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The Effect of Nutrition on Children's Development of Gross Motor Skills

Nelci Masang
Puskesmas Baru Kabupaten Halmahera Barat
Email: nelcimasang@gmail.com

ABSTRACT

Childhood is a crucial time in life that needs to be treated with great care. Physical growth and psychomotor development are two areas of development that are growing and developing extremely quickly at this time. Nutritional variables are a significant aspect that impacts children's growth and development. The purpose of this literature review's findings is to determine whether a child's gross motor development and nutritional status are related. A review of the literature is the research method employed. The PICOS framework is employed in the article search technique. Dimensions, Researchgate, and Google Scholar are the databases that are used. By hand-selecting pertinent publications based on the study question, the search results were restricted to the years 2017 to 2021. The terms "nutritional status" and "gross motor" are employed.

Keywords: Children, Gross Motor, Nutrition

BACKGROUND

Childhood is a crucial time in life that needs to be treated with great care. There is a very fast growth and development process going on during this time, including physical, psychomotor, mental, and social development. Nutritional variables are a significant aspect that impacts children's growth and development. Children must receive the proper amount and quality of nutrition from their daily food in order to avoid stunted growth, increased susceptibility to infections, and eventual development impairments (Meilani, & Zulaikha 2018). Toddlerhood is a critical stage in growth and development. Language proficiency, creativity, social and emotional intelligence, and intelligence awareness all develop swiftly during this time and serve as the foundation for later development, therefore even the smallest anomaly or deviation.

Toddlers' nutritional status can be assessed using the body weight for height (WW/TB), height for age (TB/U), and weight for age (WW/U) index. When the BB/U index was used to assess the nutritional status of PSG in toddlers aged 0-59 in 2016, the findings revealed that 3.4% of them presented with malnutrition, 14.4% with undernutrition, and 1.5% with overnutrition. This number is comparable to the PSG data from 2015, which showed that overnutrition was at 1.6%, malnutrition was at 14.9%, and malnutrition was at 3.9%. In the meantime, it is known that the prevalence of malnutrition is 3.9% and undernutrition is 13.8%, according to Riskerdas in 2018. In 2016, East Nusa Tenggara had the greatest rate of malnutrition (28.1%), while North Sulawesi had the lowest rate (7.2%). Lampung Province had the lowest rate of malnutrition.

The postnatal environment, including nutrition, is one of the variables that affects a child's growth and development (Ministry of Health of the Republic of Indonesia, 2016). Every parent needs to be aware of their toddler's nutritional state. Given that malnutrition during this golden period is irreparable or unrecoverable, toddler growth and development require

greater care (Marimbi, H., 2017). Toddlers with poor nutritional status may experience severe negative effects on their physical, mental, and cognitive capacities, which may eventually limit their capacity for work and other activities. Malnutrition can lead to metabolic and structural problems that impede the growth and development necessary for nerve function. If the expansion and advancement.

METHODS

Researchers employed a literature review design in this study. Through thorough research and interpretation of the literature related to a particular topic, including the identification of research questions by searching and analyzing pertinent literature, a literature review serves as a framework relating to both new and prior findings in order to identify indications of progress or not in the study's results. employing a methodical manner (Randolph, 2014). The methodology employed in the literature review is a methodical, streamlined approach to data analysis. The majority of the papers included are original research articles or research articles with abstracts, introductions, methods, results, and debates that present the findings of real observations or experiments.

RESULTS

Data Normality Test Based on Nutritional Status in Children Aged 1-3 Years

Variable	Mean	Median	SD	Min	Mak	p-value
Nutritional Status Gross Motor Development	2,89	3	0,039	2	3	0,102
	2,10	2	0,289	2	3	0,110

The data normality test is based on the nutritional status of children aged 1-3 years; p value = 0.102 (p>0.05) was obtained, where it was determined that the data normality test based on nutritional status in children aged 1-3 years was normal. Table 1 shows that the average value of nutritional status for children aged 1-3 years is 2.89, the median value is 3, the standard deviation value is 0.309, the minimum value is 2, and the maximum value is 3. The data normality test based on revealed that the gross motor development of children aged 1-3 years had an average value of 2.10, a median value of 2, a standard deviation value of 0.289, a minimum value of 2, and a maximum value of 3.

Data Normality Test Based on Gross Motorcycle of Children Aged 1-3 Years

Variable	n (123)	%
Children's nutritional status		
Not enough	13	10,6
Good	110	89,4
Gross Motor Development		
Normal	111	90,2
Warning	12	9,8

According to Table 2, out of the 123 respondents, 110 (89.4%) had good nutritional status in children aged 1-3 years, while 13 (10.6%) had low nutritional status in children of that age. Subsequently, out of the 123 participants, 111 (90.2%) had gross motor development in children aged 1-3 years that was normal, and 12 (9.8%) had gross motor development in children aged 1-3 years that was abnormal. kid diet and the growth of their gross motor abilities.

Relationship between nutritional status and gross motor development in children aged 1-3 years

Nutritional status	**Normal Gross Motor Development**		**Gross Motor Development Warning**		Total		p-value
	f	%	f	%	f	%	
Not enough	2	15,4	11	84,5	13	100	0,000
Good	109	99,1	1	0,9	110	100	
Total	111	90,2	12	9,8	123	100	

According to Table 3, 84.6% of respondents who had low nutritional status also had normal gross motor development in children aged 1-3 years, but 15.4% of respondents who had poor nutritional status did not. three years. Children between the ages of one and three years old exhibited normal gross motor development in 99.1% of respondents with good nutritional status and in 0.9% of respondents with normal nutritional status. Test outcomes Based on statistical analysis, the p-value = 0.000 indicates that the p-value is less than 0.05, indicating a significant association between children's gross motor development and nutritional status between the ages of 1-3 years.

DISCUSSION

The majority of children between the ages of one and three have adequate nutritional status, according to study findings, since their moms feed them a variety of nutrient-dense foods that are tailored to meet their needs. A child's nutritional intake is necessary for their growth and development, particularly for the development of their brain. It is possible to help children improve their motor nerve capacities by giving them a balanced diet. Ensuring a well-rounded diet is crucial for the healthy growth and development of children, including fetuses in the womb, school-age children, teenagers, and adults.

A vital component of development and growth is nutrition. According to Sumeru and Proverawati (2018), one of the elements influencing children's development and growth is this.

However, some respondents are undernourished as a result of moms not providing wholesome food that meets the needs of children between the ages of one and three, as well as mothers occasionally giving their kids snacks that don't fulfill those needs. Children who are malnourished, particularly in their early years when they are growing and developing quickly, will suffer in the long run. Particularly when a youngster is malnourished, their brain is developing quickly, which negatively affects children's IQ (Suhardjo, 2015). Unbalanced food consumption is one of the variables that contribute to malnutrition, according to Endarwati and Komariyah (2017).

Suhartini and Majid (2018) suggest that optimal motor skill development can be achieved through parental attention and high-quality stimulation.

The researchers hypothesized that moms with appropriate gross motor development and warnings would be able to encourage their children's development from birth to three years old, allowing them to mature and develop in accordance with their age. Assumptions made by researchers state that children in the 1-3 year age range who are in good nutritional status will grow and develop quickly. This suggests that there is a balance between the body's need to use nutritional substances, particularly by the brain, and the amount of nutrition that the child consumes. Good brain and muscle function are necessary for gross motor skills, hence the body has to consume a healthy diet. It is known from the study findings that statistical testing indicates that.

Given that children are going through a time of extremely rapid physical growth and development, (Soetjiningsih, 2018) asserts that diet and health have a significant impact on

optimizing children's motoric development. An growth in the child's body's volume and functionality is indicative of this. Children's fast physical and motor development need enough nutrients for the formation of new body tissue and cells. A child's physical growth and development will be slowed down and their bodily tissues and cells will be harmed if their health is disrupted by illness. Budiarti (2015) asserts that dietary consumption has a significant impact on children's development of their gross and fine motor skills. Researchers believe that a child's development between the ages of one and three years old is greatly supported by nutrition.

CONCLUSION

Children with low nutritional status will directly impact their motor development, leading to delays in the process of growth and development as well as disruptions in the child's growth and development. Gross motor development and nutritional health are generally normal in children between the ages of one and three years. Children's gross motor development and nutritional status are related in those under three years old.

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