

The Relationship of Children's Nutritional Status with the Development of Preschool Age Children

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INFO

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ABSTRACT

The most important phase in a child's growth and development is during infancy and toddlerhood, because at that time it will determine the child's future both physically, mentally and behaviorally. One factor that influences development is nutritional status. The aim of this research was to determine the relationship between children's nutritional status and the development of pre-school age children in RT 001 RW 001 Bicoing Village, Tonra District, Bone Regency. The type of research used is analytical research with a cross sectional study approach. The population of this study were pre-school children in RT. 001 RW. 001 Bicoing village, Tonra subdistrict, Bone district in 2014, namely 40 children. The number of samples studied was 40 children using total sampling techniques. Data was collected by filling out a questionnaire and then analyzed using the Chi Square test with a significance level of $\alpha < 0.05$. Based on the results of research on nutritional status, it shows that of the 40 respondents, 33 people (82.5%) had good nutritional status, and the majority experienced normal development, namely 31 people (93.9%). However, there are still a small number who experience abnormal development, namely 2 people (6.1%). After carrying out the Chi Square statistical test, the value of $p = 0.000 < 0.05$ was obtained. Based on the research results, it was concluded that there is a relationship between nutritional status and the development of pre-school age children. It is hoped that health workers will be able to improve services, especially monitoring children's nutritional status and efforts to detect early deviations in children's development on a regular basis, as well as providing health education to the community, especially regarding children's nutritional status.

Keywords: *Nutrition, Nutritional Status of Children, Development of Pre-School Age Children*

INTRODUCTION

Nutritional status is an expression of a state of balance in the form of certain variables, or a manifestation of nutrition in the form of certain variables, for example endemic goiter is a condition of imbalance in the intake and output of iodine in the body (Waryana, 2010).

Development is an increase in abilities (skills) in more complex body structures and functions in a regular and predictable pattern, as a process resulting from maturation. Development is related to the maturation of the function of cells or individual body organs, the two cannot be separated (Riyadi and Sukarmin, 2009).

At an early age, especially under the age of five (toddlers), many problems are faced, including the problem of protein energy deficiency. Protein Energy Deficiency (PEM) is one of the nutritional problems caused by decreased nutritional status in children under five (Ministry of Health of the Republic of Indonesia, 2012).

The prevalence in 2010 was that 103 million children under the age of five in developing countries were underweight or underweight. FAO estimated that in 1999 around 790 million people in the world were hungry. Approximately 30% of the world's population consisting of infants, children, teenagers, adults and the elderly suffer from malnutrition, as much as 50% of under-five deaths are related to malnutrition (Rosari, 2013).

The problem of malnutrition, apart from being caused by a reduction in consumption due to weakening people's purchasing power and low nutritional quality, is also caused by the fact that there are still many people who lack knowledge about the importance of fulfilling nutrition from infancy (Food and Nutrition Problem Management Coordination Team, 2009). Pre-school children (1-5 years) are a group that really needs to pay attention to their nutritional needs because they are growing.

The prevalence of toddlers experiencing nutritional problems based on weight per age (WW/U) in Indonesia in 2010 included cases of malnutrition at 13.0% and malnutrition at 4.9%. The low Human Development Index (HDI) in Indonesia is greatly influenced by the low nutritional and health status of the population. According to the Ministry of Health (2004) in 2003 there were around 27.5% (5 million) malnourished children under five, of which 3.5 million children (19.2%) were undernourished and 1.5 million (8.3%) malnourished children (Ministry of Health RI, 2004).

Research by Proboningsih (2004) showed that of children aged 12 - 18 months in the Sidoarjo regional health center in the good nutritional status group, 78.6% had normal development and 21.4% had delayed development. Meanwhile, in the malnourished group, 53.6% had normal development and 46.4% had stunted development. This shows that normal nutritional status and normal nutritional status and poor nutritional status have differences in development (gross motor, fine motor, language and personality).

Based on an initial survey conducted at RT.001 RW.001 Bicoing Village, Tonra District, Bone Regency, it appears that there are still pre-school children whose height is under 89 cm. This shows that there are nutritional problems experienced by pre-school children in this village.

Likewise with children's development, monitored from fine motor skills, gross motor skills and social emotions, there are still children who cannot write words, cannot jump alternately with their feet, cannot write their names even though they should be able to write them.

Based on a preliminary survey taken on February 5 2015 at RT.001 RW.001, Bicoing village, Tonra subdistrict, Bone district, the number of pre-school age children was 40.

The formulation of the problem that arises in this research is whether there is a relationship between children's nutritional status and the development of pre-school age children.

The aim of the research was to determine the relationship between children's nutritional status and the development of pre-school age children in RT 001 RW 001 Bicoing Village, Tonra District, Bone Regency.

METHODS

The type of research used was analytical research with a cross sectional study approach to determine the relationship between children's nutritional status and the development of pre-school age children in RT.001 RW.001 Bicoing Village, Tonra District, Bone Regency.

The location chosen for this research was RT.001 RW.001 Bicoing Village, Tonra District, Bone Regency.

Sampling in this research was a total sampling technique, namely taking the entire sample from a population of 40 children. The data in this research uses editing, coding, data entry, cleaning, scoring and data tabulation processes. The data analysis used is univariate analysis and bivariate analysis.

RESULTS

The type of research used is descriptive research with a cross sectional study approach, where measurements are taken to determine the relationship between children's nutritional status and the development of pre-school aged children.

Univariate Analysis

Child Development

Table 1. Distribution of Respondents Based on Child Development in RT. 001 RW. 001 Bicoing Village, Tonra District, Bone Regency

Child development	n	%
Abnormal	8	22,5
Normal	32	80,0
Amount	40	100,0

Source: Primary Data

Based on the interpretation results in table 1, it shows that the majority of respondents experienced normal development, namely 32 people (80.0%), while the number of respondents who experienced abnormal development was 8 people (20.0%).

The results of this analysis show that the majority of respondents were 4 years old, namely 27 people (67.5%). Meanwhile, based on gender, it shows that the majority of respondents were women, namely 22 people (55.0%).

Based on the research results, it shows that the majority of respondents had good nutritional status, namely 33 people (82.5%), and those who had poor nutritional status were 7 people (17.0%). Meanwhile, based on development, it shows that the majority of respondents experienced normal development, namely 32 people (80.0%), while the number of respondents who experienced abnormal development was 8 people (20.0%).

Bivariate Analysis

The Relationship between Nutritional Status and the Development of Pre-School Age Children

Table 2. Relationship between nutritional status and the development of pre-school children in RT. 001 RW. 001 Bicoing Village, Tonra District, Bone Regency

Nutritional Status	Child development				Total		p Value
	Normal		Abnormal				
	n	%	n	%	n	%	
Not enough	1	2,5	6	15,0	7	17,5	p = 0,000
Good	31	77,5	2	5,0	33	82,5	
Amount	32	80,0	8	20,0	40	100,0	

Source: Primary Data

Based on the interpretation results in table 2, it shows that respondents with poor nutritional status were 7 people (17.5%), most of whom experienced abnormal development, namely 6 people (15.0%), and another 1 person (2.5%) experienced normal development. Meanwhile, respondents with good nutritional status were 33 people (82.5%), the majority of whom experienced normal development, namely 31 people (77.5%) and 2 other people (5.0%) experienced abnormal development.

After carrying out the Chi Square statistical test, the value of $p = 0.000 < 0.05$ was obtained, which means that there is a relationship between nutritional status and the development of pre-school children.

DISCUSSION

The results of the study showed that respondents with poor nutritional status were 7 people (17.5%), most of whom experienced abnormal development, namely 6 people (15.0%), and only 1 person (2.5%) experienced normal development. . This can be explained because apart from being influenced by nutritional status, child development is also influenced by socio-cultural factors, infectious diseases, agricultural factors, economic factors, genetics and environmental factors. Nutritional status can influence the child's development process. It has been proven that

children with poor nutritional status experience developmental delays. This inhibition occurs due to a decrease in the number and size of brain cells. The ability of the nervous system in the brain to make and release neurotransmitters depends on the concentration of certain nutrients in the blood obtained from the composition of the food consumed. Nutritional status is influenced by infection and food intake (Almatsier, Sunita. 2009). According to WHO, the occurrence of malnutrition (malnutrition and malnutrition) is more influenced by infectious diseases and food intake which directly influence the incidence of malnutrition. Parenting patterns and maternal knowledge also influence malnutrition. If the problem of malnutrition and malnutrition is not handled seriously, it will result in a "lost generation". Family involvement is needed in assisting children who suffer from malnutrition. Sufficient attention and appropriate parenting patterns will have a big influence in improving nutritional status.

Meanwhile, respondents with good nutritional status were 33 people (82.5%), most of whom experienced normal development, namely 31 people (77.5%), but there were still 2 people (5.0%) who experienced abnormal development, meaning they were getting better. The child's nutritional status will also improve. Theoretically, it is explained that child development is greatly influenced by internal and external factors. Internal factors consist of genetics, food intake, and infectious disease factors. External factors consist of agricultural factors, economic factors, socio-cultural factors, and nutritional knowledge. Nutritional status is a description of the body's condition as a result of food consumption and use of substances by distinguishing between poor, good and over nutritional status

Based on the Chi Square statistical test, the p value = $0.000 < 0.05$, which means that there is a relationship between nutritional status and the development of pre-school children. Nutritional status is the health condition of individuals or groups which is determined by the degree of physical need for energy and other nutrients obtained from food and foods whose physical impacts are measured anthropometrically. Nutritional status can influence the child's development process. It has been proven that children with poor nutritional status experience developmental delays. This inhibition occurs due to a decrease in the number and size of brain cells. The ability of the nervous system in the brain to make and release neurotransmitters depends on the concentration of certain nutrients in the blood obtained from the composition of the food consumed.

The results of this study are in accordance with the results of research conducted by Proboningsih (2004), which showed that of children aged 12 - 18 months in the Sidoarjo regional health center in the good nutritional status group, 78.6% had normal development and 21.4% had delayed development. Meanwhile, in the malnourished group, 53.6% had normal development and 46.4% had stunted development. This shows that normal nutritional status and normal nutritional status and poor nutritional status have differences in development (gross motor, fine motor, language and personality).

Children under five years old are an important period in a child's growth and development because the basic growth that takes place during the toddler years will influence and determine the child's subsequent development. As is known, the first three years (baduta) are the golden period, namely the optimization of the growth and development process. For growth and development, children need nutrients so that the growth and development process runs well. The nutritional substances consumed by toddlers will affect the nutritional status of the toddlers. Differences in the nutritional status of toddlers have a different influence on each child's development. If the balanced nutrition consumed is not met, the achievement of the child's growth and development, especially good motoric development, will be hampered.

Nutritional status or meeting nutritional needs is one of the factors that influences development. If nutritional needs are not or are not met, it can hamper growth and development. Almatsier, Sunita (2009), stated that for someone who has good or normal nutritional status, the reflection given is normal growth, level of development according to age, body being healthy, good appetite and easily adapting to the environment.

The initial stage of development will determine the next stage of development. Development is the result of interactions between the maturity of the central nervous system and the organs it influences, so that this development plays an important role in human life. Good

growth and development of children is influenced by balanced nutritional intake, quality and quantity, including water, carbohydrates, fats, proteins, vitamins and minerals to obtain sufficient energy. The child concerned will get protein which is very useful for cell division in the body, get enough vitamins for the smooth metabolism of the body, and will get enough minerals for the growth of bones and teeth. Overall nutritional adequacy ensures optimal child growth.

CONCLUSION

Based on the research results, it was concluded that there was a relationship between nutritional status and the development of pre-school age children with a value of $p=0.000<0.05$. The results of the study showed that respondents with poor nutritional status were 7 people (17.5%), most of whom experienced abnormal development, namely 6 people (15.0%), and only 1 person (2.5%) experienced normal development. . This can be explained because apart from being influenced by nutritional status, child development is also influenced by socio-cultural factors, infectious diseases, agricultural factors, economic factors, genetics and environmental factors.

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