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Original Article

Evaluation Of Growth And Development Of Stunting Childrens : A Case Control Study

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ABSTRACT

Background: Building the quality of human resources must go through a long process and is influenced by various factors. One of the most influencing factors is the intake of food with sufficient nutritional value for growth and development. The aim of this research is to comparison of growth and development of stunting childrens.

Methods: This research was conducted in April – October 2023 with a case control research design. Population of this study are childrens with stunting in Jambi City, Indonesia . The research instrument used Developmental Pre-Screening Questionnaire (KPSP) and Denver Test. Variable evaluation of vision and hearing, evaluation of child's speech and language, physical examination, neurological examination, evaluation of other diseases and development.

Results: The results obtained from this study were the majority were 25-36 months old 46.1%, with the largest gender being male 52.8%. No neurological or ear disorders were found in cases or controls. There was 1 eye disorder on physical examination, 3 disorders were found in cases and 1 disorder in controls. No significant relationship between variable. In the KPSP developmental examination, it was found that there were 44.4% developmental deviations in stunted children and have significant relationship between development and stunting.

Conclusion: In terms of growth, stunted childrens do not experience any problems, but there are deviations in the development of stunted childrens.

INTRODUCTION

To assess the condition of the body due to the food consumed, the nutritional status can be measured. Assessment of the nutritional status of toddlers can be measured from anthropometric measurements with the variables age, weight and height/body length[1]. Based on the anthropological criteria set by WHO, nutritional status with weight-for-age indicators can determine whether a child is underweight, normal or overweight. Nutritional status with indicators of height or body length per age can determine whether a child grows normally or suffers from stunting. Meanwhile, nutritional status using the weight per height indicator can determine whether the child is

normal, wasted (thin), or even severely wasted (very thin)[2].

Stunting, a chronic form of undernutrition, continues to be a significant public health issue in Indonesia, particularly among children under the age of five [3].The prevalence of stunting in Indonesia is notably high, with rates reaching 30.8% among infants less than five years old and 29.9% among two-year-olds [3].This issue is not only confined to Indonesia but is also a global concern, with Indonesia being reported as the country with the third-highest stunting prevalence in Southeast Asia [4].The problem of stunting is particularly dominant in the eastern region of Indonesia, with the highest prevalence rate recorded in East Nusa Tenggara at 40.3% [4]. Various factors contribute to the persistence of stunting in Indonesia. The determinants of stunting include the prenatal environment, maternal anemia, socioeconomic status, access to healthcare facilities, sanitation, and maternal nutrition [5], [6], [3]. Additionally, it has been highlighted that chronic malnutrition, represented by stunting, is a serious threat to the physical development of children in Indonesian [7]. Furthermore, the study by emphasizes the indirect causes of stunting and the necessity of allocating budget for interventions targeting these causes [8]. The impact of stunting extends beyond physical growth disorders, as it can also lead to increased vulnerability to diseases and disorders of brain development and intelligence among children [9]. The World Health Organization (WHO) considers stunting to be a chronic public health issue when its prevalence exceeds 20%, indicating the severity of the problem in Indonesia [10].

Stunting, a form of chronic malnutrition, has been associated with severe and irreversible physical and neurocognitive damage, posing a significant threat to human development [11]. In Indonesia, studies have assessed the prevalence and risk factors for stunting among children under five years old, highlighting the importance of understanding the local context and risk factors associated with stunting [12]. Additionally, the association of stunted and wasted children with their mothers' nutritional health status has been explored, emphasizing the intergenerational impact of malnutrition [13]. Furthermore, meta-analyses have demonstrated consistent negative associations between stunting and multidimensional child development in low- and middle-income countries, emphasizing the pervasive impact of stunting on child development [14]. However, it has been found that children who recover from early stunting demonstrate similar levels of cognition to those who were not stunted, indicating the potential for recovery and catch-up growth [15].

Interventions during pregnancy, such as Moringa Oleifera supplementation, have been studied for their potential in preventing stunted growth in children, highlighting the importance of maternal nutrition in addressing stunting [16]. Moreover, local studies in specific regions of Indonesia, such as Gunung Baran Village, have identified factors causing stunting in toddlers, emphasizing the need for targeted interventions addressing local determinants of stunting [17]. The impact of stunting on the intelligence quotient (IQ) of school-age children has also been investigated, shedding light on the cognitive implications of stunting [18]. Additionally, multilevel and spatial analyses in Uganda have examined individual and contextual factors contributing to childhood malnutrition, providing insights into the broader determinants of stunting [19].

The prevalence of undernutrition in Indonesia based on the 2018 Basic Health Research (Riskesdas) report is 17.7%, the prevalence of children aged 0-24 months based on BW/U is 11.4%, the prevalence of stunting is 17.1% and the prevalence of underweight children is 7.2%. Thus, the nutritional status of children aged 0-24 years in Indonesia is still a serious problem that needs to be addressed[20].

The prevalence of stunting in Jambi Province based on Riskesdas 2018 is 30%, while the national prevalence is 29.9%. According to SSGI 2021 data, the prevalence of stunting in Jambi Province is currently

22.4% (67,893 children under five) and is in the high category according to WHO, where the minimum 20% . Children with stunting have long-term effects that are not as good as normal children, stunted children are at risk of experiencing growth and development disorders, intelligence, metabolic disorders, etc. Assessment and evaluation of the impact that has occurred on children with stunting is very important to be able to determine what policies will be implemented afterwards to deal with this problem.

Meanwhile, the child factors that can influence are history of exclusive breastfeeding, the presence of an Early Breastfeeding Initiation phase at birth, the child's immunization status, length of the baby at birth, weight of the baby at birth and head circumference of the baby at birth. These factors can influence each other and are determinants of the nutritional status of children aged 0-59 months. Moving on from this problem, researchers want to see further monitoring of growth and development in stunted toddlers in the working area of the Simpang Wire Community Health Center, Jambi City.

METHOD

This research was conducted in April – September 2023 with a case control design research design. The location of the activity will be the Simpang Kawat Community Health Center, Jambi City. The aim of this research is to assess and evaluate children's development based on the Denver test, evaluation of vision and hearing, evaluation of children's speech and language, physical examination, neurological examination, evaluation of other diseases. These results are compared with the development of normal child growth and development. The target population in this study were children suffering from stunting as cases and normal children as controls in the working area of Simpang Kawat Kota Health Center. The sample in this study was the entire population of 36 stunting cases and 36 children as controls taken using matching techniques based on age, gender and place of residence.

This research will be submitted to the Research Ethics Committee of the Faculty of Medicine, Jambi University to obtain ethical approval. Participants will also be given informed consent before the examination. The questionnaire used is a standard questionnaire which has been tested for validity and reliability. Quantitative data will be processed univariately and bivariately using computer applications.

RESULT AND DISCUSSION

Respondent Characteristic

The research was conducted at the Simpang Kawat Community Health Center, Jambi City, from April – September 2023. The sample obtained was 72 respondents consisting of 36 cases and 36 controls. From the research results, the characteristics of respondents were obtained as in **Table 1.**

In this study, 36 respondents were found for children with stunted nutritional status and 36 children with normal nutritional status. Based on age, the majority were 25-36 months old, 26 respondents (46.1%), with the largest gender being male, 38 respondents (52.8%).

Neurological examination is carried out by physical examination of the cranial nerves, motor and sensory examination and meningeal stimulation examination. The results showed that both stunted and non-stunting children who were examined did not have neurological disorders.

Table 1. General description of characteristic respondents

	Characteristic	Frequency	Precentage (%)
Nutrition Status	Stunting	28	50 %
	Normal	26	50 %
Age (Month)	0-12	2	1,38%
	13-24	22	30,5%
	25-36	26	46,1%
	37-48	14	19,4%
	49-60	8	11,1%
Gender	Female	34	47,2%
	Male	38	52,8%

The neurological development of stunted children has been found to be affected, impacting cognitive abilities and psychomotor performance [21]. Studies have highlighted the importance of neurological examination in assessing the impact of stunting on children's development, emphasizing the need for early detection and intervention to mitigate the effects of stunting on neurological outcomes [21]. Additionally, the utility of neuroimaging in evaluating children with neurological symptoms has been explored, providing insights into the diagnostic approach for neurological conditions in children [22], [23].

The eye examination carried out is by using an eye vision examination using an E chart, examining eye movement and physical examination of the eyes. The research results showed that there was 1 respondent in the stunting case who experienced a disorder, namely strabismus.

The impact of stunting on visual development and eye health in children has been recognized, although specific references related to eye examinations in stunted children were not identified. Malnutrition, including stunting, can lead to visual impairments and deficiencies in essential nutrients that are crucial for eye health and development [21]. Eye examinations play a vital role in identifying and addressing visual impairments in stunted children, contributing to their overall well-being and development.

Ear examination is carried out using a tuning fork, and physical examination of the ear. From the results of the examination, it was found that in both stunting and non-stunting cases there were no ear problems.

While specific references related to ear examination in stunted children were not identified, it is well-established that malnutrition, including stunting, can have detrimental effects on children's overall health, including their susceptibility to ear infections and related complications (Yorita et al., 2023; Adla et al., 2022). Ear examinations are crucial in identifying and managing ear infections and associated hearing impairments, which can be prevalent in children affected by malnutrition, including stunting.

The physical examination carried out is a physical examination of vital signs, namely Heart Rate, Respiration Rate and Body Temperature, Head to Toe examination from head to extremities. From the results of the examination carried out, 3 disorders were found in stunting cases, namely signs of Down syndrome, rales (+/+) and skin diseases were found. Meanwhile, in children who were not stunted, 1 respondent was found to have problems, namely rhonchi (+/+).

Physical examinations of stunted children encompass anthropometric measurements, neurological assessments, and evaluations of overall health and development. Studies have emphasized the importance of physical examinations in identifying stunting and its associated health implications, including neurological abnormalities and growth disorders. Additionally, physical examinations are essential in assessing the impact of stunting

on children's overall health and well-being, guiding interventions and support for affected children [24], [25].

The evaluation of stunted and normal children through neurological, ear, eye, and physical examinations is crucial for understanding the impact of stunting on their development and overall health. These examinations provide valuable insights into the neurological, sensory, and physical implications of stunting, guiding interventions and support for affected children. Result of growth and Development examination can be seen in **Table 2**.

Table 2. Growth and Development Result Assessment

Variable	Characteristic	Stunting	Normal	Total
Neurological Examination	Disorders	0	0	0
	Normal	36	36	72
Ear Examination	Disorders	0	0	0
	Normal	36	36	72
Eye Examination	Disorders	1	0	1
	Normal	35	36	71
Physical Examination	Disorders	1	0	1
	Normal	35	36	71
Develompent Examination (KPSP)	In accordance	13	27	40
	Doubtful	7	4	11
	Deviation	16	5	21
Denver Test Evaluation	Gross Motor Disorders	8	3	11
	Fine Motor Disorders	14	4	18
	Personal Social Disorders	9	2	11
	Language Disorders	12	2	14
	Normal	17	28	45

The Denver Test examination is used to determine gross motor disorders, fine motor disorders, personal social disorders and language disorders. From the research, it was found that 8 stunted children experienced gross motor disorders (22.2%). 14 children experienced fine motor disorders (38.8%), 9 children experienced personal social disorders (25%), 12 children experienced language disorders (33.3%) and 17 children did not experience any disorders. Of the non-stunted children, 3 children experienced gross motor disorders (8.3%), 4 children experienced fine motor disorders (11.1%), 9 children experienced personal social disorders (5.5%), 2 children experienced language disorders. (5.5%) and 28 children did not experience problems (77.78%).

The Denver Developmental Screening Test (DDST) has been widely used to assess the developmental progress of children, including those affected by stunting. The DDST is recognized for its ease of use and its applicability in various settings. Several studies have utilized the DDST to evaluate the developmental outcomes of stunted children and have provided valuable insights into the relationship between stunting and cognitive development [26]. conducted a study using data from the Cebu Longitudinal Health and Nutrition Study to assess the relationship between stunting in the first two years of life and later cognitive development, emphasizing the significance of severity, timing, and persistence of early stunting [26]. The study highlighted the long-term impact of early stunting on cognitive performance in late childhood [15]. Utilized the Peabody Picture Vocabulary Test (PPVT) and the Cognitive Development Assessment (CDA) to evaluate vocabulary skills, listening comprehension, and quantitative reasoning in children aged 4.5-6 years, providing insights into the cognitive abilities of stunted children who recovered from early stunting [15]. The study demonstrated that children who recovered

from early stunting exhibited similar levels of cognition to those who were not stunted.

Furthermore, the Denver II Developmental Screening Test was used to assess child development in various studies. These studies focused on evaluating the neuropsychomotor development of children and possible changes during their development, highlighting the utility of the Denver II Test in assessing the developmental progress of children[27], [28].

The Denver Developmental Screening Test has been instrumental in evaluating the developmental progress of stunted children and has provided valuable insights into the long-term cognitive impact of early stunting. Its ease of use and applicability in diverse settings make it a valuable tool for assessing child development, including in populations affected by stunting

Bivariat statistical result between independent variable and dependent variable can be seen in **Table 3.**

Table 3. Bivariat Statistical Test Results

Variabel	Nutrition stataus		OR* (95% CI**)	P value
	Stunting	Normal		
Neurological Examination				0.872
Disorders	0 (0%)	0 (0%)	-	
Normal	36 (100%)	36 (100%)		
Ear Examination				
Disorders	0 (0%)	0 (0%)	-	0.872
Normal	36 (100%)	36 (100%)		
Eye Examination				
Disorders	1 (2,7%)	0 (0%)	-	0.841
Normal	35 (97,3%)	36 (100%)		
Physical Examination				
Disorders	1 (2,7%)	0 (0%)	-	0.841
Normal	35 (97,3%)	36 (100%)		
Developent Examination (KPSP)				
Doubtful-Deviation	23 (63,8%)	9 (25%)	5,30 (2,1733-	0.012
In accordance	13 (36,2%	27 (75%	9,6873)	
Denver Test Evaluation				
Disorders	19 (52,75%)	8 (22,2%)	3,91 (1,11-	0,032
Normal	17 (47,25%)	28 (77,8%)	4,857)	

From the result **Table 3.** Showed there is no significant effect on growth with the incidence of stunting. In the Development Examination (KPSP), individuals with Doubtful-Deviation status had a much higher chance (OR = 5.30) of experiencing stunting compared to individuals who were in line with normal development. In the Denver Test Evaluation, individuals with abnormalities had a much higher chance (OR = 3.91) of experiencing stunting compared to those whose evaluation results were normal. Overall, these findings suggest an association between certain screening disorders and stunting, highlighting potential implications for health and development.

Based on the provided references, the study by Bella et al. (2020) emphasizes the relationship between parenting patterns and the occurrence of stunting in toddlers from poor families in Palembang City. The study highlights that stunting can impact a child's development from the early stages of conception until the age of four, affecting their growth and intelligence levels. Children experiencing stunting have a higher risk of

having an IQ below average compared to non-stunted children [18].

Moreover, the meta-analysis by Miller et al. (2015) explored the associations between stunting and child development in low- and middle-income countries, highlighting the negative impact of severe stunting on developmental outcomes [14]. Oddo et al. (2012) investigated predictors of maternal and child double burden of malnutrition in rural Indonesia and Bangladesh, emphasizing the association between child stunting and an increased risk of obesity and chronic diseases in adulthood [29].

Additionally, Calista et al. (2021) discuss the occurrence of stunting and its association with fine motor development in toddlers. Stunting, characterized by short stature and disrupted brain development, can affect physical growth and cognitive development in children. The study suggests that children with abnormalities in the Denver Test Evaluation have a significantly higher chance of experiencing stunting compared to those with normal evaluation results [30].

Moreover, the study by Yulianti & R (2020) explores the relationship between stunting and motor development in toddlers in the working area of Kemumu Community Health Center in North Bengkulu Regency. The results indicate a correlation between stunting and fine and gross motor development in toddlers, highlighting the impact of stunting on motor skills [31].

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Overall, these findings suggest a significant association between certain screening disorders, disrupted development, and stunting in children, emphasizing the importance of early detection and intervention to address the developmental challenges associated with stunting.

CONCLUSION

The findings from this study highlight the complex impact of stunting on children's health and development. Screening tools like the Denver Developmental Screening Test (DDST) play a crucial role in identifying at-risk children and guiding targeted interventions to support their overall well-being and cognitive development. To address the broader health implications of stunting, comprehensive interventions that integrate nutritional support, early childhood development programs, and specialized health care are essential in mitigating the impact of stunting on children's health outcomes.

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REFERENCES

1. *Chowdhury MdIB, Rahman MdS, Billah B, Kabir R, Perera NKP, Kader M. The Prevalence and Socio-Demographic Risk Factors of Coexistence of Stunting, Wasting, and Underweight Among Children Under Five Years in Bangladesh: A Cross-Sectional Study. BMC Nutr. 2022;*
2. *Bukari N, Danaa A, Mubarak A, Forfoe WW, Gariba A, Ali Z. Comparative Study of Stunting Measurement in Children Using WHO Procedure and Growth Length Mat in Ghana. BMC Res Notes. 2022;*
3. *Sirait BI, Suryanegara W. Correlation Between History of Maternal Anemia and Prevalence of 0-5 Years Old Stunting Children in Cilembu Village, Sumedang Regency, 2019. International Journal of Research - Granthaalayah. 2021;*
4. *Akbar MT, Mahardhika DW, Sihaloho ED. Stunting in Eastern Indonesia: Determinants and Solution From Indonesian Family Life Survey. Jurnal Cita Ekonomika. 2021;*
5. *Schmidt MK, Muslimatun S, West CE, Schultink W, Gross R, Hautvast JGAJ. Nutritional Status and Linear Growth of Indonesian Infants in West Java Are Determined More by Prenatal Environment Than by Postnatal Factors. Journal of Nutrition. 2002;*
6. *Indrastuty D, Pujiyanto P. Determinan Sosial Ekonomi Rumah Tangga Dari Balita Stunting Di Indonesia: Analisis Data Indonesia Family Life Survey (IFLS) 2014. Jurnal Ekonomi Kesehatan Indonesia. 2019;*

7. *Hasanah I, Susanti H. Does Water and Sanitation Effects on Children's Physical Development? Evidence From Indonesia Family Life Survey (IFLS) 2014. E3s Web of Conferences. 2018;*
8. *Muslimah RH, Bakhtiar HS. Bekasi City Government Policy in Financing Stunting in Children. Kesans International Journal of Health and Science. 2021;*
9. *Noor Z, Hasan MdM, Gazi MdA, Hossaini F, Haque NMS, Palit P, et al. Immune Modulation by Nutritional Intervention in Malnourished Children: Identifying the Phenotypic Distribution and Functional Responses of Peripheral Blood Mononuclear Cells. Scand J Immunol. 2023;*
10. *Fitrianingsih ADR, Prameswari FSP. The Relationship Between Public Health Center Service Coverage and Stunting in Children Aged ≪59 Months in Malang Regency. Journal of Applied Food and Nutrition. 2021;*
11. *Onís M d., Branca F. Childhood Stunting: A Global Perspective. Matern Child Nutr. 2016;*
12. *Ramli R, Sattu M, Ismail AMS, Lalusu EY, Lanyumba FS, Balebu DW, et al. Factors Influencing the Incidence of Stunting in Jaya Bakti Village, Pagimana District, Banggai Regency. Open Access Maced J Med Sci. 2022;*
13. *Khadija U, Mahmood S, Ainee A, Quddoos MY, Ahmad H, Khadija A, et al. Nutritional Health Status: Association of Stunted and Wasted Children and Their Mothers. BMC Pediatr. 2022;*
14. *Miller AC, Murray M, Thomson DR, Arbour MC. How Consistent Are Associations Between Stunting and Child Development? Evidence From a Meta-Analysis of Associations Between Stunting and Multidimensional Child Development in Fifteen Low- And Middle-Income Countries. Public Health Nutr. 2015;*
15. *Crookston BT, Penny ME, Alder SC, Dickerson T, Merrill RM, Stanford JB, et al. Children Who Recover From Early Stunting and Children Who Are Not Stunted Demonstrate Similar Levels of Cognition. Journal of Nutrition. 2010;*
16. *Basri H, Hadju V, Zulkifli A, Syam A, Indriasari R. Effect of <i>Moringa Oleifera</I> Supplementation During Pregnancy on the Prevention of Stunted Growth in Children Between the Ages of 36 to 42 Months. J Public Health Res. 2021;*
17. *Harahap D, Nurkholidah. Factors Causing Stunting in Toddlers in Gunung Baran Village, Panyabungan District, Mandailing Natal Regency. International Journal of Public Health Excellence (Ijphe). 2023;*
18. *Aurora WID, Sitorus RJ, Flora R. Effect of Stunting on Intelligence Quotient (IQ) of School-Age Children. 2021;*
19. *Amegbor PM, Zhang Z, Dalgaard R, Sabel CE. Multilevel and Spatial Analyses of Childhood Malnutrition in Uganda: Examining Individual and Contextual Factors. Sci Rep. 2020;*
20. *Aurora WID, Sitorus RJ, Flora R. PERBANDINGAN SKOR IQ (Intellectual Question) PADA ANAK STUNTING DAN NORMAL. Jambi Medical Journal : Jurnal Kedokteran dan Kesehatan [Internet]. 2020 May 1;8(1 SE-):19–25. Available from: https://online-journal.unja.ac.id/kedokteran/article/view/8333*
21. *Yorita E, Dahrizal D, Sahidan S, Gustina M, Wahyudi A, Muslim Z, et al. Upaya Pencegahan Stunting Melalui Pengolahan Makanan Berbasis Ikan Pada Balita Di Pulau Enggano, Kabupaten Bengkulu Utara. Poltekita Jurnal Pengabdian Masyarakat. 2023;*
22. *Wöber-Bingöl Ç, Wöber C, Prayer D, Wagner-Ennsgraber C, Karwautz A, Veselý C, et al. Magnetic Resonance Imaging for Recurrent Headache in Childhood and Adolescence. Headache the Journal of Head and Face Pain. 1996;*
23. *Walker PE, Freeman P, Monteiro SRM, Bexfield N, Harris G, Radke H, et al. Description of Neurological Mimics Presented to the Neurology Service of a Small Animal Referral Hospital. Veterinary Record. 2022;*
24. *Wake SK, Zewotir T. Patterns, Prevalence and Determinants of Stunting Among Children Aged 1-15 Years. 2022;*
25. *Nshimyiryo A, Hedt-Gauthier B, Mutaganzwa C, Kirk CM, Beck K, Ndayisaba A, et al. Risk Factors for Stunting Among Children Under Five Years: A Cross-Sectional Population-Based Study in Rwanda Using the 2015 Demographic and Health Survey. BMC Public Health. 2019;*
26. *Mendez MA, Adair LS. Severity and Timing of Stunting in the First Two Years of Life Affect Performance on Cognitive Tests in Late Childhood. Journal of Nutrition. 1999;*
27. *Fernani DCGL, Lucin GSM, Escarelli LB, Gomes GCC, Loosli NS, Lima RA de O, et al. Avaliação Do Desenvolvimento Da Motricidade Global Em Crianças. Colloquium Vitae. 2011;*
28. *Tahan TT, Bruck I, Burger M, Cruz CR. Neurological Profile and Neurodevelopment of 88 Children Infected With HIV and 84 Seroreverter Children Followed From 1995 to 2002. The Brazilian Journal of Infectious Diseases. 2006;*
29. *Oddo VM, Rah JH, Semba RD, Sun K, Akhter N, Sari M, et al. Predictors of Maternal and Child Double Burden of Malnutrition in Rural Indonesia and Bangladesh. American Journal of Clinical Nutrition. 2012;*
30. *Calista VP, Larasati T, Sayekti WD. Kejadian Stunting Dengan Perkembangan Motorik Halus Pada Balita. Jurnal Ilmiah Kesehatan Sandi Husada. 2021;*
31. *Yulianti S, R DT. Stunting Dan Perkembangan Motorik Balita Di Wilayah Kerja Puskesmas Kemumu Kabupaten Bengkulu Utara. Journal of Nutrition College. 2020;*