in the work area of the Bebesen Health Center, Central Aceh Regency.

Methods: Descriptive quantitative research with a cross-sectional design. A sample of 33 children using the purposive sampling technique.

Results: The results of the study conducted on 33 children in the work area of the Bebesen Health Center, from the aspect of the weight/age ratio, the dominant children are in normal condition. From the aspect of height/age, the dominant ones are in the "Very Short" and "Short" conditions. From the aspect of weight/height, the dominant ones are in the "Good Nutrition" condition. The results of the DDST II observations on the entire sample, both in terms of personal social, gross motor, language, and fine motor, all are predominantly delayed.

Conclusion: Children with stunting experience delayed growth and development in terms of personal social, gross motor skills, language, and fine motor skills.

Suggestions; Prevention of stunting is more appropriate to avoid delayed growth and development in children that can be dangerous.

Keywords: : Stunting, Growth and Development, Observation, Toddler

INTRODUCTION

Stunting is a chronic nutritional problem in toddlers that is characterized by a child's shorter height than a child of the same age (Kementrian Kesehatan Republik Indonesia, 2018). According to the World Health Organization (WHO), stunting is a condition in which the Z-score of height by age (TB/U) based on the growth standard reaches less than -2 standard deviation (SD) (Wahyuni et al., 2024; Yadika et al., 2019). Short Toddlers (Stunting) is a nutritional status based on the PB/U or TB/U index where in the anthropometric standard for assessing children's nutritional status, the measurement results are at the threshold (Z-Score) <-2 SD to -3 SD (short/stunted) and <-3 SD (very short / severely stunted). Stunting is a short body shape that exceeds a deficit of -2 SB below the median standard height or body length according to age. This stunting problem starts from problems during the growth and development process of the fetus in the womb until the age of 2 years, where this period is known as the first 1000 days of life or window opportunity (Wellina et al., 2016). Stunting is a linear growth disorder that lasts from pregnancy to 24 months of age which indicates a long-term and cumulative occurrence of lack of nutrients, health and inadequate parenting patterns. Identification of stunted toddlers according to WHO child growth based on TB/U using indicators with stunting criteria, namely the zscore value of TB/U <-2 SD. Stunting is often found in children aged 12-36 months with a prevalence of 38.3 - 41.5% (Kusuma & Nuryanto, 2013; Lestari et al., 2022).

According to the World Health Organization, stunting can lead to imoptimal cognitive or intellectual, motor, and verbal development, an increased risk of obesity and other degenerative diseases, increased health costs, and an increased incidence of illness and death (Kementrian Kesehatan Republik Indonesia, 2018). Children who have suboptimal intelligence levels due to stunting can ultimately hinder economic growth, increase poverty, and widen inequality in a country (Yadika et al., 2019).

Stunting is a chronic malnutrition problem caused by insufficient nutritional intake for a long time due to feeding that is not in accordance with nutritional needs. Stunting can occur from the fetus still in the womb and only appears when the child is two years old (Fitriani et al., 2023; Rahmadhita, 2020). Stunting is a condition that describes the condition of malnutrition, usually occurs for a long time and requires a long recovery in children who have impaired growth and development to recover (Beal et al., 2018; Mardiana et al., 2024).

Stunting is closely related to children's growth and development, the influence of stunting on growth and development is very large. Children with stunting have low motor activity, delayed motor and mental development and stunted cognitive abilities. Delayed growth and development of children is very dangerous if it occurs in the golden period, where during that time children are experiencing rapid growth which is a provision for adolescence and adulthood (Sakti, 2020). The golden period is a period that determines the quality of life, where this period occurs at the age of 0-24 months. At this age, adequate nutrition is needed, this is because the consequences that occur during this period will be permanent and cannot be corrected again (Apriana et al., 2024; Mitra, 2015). Stunting cases are a big problem, the high influence of stunting on children's growth and development has the potential to make a generation that is hampered in its competitiveness (Fitriani et al., 2022; Fitriani, Erlina, et al., 2024).

There are several factors or relationships that cause an increase in stunting incidence, one of which is parenting. Parenting patterns will affect the nutritional status of children indirectly. This includes breastfeeding (Breast Milk) and MP-ASI (Fitriani, Us, et al., 2024; Friscila et al., 2022; Yuliani et al., 2023). Breast milk is the best natural food that a mother can give to a newborn child, besides, the composition of breast milk is suitable for the growth and development of the baby, which changes according to the baby's needs at any time. In addition, parenting can be carried out through feeding practices, child health care, sanitation practices, and stimulation of children's psychosocial development. Parenting is determined by resources in the family, including knowledge, education, maternal health and social support (Putri, 2020).

Based on data from the Ministry of Health in the Results of the 2022 Indonesia Nutrition Status Survey (SSGI), Aceh Province ranks third in the prevalence of underweight toddlers, which is at 24.3, below the provinces of NTT and Central Sulawesi, and far below the national average of 17.1 (Badan Kebijakan Pembangunan Kesehatan, 2022). This requires serious attention from all parties. From data from Regencies/Cities in Aceh, Central Aceh Regency, where the Bebesen District Health Center is located, the prevalence rate of stunting toddlers is still above the provincial average, which is at 32.0. Therefore, it is important to study the problem of stunting in the working area of the Bebesen District Health Center.

Peruvian stunting toddlers are given more attention to overcome or reduce the effects of stunting. As much as possible, efforts are made to

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

improve the nutritional status of children, so that the children experience improvements for their future. In other words, the parenting of stunted children is very important in overcoming the stunting problem. Indirectly, stunting is influenced by inadequate child care, low food security, environmental sanitation, and the reach of health service quality. In experience, people have not realized that short children are a problem, which must be overcome immediately (Putri, 2020).

The problem taken in this study is to determine the right parenting style, observation or observation is needed about the condition of stunted children, such as physical-motor development, cognitive development, language development, and so on. From the observation of the growth and development of stunted toddlers, it can be determined that the right parenting style can be taken by parents, families, and health workers, who have direct contact with the stunted toddler.

The purpose of this study is to provide observation results of the growth and development of stunted toddlers in the work area of the Bebesen Health Center, Central Aceh Regency, so that it can be used as a basis for providing the right parenting style for stunted toddlers.

RESEARCH METHODS

This study is a descriptive quantitative research with a cross-sectional design, conducted from March to July 2024. A purposive sampling method was used to select participants from a population of 62 stunted toddlers in the Puskesmas Bebesen working area. Of these, 33 toddlers who attended the Puskesmas Bebesen for examination were chosen, based on a 90% confidence level and a 10% margin of error. Primary data were collected through Denver II screening, while secondary data included the toddlers' birth dates and stunting status, obtained from Puskesmas Bebesen. Data analysis was performed using univariate analysis, focusing on the frequency distribution of each aspect under investigation. Data collection was carried out once when meeting with respondents who met the criteria as below:

Inclusion criteria for this study were: 1) Toddlers aged between 1 and 5 years (12-60 months) at the time of screening; 2) Toddlers identified as stunted; 3) Toddlers residing within the Puskesmas Bebesen working area, Central Aceh Regency.

RESEARCH RESULTS

Based on the sample inclusion criteria, from 62 stunted toddlers in the Bebesen Health Center work area, in the research time span, a sample of 33 children under five was taken as shown in table 1 below.

Table 1
Data on the results of height and weight measurements of toddlers

Sample	Gender	Age (months)	Weight (kg)	Height (cm)	Weight/Age	Height/Age	Weight/Height
1	Male	14	9,1	73,2	Normal	Severely Stunted	Severely Wasted
2	Female	29	11	86	Normal	Severely Stunted	Wasted
3	Female	31	9	86	Severely Underweight	Severely Stunted	Severely Wasted
4	Female	15	8,6	71,5	Normal	Severely Stunted	Normal
5	Male	48	14,5	91,5	Normal	Stunted	Normal
6	Female	26	10,6	79,5	Normal	Normal	Wasted
7	Female	44	13,5	79	Normal	Stunted	Normal
8	Male	19	9	72,5	Underweight	Severely Stunted	Normal
9	Male	21	9,2	74,4	Underweight	Severely Stunted	Overweight
10	Male	25	9,8	82	Normal	Severely Stunted	Normal
11	Male	26	10,2	81	Underweight	Severely Stunted	Normal

12	Male	31	10,7	87	Underweight	Stunted	Normal
13	Male	41	13,4	92,6	Normal	Stunted	Normal
14	Female	29	11,1	88,5	Underweight	Severely Stunted	Normal
15	Male	35	9,9	85,2	Severely Underweight	Severely Stunted	Normal
16	Male	53	13,3	96	Underweight	Stunted	Normal
17	Female	26	10,5	81,5	Normal	Stunted	Normal
18	Male	6	7,1	75,2	Normal	Stunted	Normal
19	Female	26	10,5	83,5	Normal	Stunted	Normal
20	Male	30	11,8	86	Normal	Stunted	Normal
21	Female	37	11	88,8	Underweight	Stunted	Normal
22	Female	25	9,2	76	Underweight	Stunted	Normal
23	Male	48	12,7	96	Underweight	Stunted	Normal
24	Male	31	12	86	Normal	Stunted	Normal
25	Male	24	8,6	73	Severely Underweight	Stunted	Normal
26	Female	29	9,9	70	Underweight	Severely Stunted	Normal
27	Male	13	8,8	75,5	Normal	Stunted	Normal
28	Female	38	12,5	91,5	Normal	Stunted	Normal
29	Male	38	11,5	85	Underweight	Severely Stunted	Normal
30	Female	20	8,4	78	Underweight	Stunted	Normal
31	Female	23	10,1	74,7	Normal	Stunted	Overweight
32	Male	22	10,6	79,5	Normal	Stunted	Normal
33	Female	8	6,2	67	Underweight	Normal	Wasted

In table 1, you can see the data on the results of height and weight measurements in stunted toddlers in Bebesen District, Central Aceh. Based on the data in table 1, it is then grouped by gender and weight/age category, and height/age, which is shown in the following table 2.

Table 2
Weight/age and height/age status categories

Categories	Male	%	Female	%	Total	% of samples
Weight/Age						
Severely Underweight	2	66,7	1	33,3	3	9,1
Underweight	6	46,2	7	53,8	13	39,4
Normal	9	52,9	8	47,1	17	51,5
Height/Age						
Severely Stunted	7	58,3	5	41,7	12	36,4
Stunted	11	57,9	8	42,1	19	57,6
Normal	0	0,0	2	100,0	2	6,1
Weight/Height						
Severely Wasted	1	50,0	1	50,0	2	6,1
Wasted	0	0,0	3	100,0	3	9,1
Normal	15	57,7	11	42,3	26	78,8
Overweight	1	50,0	1	50,0	2	6,1

Based on Table 2, it can be observed that a significant number of children in this dataset are categorized as "Stunted" and " Severely Stunted " for their age, with 19 (57.6%) and 12 (36.4%) of the total sample, respectively. This indicates a strong presence of stunting issues within the studied

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

population. According to gender data, male generally exhibit higher indications of stunting compared to female. This is evident in the weight-for-age aspect, where the percentages of " Severely Underweight " and " Underweight " are higher for male compared to female. In the height-for-age aspect, male also show higher percentages of "Severely Stunted" and "Stunted" compared to female toddlers. The categories of "Severely Stunted" and "Stunted" are predominant across the entire sample, with only 2 children (6.1%) falling within the normal height-for-age range. Regarding weight-for-height ratio, the majority of the sample is categorized as "Normal" with 26 children (78.8%). There are 2 children classified as " Severely Wasted " and 3 children classified as " Wasted ".

The assessment of the development of toddlers in this study was carried out through the application of the Denver II screening method. In tables 3 and 4, it is known that the results of sector assessments on social, fine motor, language, and gross motor aspects are known. In general, it can be seen that there are many "delays" in all aspects.

Table 3
Denver II Screening Assessment Results

Sample	Age	Gender	Hasil Penilaian			
			personal–social	fine motor-adaptive	Language	Gross motor abilities
1	14	Male	Delayed	Delayed	Delayed	Normal
2	29	Female	Delayed	Delayed	Normal	Normal
3	31	Female	Normal	Caution	Delayed	Caution
4	15	Female	Delayed	Normal	Delayed	Delayed
5	48	Male	Delayed	Normal	Delayed	Delayed
6	26	Female	Delayed	Caution	Delayed	Normal
7	44	Female	Normal	Normal	Delayed	Delayed
8	19	Male	Delayed	Delayed	Normal	Delayed
9	21	Male	Delayed	Delayed	Delayed	Delayed
10	25	Male	Delayed	Normal	Delayed	Normal
11	26	Male	Normal	Delayed	Delayed	Delayed
12	31	Male	Normal	Caution	Delayed	Caution
13	41	Male	Normal	Delayed	Delayed	Normal
14	29	Female	Delayed	Normal	Delayed	Delayed
15	35	Male	Delayed	Delayed	Delayed	Delayed
16	53	Male	Normal	Normal	Delayed	Delayed
17	26	Female	Delayed	Delayed	Delayed	Normal
18	6	Male	Normal	Normal	Normal	Delayed
19	26	Female	Delayed	Delayed	Normal	Normal
20	30	Male	Normal	Normal	Normal	Delayed
21	37	Female	Normal	Normal	Normal	Normal
22	25	Female	Delayed	Caution	Delayed	Caution
23	48	Male	Normal	Delayed	Normal	Normal
24	31	Male	Delayed	Delayed	Normal	Delayed
25	24	Male	Delayed	Caution	Delayed	Delayed
26	29	Female	Normal	Delayed	Delayed	Normal
27	13	Male	Delayed	Delayed	Delayed	Normal
28	38	Female	Normal	Caution	Normal	Delayed
29	38	Male	Delayed	Delayed	Normal	Normal
30	20	Female	Normal	Normal	Delayed	Normal
31	23	Female	Delayed	Normal	Normal	Delayed
32	22	Male	Delayed	Normal	Normal	Normal
33	8	Female	Normal	Normal	Delayed	Caution

Table 4
Summary of Denver II Screening Assessment Results

Aspect	Frequency	%
Personal-social		
Normal	14	42,4
Caution	0	0,0
Delay	19	57,6
Fine motor-adaptive		
Normal	13	39,4
Caution	6	18,2
Delay	14	42,4
Bahasa		
Normal	15	45,5
Caution	0	0,0
Delay	18	54,5
Gross motor abilities		
Normal	14	42,4
Caution	4	12,1
Delay	15	45,5

Table 5
Denver II Screening Interpretation Results

Interpretation	Frequency	%
Normal	0	0
Suspect	33	100%

DISCUSSION

Based on the data in Table 2, it is evident that a substantial number of children in this dataset are categorized as "Stunted" and "Severely Stunted" for their age, with 19 (57.6%) and 12 (36.4%) of the total sample, respectively. This serves as a strong indicator of stunting issues within the studied population. Gender-specific data show that male toddlers generally exhibit higher indications of stunting compared to female toddlers. This is reflected in the weight-for-age aspect, where the percentages of "Severely Wasted" and "Wasted" are higher for male toddlers than for female toddlers. In the height-for-age aspect, male toddlers also demonstrate higher percentages of "Severely Stunted" and "Stunted" compared to female toddlers. The categories of "Severely Stunted" and "Stunted" are predominant across the entire sample.

This can be suspected to be caused by the number of nutritional needs of a person. Men need more energy and protein than women. Male toddlers have more nutritional needs because male toddlers generally have a larger posture and a high metabolism (Rahmi, 2020). Nutritional needs for each person are different depending on age, gender and activity (Mauyah et al., 2022). The nutrsi needed by early childhood is not the same as adults, children need more nutritional intake than adults. This is because preschool children are still in the growth and development phase. Early childhood is also called the preschool period, because during this period children begin to train various movements, physical reflexes, motors, and their five senses, so that children are ready to take education to the next stage, which is basic education. In addition, in early childhood, they begin to learn about various things in their environment. Great curiosity, and a lot of activities must be balanced with nutritious nutrition (Rahmi, 2020). Women have more fat tissue and less muscle tissue than men. Metabolically, muscles are more active when compared to fat, so proportionally muscles will require more energy than fat, thus, men and women of the same height, weight and age have different body compositions, so their energy and nutritional needs will also be different (Sekarini, 2022)(Apriyana et al., 2022). This is in line with the results of a study that stated that the proportion of stunting incidence in toddlers 6-23 months was more found in male toddlers as many as 22 people (27.2%), compared to women 11 people (13.3%) (Angelina et al., 2018).

DDST II is one of the tools that can be used for child development screening. The purpose of this examination is to find out as early as possible the deviations that occur in children from birth to the age of 6 years, which includes 4 aspects of assessment, namely personal-social, gross motor abilities, language, and fine motor-adaptive with 125 items in it. The Denver II test is a tool to assess a child's developmental level according to the task for his or her age group at the time of taking the test. Denver II can be used to monitor and monitor the development of infants or children with a high risk of developmental abnormalities or abnormalities on a regular basis (Widadi et al., 2020) (Apriani & Mahayaty, dkk, 2022). Based on table 5, all the children who were included in the research sample were classified as suspected growth and development delays, namely from the aspects of personal-social, gross motor abilities, language, and fine motor-adaptive.

Suboptimal intelligence development in stunting conditions can have an impact on the impairment of children's emotional intelligence and loss of curiosity about the environment where this can hinder the child's social development process (Paramesti & Indarjo, 2024). Developmental delays in the personal-social aspect can indicate a lack of stimulation from parents that is necessary to support the social development of toddlers. Children with directed stimulation develop faster than children who have less or no stimulation (Hairunis et al., 2018). In

this study, there were 59.3% of children who experienced delays in the personal-social aspect. Based on the results of observations, most toddlers, especially those who experience developmental delays in the personal-social aspect, look more comfortable when playing alone or with their mothers. Meanwhile, groups of toddlers with normal development are easier to blend in with others even with people they have just met.

Fine motor-adaptive involves finely regulated movements, such as grasping a toy, buttoning a shirt, or doing anything that requires hand skills (Sandra Adetya & Gina, 2022). Fine motor-adaptive development includes the child's ability to show and master the movements of fine muscles in the form of coordination, dexterity and dexterity in using the hands and fingers. The toddler group in this study has mostly been stimulated with fine motor-adaptive development in the form of simple game tools such as wooden blocks, legos, balls, toy cars, and dolls that are often played with every day. In this study, there were 13 children (48.1%) who experienced delays in the fine motor-adaptive aspect.

The results of this study on the language aspect show that most toddlers have delays, with a percentage slightly above the normal category. This group of toddlers does not have good skills in responding to sounds, speaking, communicating, and following commands. This is in line with research that states that stunting conditions have a significant effect on language development where children with stunting experience impairments in speech and language skills (Wulansari et al., 2021). Toddlers with normal language development showed that there was a well-achieved stimulation in language skills. The group of toddlers with normal language development has parents, especially mothers, who often invite toddlers to communicate, such as showing the names of objects or people, talking about something, and allowing the child to convey what he feels or wants. This is in accordance with the research of Asthiningsih and Muflihatin (2018) which states that parents are an important component in children's language development, because of their role as language models and corrections for children's mistakes (Asthiningsih & Muflihatin, 2018).

The results of this study show that most stunted toddlers experience developmental delays in the aspect of gross motor abilities. This can be interpreted that the majority of toddlers do not have a good ability to perform body movements and postures that involve large muscles such as sitting, standing, walking, and so on. In line with research by Kartika (2020) which states that children with stunted nutritional status are five times more likely to be suspected of gross motor abilities developmental disorders than non-stunted children (Kartika et al., 2020). In relation to the mechanism of delayed development of gross motor abilities, stunted children tend to be passive to move, apathetic, and lack interest in playing involving gross motor abilities so that children tend to be silent (Rohayati et al., 2022). Lack of long-term energy and protein intake affects the growth of large muscles so that stunted children tend to have more limited energy to be active. This is in line with the statement of the mother of the toddler who explained that most toddlers do not like to eat and are very picky eaters. Some toddlers only eat twice a day with less varied food composition and small portions (Paramesti & Indarjo, 2024).

Cognitive development is an aspect that focuses on thinking skills, including learning, problem-solving, rationality, and remembering that have a great influence on students' success in school [10]. Based on research by Solihin (2013) through a correlation test, it is known that the height of toddlers by age (TB/U) is positively related to the level of cognitive development, where an r of 0.272 and a p-value of 0.020 are obtained. This study states that taller toddlers have a higher level of cognitive development (Solihin, M.Faisal, A. Dadang, 2013).

Cognitive development is a pattern of changes in mental abilities that include the ability to learn, concentrate, think, creativity, and language (Ni'mah & Nadhiroh, 2015). According to Hanushek and Woessmann, improving nutrition in the first 1000 days of life (1000 HPK), i.e. from the fetus in the womb to the age of 2 years, is the key to reducing the incidence of stunting, improving cognitive abilities and improving educational outcomes which can ultimately trigger economic growth (Andriani et al., 2023).

WHO states that in addition to experiencing growth disorders, stunted children also experience developmental delays. Development in toddlers can be assessed from three things, namely physically, cognitively, and psychosocially. Aryastami (2017) stated that stunting has an impact on the decline of children's intellectuality and cognitive abilities (Aryastami, 2017).

Cognitive development is closely related to the process of genetic growth or physical maturity of children. Through research by Solihin (2013) through a correlation test, it is known that the height of toddlers according to age is positively related to the level of cognitive development, where an r of 0.272 and a p-value of 0.020 are obtained. This means that taller toddlers have higher levels of cognitive development (Solihin, M.Faisal, A. Dadang, 2013).

Children who suffer from stunting are detected to have low confidence and are at risk of causing family problems, especially when they are teenagers. Based on research by Rahmaningrum (2017) on students of SMP Muhammadiyah 1 Kartasura, the results of 12 stunted people, 11 people have poor cognitive ability and 1 person has good cognitive ability. Meanwhile, for 40 people who are not stunted, 25 people have good cognitive ability and 15 people lack. Through the chi-square test, a p-value of 0.001 (p<0.05) and an Odds Ratio (OR) of 18.333 were obtained, which showed a meaningful relationship between stunting and adolescent cognitive ability in SMP Muhammadiyah 1 Kartasura. Children who suffer from stunting are also easily anxious and prone to depression (Rahmaningrum, 2017).

CONCLUSION

Based on research conducted on 33 children in the Bebesen Health Center work area, from the aspect of weight/age ratio, the dominant children are in normal conditions. From the aspect of height/age, dominant in the conditions of "Very Short" and "Short". From the aspect of weight/height is dominant in the condition of "Good Nutrition".

Based on the observation of DDST II on the entire sample, both in terms of personal-social, gross motor abilities, language, and fine motor-adaptive, all dominant experienced delays.

SUGGESTION

Prevention of stunting is more appropriate to avoid delayed growth and development in children that can be dangerous.

REFERENCE

Andriani, L., Nisa, S., & Aprihatin, Y. (2023). Pengaruh Negatif Stunting Terhadap Perkembangan Kognitif Dan Motorik Pada Anak Balita. *Ashiha Jurnal*, *4*(1), 1–5. https://doi.org/https://doi.org/10.69922/asshiha.v4i1.47

Angelina, C. F., Perdana, A. A., & Humairoh. (2018). Faktor kejadian stunting balita berusia 6-23 bulan di Provinsi Lampung. *Jurnal Dunia Kesmas*, *7*(3), 1–5. https://doi.org/https://doi.org/10.33024/jdk.v7i3.507

Apriana, W., Friscila, I., Hasanah, S. N., Wijaksono, M. A., Herawaty, T., Nabila, S., & Winarti, A. D. (2024). Analisis Karakteristik Pasien terhadap Kepuasan Pelayanan Bidan pada Masa Pandemi Covid-19 di Ruang KIA. *Media Informasi*, *20*(1), 103–108. https://doi.org/https://doi.org/10.37160/mijournal.v20i1.58

Apriani, & Mahayaty, dkk, 2022. (2022). Buku Ajar Anak S1 Keperawatan Jilid 1. In *Ebook* (Vol. 1).

Apriyana, K., Pramudho, K., Hermawan, N. S. A., Irianto, S. E., & Rahayu, D. (2022). Determinan Yang Berhubungan Dengan Pencegahan Stunting. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKes Kendal*, *12*(4), 597–610. https://www.academia.edu/download/102451445/30_JIPJISK_VOL_13_NO_2_April_2023_hal_597_610_Abdul_Muhith_Hasina_.pdf

Aryastami, N. K. (2017). Kajian Kebijakan dan Penanggulangan Masalah Gizi Stunting di Indonesia. *Buletin Penelitian Kesehatan*, *45*(4), 233–240. https://doi.org/10.22435/bpk.v45i4.7465.233-240

Asthiningsih, N. W. W., & Muflihatin, S. K. (2018). Deteksi Dini Perkembangan Balita Dengan Metode DDST II Di Posyandu Wilayah Kerja Puskesmas Juanda Samarinda. *Jurnal Endurance*, *3*(2). https://doi.org/10.22216/jen.v3i2.3149

Badan Kebijakan Pembangunan Kesehatan, -. (2022). *Buku Saku Hasil Survei Status Gizi Indonesia (SSGI) 2022*.

Beal, T., Tumilowicz, A., Sutrisna, A., Izwardy, D., & Neufeld, L. M. (2018). A review of child stunting determinants in Indonesia. *Maternal and Child Nutrition*, *14*(4), e12617. https://doi.org/10.1111/mcn.12617

Fitriani, A., Erlina, E., Usrina, N., & Friscila, I. (2024). Factors That Influence Pregnant Women's Compliance With Local PMT Bu Gateng. *JKM (Jurnal Kebidanan Malahayati)*, *10*(4), 334–343. https://doi.org/http://dx.doi.org/10.33024/jkm.v10i4.14774

Fitriani, A., Friscila, I., Mauyah, N., Elvieta, E., & Fatiyani, F. (2022). Faktor-Faktor yang Berhubungan dengan Stunting di Puskesmas Syamtalira Aron. *Jurnal Medikes (Media Informasi Kesehatan)*, *9*(1), 47–56. https://doi.org/https://doi.org/10.36743/medikes.v9i1.342

Fitriani, A., Mauyah, N., Wahyuni, Y. F., & Friscila, I. (2023). Edukasi Pentingnya Kunjungan ANC Pada Ibu Dengan Media Syair Aceh Di Desa Lancok. *JMM (Jurnal Masyarakat Mandiri)*, *7*(5), 5264–5273. https://doi.org/https://doi.org/10.31764/jmm.v7i5.17405

Fitriani, A., Us, H., Fatiyani, F., & Friscila, I. (2024).

Pelatihan Kader Peduli Tablet Tambah Darah Bagi Remaja Putri Di SMP Dan SMA. *Compromise Journal: Community Proffesional Service Journal*, *2*(2), 7–14. https://doi.org/https://doi.org/10.57213/compromisejournal.v2i2.246

Friscila, I., Noorhasanah, S., Hidayah, N., Sari, S. P., Nabila, S., Fitriani, A., Fonna, L., & Dashilva, N. A. (2022). Education Preparation for Exclusive Breast Milk at Sungai Andai Integrated Services Post. *Ocs.Unism.Ac.Id*, *1*, 119–127. https://ocs.unism.ac.id/index.php/semnaspkm/article/view/755

Hairunis, M. N., Salimo, H., & Dewi, Y. L. R. (2018). Hubungan Status Gizi dan Stimulasi Tumbuh Kembang dengan Perkembangan Balita. *Sari Pediatri*, *20*(3), 146–151. https://doi.org/10.14238/sp20.3.2018.146-51

Kartika, C., Suryani, Y. D., & Garna, H. (2020). Hubungan Stunting dengan Perkembangan Motorik Kasar dan Halus Anak Usia 2–5 Tahun di Desa Panyirapan, Kecamatan Soreang Kabupaten Bandung. *Jurnal Integrasi Kesehatan & Sains*, *2*(2), 104–108. https://doi.org/10.29313/jiks.v2i2.5597

Kementrian Kesehatan Republik Indonesia. (2018). Pusdatin: Situasi Balita Pendek (Stunting) Di Indonesia. In *Kementrian Kesehatan Republik Indonesia*.

Kusuma, K. E., & Nuryanto, N. (2013). Faktor Risiko Kejadian Stunting Pada Anak Usia 2-3 Tahun (Studi Di Kecamatan Semarang Timur). *Journal of Nutrition College*, *2*(4), 1–5. https://doi.org/10.14710/jnc.v2i4.3735

Lestari, M., Friscila, I., Us, H., Wahyuni, Y. F., Safina, S., & Hasibuan, S. R. (2022). Gerakan Pencegahan Stunting Melalui Pemberdayaan Masyarakat Di Desa Lancok Kecamatan Syamtalira Bayu. *Jurnal Abdimas ITEKES Bali*, *2*(1), 35–42. https://doi.org/https://doi.org/10.37294/jai.v2i1.448

Mardiana, S., Hartinah, H., Friscila, I., & Fitriani, A. (2024). Pengaruh Pendidikan Kesehatan Dengan Booklet Terhadap Pengetahuan Ibu Hamil Tentang Anemia Kehamilan Di Puskesmas Kotabaru. *Quantum Wellness: Jurnal Ilmu Kesehatan*, *1*(2), 57–70. https://doi.org/https://doi.org/10.62383/quwell.v1i2.160

Mauyah, N., Elvieta, E., Subki, S., Savina, S., Akla, N., Friscila, I., & Sari, S. P. (2022). Penyuluhan Pengolahan Makanan Bergizi untuk Anak di Desa Gampong Raya Tambo Kecamatan Peusangan Kabupaten Bireuen 2021. *Jurnal Abdimas ITEKES Bali*, *1*(2), 76–80. https://doi.org/https://doi.org/10.37294/jai.v1i2.374

Mitra, M. (2015). Permasalahan Anak Pendek (Stunting) dan Intervensi untuk Mencegah Terjadinya Stunting (Suatu Kajian Kepustakaan). *Jurnal Kesehatan Komunitas*, *2*(6), 254–261. https://doi.org/10.25311/keskom.vol2.iss6.85

Ni'mah, K., & Nadhiroh, S. R. (2015). Faktor yang berhubungan dengan kejadian stunting pada balita (Digital Repository Universitas Jember). *Media Gizi Indonesia*, *10*(1), 13–19. https://e-journal.unair.ac.id/index.php/MGI/article/download/3117/2264

Paramesti, H. R., & Indarjo, S. (2024). Tumbuh Kembang Balita Stunting Usia 1-3 Tahun Melalui Skrining Denver II. *HIGEIA (Journal of Public Health Research and Development)*, *8*(1), 111–123. https://doi.org/10.15294/HIGEIA.V8I1.64144

Putri, A. R. (2020). Aspek Pola Asuh, Pola Makan, Dan Pendapatan Keluarga Pada Kejadian Stunting. *Healthy Tadulako Journal (Jurnal*, *6*(9), 7–12. https://doi.org/https://doi.org/10.22487/htj.v6i1.96

Rahmadhita, K. (2020). Permasalahan Stunting dan Pencegahannya. *Jurnal Ilmiah Kesehatan Sandi Husada*, *9*(1), 225–229. https://doi.org/https://doi.org/10.35816/jiskh.v11i1.253

Rahmaningrum, Z. N. (2017). *Hubungan Antara Status Gizi (Stunting Dan Tidak Stunting) Dengan Kemampuan Kognitif Remaja Di Sukoharjo, Jawa Tengah*. Universitas Muhammadiyah Surakarta.

Rahmi, P. (2020). Peran Nutrisi Bagi Tumbuh dan Kembang Anak Usia Dini. *Pusat Jurnal UIN Ar-Raniry (Universitas Islam Negeri)*, *5*(1), 1–13. https://doi.org/http://dx.doi.org/10.22373/bunayya.v5i1.6380

Rohayati, Iswari, Y., & Hartati, S. (2022). Stunting Mempengaruhi Perkembangan Motorik Kasar, Motorik Halus Dan Bahasa Anak Usia 0-24 Bulan. *Jurnal Endurance*, *6*(3), 631–641. https://doi.org/10.22216/jen.v6i3.618

Sakti, S. A. (2020). Pengaruh Stunting pada Tumbuh Kembang Anak Periode Golden Age. *Jurnal Ilmiah Fakultas Keguruan Dan Ilmu Pendidikan*, *6*(1), 169–175.

https://doi.org/https://doi.org/10.35569/biormatika.v6i1.709

Sandra Adetya, & Gina, F. (2022). Bermain origami untuk melatih keterampilan motorik halus anak usia dini. *Altruis: Journal of Community Services*, *3*(2), 46–50. https://doi.org/10.22219/altruis.v3i2.21501

Sekarini, S. (2022). Kejadian Stunting Pada Balita Ditinjau Dari Karakteristik Umur Dan Jenis Kelamin. *Jurnal Ilmu Kesehatan MAKIA*, *12*(1), 8–12. https://doi.org/10.37413/jmakia.v12i1.186

Solihin, M.Faisal, A. Dadang, S. (2013). Kaitan Antara Status Gizi,Perkembangan Kognitif, Dan Perkembangan Motorik Pada Anak Usia Prasekolah. *Penelitian Gizi Dan Makanan*, *36*(1).

Wahyuni, Y. F., Fitriani, A., Iswani, R., Mawarni, S., Savina, S., Akla, N., & Friscila, I. (2024). Penyuluhan Gizi Dalam Upaya Pencegahan Stunting Bagi Ibu Balita Di Puskesmas Syamtalira Bayu. *Jurnal Abdimas ITEKES Bali*, *3*(2), 117–123. https://doi.org/https://doi.org/10.37294/jai.v3i2.577

Wellina, W. F., Kartasurya, M. I., & Rahfilludin, M. Z. (2016). Faktor Risiko Stunting pada Anak usia 6 - 12 bulan. *Jurnal Gizi Indonesia*, *5*(1).

Widadi, S. yekti, Patimah, I., Nurani, Z., Safaat, R., Tri, E. N., Sofyan, A., Suci, H., & Suwandi, Y. (2020). Pemantauan Perkembangan Anak Dengan DDST II PGTK Paud Pelita Hati Rancabango Garut. *Jurnal Pengabdiaan Masyarakat Kasih (JPMK)*, *1*(2). https://doi.org/10.52841/jpmk.v1i2.119

Wulansari, M., Luh, N., Mastuti, P. H., Indahwati, L., Studi, P., Kebidanan, S., Kedokteran, F., & Brawijaya, U. (2021). Pengaruh Stunting Terhadap Perkembangan Motorik Halus, Motorik Kasar, Bahasa Dan Personal Sosial Pada Anak Balita Usia 2-5 Tahun Di Desa Madiredo Kecamatan Pujon Kabupaten Malang. *Journal of Issues in Midwifery*, *5*(3), 111–120. https://doi.org/10.21776/UB.JOIM.2021.005.03.2

Yadika, A. D. N., Berawi, K. N., & Nasution, S. H. (2019). Pengaruh stunting terhadap perkembangan kognitif dan prestasi belajar. *Jurnal Majority*, *8*(2).

Yuliani, Y., Friscila, I., & Mariana, F. (2023). Konsumsi Jantung Pisang Terhadap Rerata Peningkatan Produksi ASI Pada Ibu Menyusui. *Jurnal Kebidanan Khatulistiwa*, *9*(2), 52–57. https://doi.org/https://doi.org/10.30602/jkk.v9i2.1210