

The Relationship between Nutritional Status and Gross Motoric Development for Toddlers 3-5 Years Old at the Bajoe Health Center, Bone Regency

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ABSTRACT

Nationally, the nutritional status of children in various regions in Indonesia is still a problem. The nutritional status of toddlers is an important thing that every parent should know. The need for more attention in growth and development at the age of five is based on the fact that malnutrition that occurs during this golden period is irreversible (cannot be recovered). Malnutrition can affect the development of a child's brain and gross motor skills. The research objective was to determine the relationship between nutritional status and gross motoric development in children under five years of age . This type of research was *Analytical Survey with Cross Sectional* design conducted at the Bajoe Health Center for 61 respondents taken using a *non-probability sampling technique, namely accidental sampling*, the data was collected using a questionnaire and analyzed using *the chi-square test*. The results of *the chi square test* showed a *p-value* of 0.000 ($p < 0.05$), which means that there is a relationship between nutritional status and gross motor development of children under five years of age. Increase the availability of trained personnel, especially midwives and nutritionists as personnel in charge of serving nutrition counseling and monitoring developments toddlers at the Bajoe Health Center, Bone District .

Keywords: Nutritional Status, Gross Motor Skills, Toddlers.

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INTRODUCTION

Nationally, the nutritional status of children in various regions in Indonesia is still a problem. The number of sufferers of malnutrition in the world reaches 104 million children, and malnutrition is the cause of one third of all causes of child death worldwide. Indonesia is among the group of 36 countries in the world that contribute 90% of the world's nutritional problems (WHO, 2016).

Meanwhile, based on the results of the 2016 Indonesian Basic Health Research (Riskesmas), the prevalence of malnutrition and undernutrition according to the weight/age indicator for toddlers in 2016 was 11.1%, consisting of 8.0% malnutrition and 3.1% malnutrition. When compared with the prevalence rate in 2015, it is 11.9% consisting of 8.2% malnutrition and 3.7% malnutrition (Riskesmas 2016).

The nutritional status of toddlers is an important thing that every parent should know. The need for more attention in growth and development at the age of five is based on the fact that malnutrition that occurs during this golden period is irreversible (cannot be recovered). Malnutrition can affect the development of a child's brain and gross motor skills. The nutritional status of toddlers can be determined by matching the child's age (in months) with the standard weight of the WHO-NHCS table, if the body weight is less, the nutritional status is poor (Marimbi, H, 2017).

Based on research by Mariani et al, regarding the relationship between nutritional status and children's motor development in Minahasa district in 2015, it was found that the level of motor development of children with poor nutritional status did not match the age of 66.7% of respondents, while the level of motor development of children with normal nutritional status did not match only occurred in 32.8% of respondents. From the results of this study it can be concluded that nutritional status really influences the motor development of children under five (Mariani, et al, 2015).

Research conducted by Kartika, et al in 2013 regarding the relationship of nutritional intake to gross motor development in Pamulang District showed that there were differences in the rate of motor growth in children who were given high-energy and micronutrient supplementation, it was found that 66.7% of children experienced slow gross motor skills due to insufficient energy intake, and 80% of children experience a lack of protein intake so that children's gross motor skills are disrupted. Therefore, good nutritional intake will support the growth and development of children, because nutrients play an important role in the growth and development of children, especially the development of children's gross motor skills.

METHOD

This type of research is survey research which is analytic in nature with a cross sectional approach. The population and sample of this study were mothers who had 157 children aged 3-5 years at the Bajoe Health Center, Bone District. Sampling used a non-probability sampling method, namely accidental sampling with exclusion and inclusion criteria. The data collection technique is by using a questionnaire and a DDST sheet in the form of a list of questions as a tool. The researcher explained in advance how to fill out the questionnaire, and asked if there were questions that they

did not understand. During the research process, children are included to observe their development according to DDST using the help of the tools needed according to the stages of the child's age.

RESULTS AND DISCUSSION

a. Univariate analysis

Table 1.

Frequency Distribution of Nutritional Status in the Working Area of the Bajoe Health Center, Bone Regency

Nutritional status	F	%
Normal	48	78.7
Abnormal	13	21,3
Amount	61	100

Source: Primary Data

Based on the table above, it can be seen that of the 61 respondents, 48 people (78.7%) were included in the category with normal nutritional status and 13 people (21.3%) were included in the abnormal category.

Table 2.

Frequency Distribution of Nutritional Status in the Working Area of the Bajoe Health Center, Bone Regency

Gross Motor Development	F	%
Normal	49	80.3
Abnormal	12	19,7
Amount	61	100

Source: Primary Data

Based on the table above, it can be seen that of the 61 respondents, 49 people (80.3%) had gross motor development which was included in the normal category and 12 people (19.7%) were included in the abnormal category .

b. Bivariate Analysis

Table 3.

The relationship between nutritional status and gross motor development for children under five years old in the working area of the Bajoe Health Center, Bone Regency

Source: Chi-square test

Nutritional status	Gross Motor Development				Friday		P-value
	Normal		Abnormal		N	%	
	N	%	N	%			
Normal	48	78.7	1	1,6	49	80.3	0.000
Abnormal	0	0	12	19,7	12	19,7	
Amount	48	78.7	13	21,3	61	100	

The results of the bivariate analysis test using chi-square between the variables of nutritional status and gross motor development of children found that normal nutritional status and normal gross motor development were 48 out of 49 people (78.7%), and with abnormal nutritional status and motor development there are as many as 12 of 12 people (19.17%) who are abnormally rough.

Discussion

The results of research conducted at the Bajoe Health Center Kab. Bone obtained a value of $p = 0.000$, which means $p < 0.05$ where there is a significant relationship between nutritional status and the gross motor skills of the respondents. Or in other words it can be concluded that there is a relationship between nutritional status and the gross motor skills of the respondents.

This is in accordance with research conducted by Pramusinta (2013) which states that changes in the nutritional status and health status of children will affect the gross motor development of children, especially those who are still under 5 years old. These results were also supported by Satoto (1990) and Suwandi (1999), who stated that there was a relationship between past nutritional status and children's motor development in the future .

Nutritional intake is a child's need that plays a role in the process of growth and development, especially in brain development. The ability of children to be able to develop their motor nerve abilities is through the provision of balanced nutritional intake. Provision of balanced nutritional intake plays a very important role in the growth and development of children, starting from the fetus in the womb, toddlers, school-age children, adolescents and even adults (Zaviera, 2008).

Budiarti (2011) explained that nutritional intake greatly influences children's development, both gross motoric and fine motoric development. Furthermore, according to Susanthy (2012) also classifies nutritional intake that is important for motor function, namely energy, protein, zinc and iron.

There are three parameters used for assessing nutritional status used in applications for monitoring nutritional status and child development: age, weight and height. Body weight is used the most because it only requires one measurement, it just depends on age determination, but it can't describe the trend of changes in the nutritional situation from time to time (Supariasa, et al, 2016).

The results of this study are different from the theory put forward by Almatsier (2014) that good or optimal nutritional status will affect physical development, brain, work ability and health, while poor nutritional status can cause a lack of energy to move and carry out activities, so that children become lazy and weak from malnutrition. Marmi and Raharjo (2012) also argue about nutritional status can affect the growth and development of children, but many factors can affect development, so good nutritional status does not necessarily mean good or normal development.

According to the researchers' assumptions, nutritional status greatly influences the development of gross motor skills in toddlers 3-5 years old. Nutritional status is related to gross motoric development of children, meaning that the lower the nutritional status of children, the lower the gross motoric development of children. Vice versa, if the child's nutritional status is low, it is not normal, then the child's gross motor development will also increase.

CONCLUSION

There is a relationship between nutritional status and gross motoric development of toddlers 3-5 years old in the Working Area of the Bajoe Health Center. For this reason, parents need to pay attention to toddler nutrition properly so that the gross motor development of toddlers will be even better which will support the growth and development of children in the future.

Thank-you note

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