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Relationship of Nutritional Status Towards Correct Motor Development in Toddlers at Keluk Pakis Full Star Posyandu, Pekanbaru City, 2021

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Abstract - Nutrition is very influential on the gross motor development of children. Good nutritional status can help the process of growth and development of children to reach optimal maturity. The impact of more nutritional status will cause excessive weight problems. As a result, the child has an excessive burden, of course it will interfere with motor skills because in carrying out motion there is no balance between the body and the center of gravity and also requires a lot of energy. The purpose of this study was to determine the relationship between nutritional status and gross motor development in toddlers at the Keluk Pakis Posyandu, Pekanbaru City in 2021. This study used a quantitative research type, with an analytical design. And using a cross sectional approach. The number of samples studied were 15 children. The measuring instrument used is a checklist table adapted from several related literatures. The results showed that there was a significant relationship between nutritional status and gross motoric development of toddlers, where X2 Count > X2 Table ie 4.17 > 2.706 so Ha was accepted and Ho was rejected. It is hoped that the Puskesmas, especially posyandu cadres, will continue to carry out preventive efforts such as providing information in the form of counseling to the community to prevent children from experiencing malnutrition (stunting), increasing awareness of parents of toddlers about nutritional status and gross motor development by paying more attention to development and nutritional status so that the number of children under five is expected to increase. Those who experience poor nutritional status or whose gross motor development fails can be reduced, providing stimulation to children for the surrounding environment, especially parents so that children can be stimulated by ideas in the hope of improving the gross motor development of children who are late.

Keywords: Nutritional Status, Gross Motor Development of Toddlers

1. Introduction

According to Riskesdas 2018, there are 10.1% of children under five thin and 7.6% of children under five are overweight (Ministry of Health, 2018).

It is estimated that stunting and other malnutrition cost Indonesia more than US$ 5 billion per year equivalent to a 2-3% loss in gross domestic product due to lost productivity as a result of poor educational standards and reduced physical abilities. Malnutrition experienced by children under five years of age includes stunting, wasting, and underweight. (Bappenas, 2018).

Proverawati and Kusuma (2010), said that the nutritional status of toddlers is an important thing that every parent must know. The need for more attention in growth and development at the age of toddlers is based on the fact that malnutrition that occurs during this golden period is irreversible (cannot be recovered).

In determining health status, there are several indicators that can be used, including infant mortality, infant morbidity, nutritional status and life expectancy at birth. Indonesia still has a fairly high infant and under-five mortality rate. The problem is especially in the neonatal period and the impact of infectious diseases. The infant morbidity rate also determines the child's health status, because the morbidity value is a reflection of the weak immune system of infants and toddlers (Hidayat, 2008).

Nutritional status is the third indicator in determining the health status of children. Good nutritional status can help the process of growth and development of children to reach optimal maturity. This

nutritional status can help to detect early the risk of health problems. Monitoring nutritional status can be used as a form of anticipation in planning to improve children's health status (Hidayat, 2008).

Toddler period is stated as a critical period in order to get quality human resources, especially in the first 2 years period is a golden period for optimal brain growth and development, therefore at this time it needs serious attention (Azwar, 2004).

To assess the development of infants and toddlers, there are four assessment parameters, namely, personal social, fine motor adaptation, language and gross motor development. Gross motor is an aspect related to movement and posture. Gross motor development in infants and toddlers has a series of sequential stages. This means that each stage must be passed and mastered before entering the next stage. (Dewi, 2010).

Toddler age or preschool age is the age where there are rapid changes in all areas of development. Children master most motor skills by the end of this period and can use their physical abilities to achieve a variety of goals. Physical development describes changes in children's physical appearance as well as their motor skills. The main physical achievement for preschool children is increased control of large and small muscles, development of large muscles or gross motor activities involving movements such as walking and running (Slavin, 2011).

2. Tables

This study uses a quantitative research type, with an analytic design. and using a cross-sectional approach, namely the distribution and collection of data is carried out at one time. This study was conducted with the main objective of finding the relationship between nutritional status and gross motor development in toddlers at the posyandu keluk pakis full star, Pekanbaru city in 2021.

The data obtained will be analyzed in stages, namely univariate and bivariate analysis, namely to see how the nutritional status and gross motor development in toddlers and then see whether there is a relationship between nutritional status and gross motor development in toddlers. This study uses questionnaires and checklists containing a number of questions related to the problem under study which were compiled by the researchers themselves based on existing theoretical reviews.

The research site will be conducted at the Keluk Pakis Posyandu, Pekanbaru City. The time of the study was carried out on January 28-30, 2021. The population in the study was all toddlers aged 3-5 years who took part in posyandu activities, totaling 15 children. Sampling using saturated samples, the entire population was used as the research sample. This analysis was conducted to see the distribution of the frequency and percentage of each variable. Presented in the form of a frequency distribution table in order to get an overview. by using the formula: $p = \frac{F}{N} X\ 100\%$

2.1 Univariate Analysis Results

Table 1

Frequency Distribution of Nutritional Status of Toddlers at the Keluk Pakis Posyandu, Pekanbaru City in 2021

No.	Nutritional status	Frequency (F)	Percentage (%)
1	Good	12	80
2	Less	3	20
	Total	**15**	**100**

In table 1 the results of research conducted by researchers on nutritional status on gross motor development in toddlers at the posyandu keluk pakis full star, Pekanbaru city in 2021, it was found that about 12 children with good nutritional status or 80%.

Table 2

Distribution of Rough Motor Frequency for Toddlers at the Keluk Pakis Posyandu, Pekanbaru City in 2021

No.	Rough motoric	Frequency (F)	Percentage (%)
1	Normal	12	80
2	Failed	3	20
	Total	**15**	**100**

In table 2 the results of research conducted by researchers on gross motor development of toddlers aged 3-5 years, the results showed that children aged 3-5 years with normal gross motor development were 12 children or about 80%.

2.2 Bivariate Analysis Results

Table 3

Relationship between nutritional status and gross motor skills of toddlers at the Keluk Pakis Posyandu, Pekanbaru City in 2021

Rough motoric / Nutritional status	Normal	Failed	N
Good	10	2	12
Less	2	1	3
Total	**12**	**3**	**15**

In table 3 the results of the research conducted, the results obtained are X2 count > X2 Table, and it can be concluded that there is a relationship between nutritional status and rough motor development of toddlers aged 3-5 years.

3. Analysis

From the results of the research conducted, the results obtained are X2 count > X2 Table, and it can be concluded that there is a relationship between nutritional status and gross motor development of toddlers aged 3-5 years. This is in line with the results of research conducted by Sylvia that nutritional status has a positive relationship with children's gross motor development.

Wells and Luttgen stated that the body is a subject that continuously receives a force when there is no real motion. When there is body movement, the total amount of force action on the body is balanced, then if the child's nutritional status is low, of course he can't move well and consequently his motor skills are low. Sejogyo emphasized that children's lack of or poor nutrition can result in disruption of their physical and intellectual growth. Malnutrition or poor nutrition in infancy or childhood, especially at the age of less than 5 years can result in disruption of physical growth and intelligence. All of these abilities develop well if the child has a good nutritional status. With good nutritional status, of course, children's motor perception develops well and can carry out daily activities successfully. There is a positive relationship between nutritional status and children's motor skills with a correlation coefficient of 0.293, this means that the higher the nutritional status of children, the higher their motor skills. (Gusril, 2009)

According to the researcher's assumption, to get normal gross motor development, energy is needed from nutrition and this nutrition is obtained through nutrition or food intake eaten by the child. If the child eats a nutritious and balanced diet, the child will learn to do movements related to gross motor faster.

As stated by Gusril (2009), if a child has a good nutritional status, of course, the child's motor development will develop well, and vice versa if the child's nutritional status is low, of course, they cannot move well and consequently their motor development is low.

Delay in gross motor development indicates damage to the central nervous system such as cerebral palsy, which is a motor system disorder caused by damage to the part of the brain that regulates the muscles of the body which makes it difficult for children to carry out movements or activities (Sofiany, 2005).

4. Conclusion

Nutritional status of children under five, it was found that most of them had good nutritional status, namely 80%. gross motor development of toddlers, it was found that most children had normal gross motor development, namely 80%. from the results of the study that there was a relationship between nutritional status and gross motor development of toddlers at the Keluk Pakis Full Bintang Posyandu Pekanbaru City in 2021.

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