

Relationship of Nutritional Status and Development in Toddlers Aged 1-5 Years

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ABSTRACT

Development has successive stages starting from ability to do perfect things and each individual has a different pace of development. The acceleration and deceleration process can be influenced by several factors, namely hereditary factors, environment, nutrition, and others. This study used a correlation design with a cross sectional approach. The population is all stunting toddlers aged 1-5 years in Denanyar Village, Jombang Regency, with a simple random sampling technique obtained a sample of 30 respondents. Data were collected using Length/Age and KPSP observations and then analyzed using the Spearman Rank test. The results showed that most of the nutritional status of toddlers was normal nutrition as many as 18 respondents (60%). Most of the development of toddlers is according to their age as many as 25 respondents (83.3%). Based on the results of statistical tests obtained p value $< \alpha$ and contingency coefficient of 0.546 so it can be concluded that there is a strong relationship between nutritional status and the development of toddlers aged 1-5 years. From the results of this study it can be concluded that nutritional status will affect the development of toddlers. In the growth and development of children need nutrients so that the process of growth and development goes well.

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INTRODUCTION

Toddler period is a period of formation and human development, this age is a vulnerable age because toddlers are very sensitive to growth disorders and the dangers that accompany them. Toddler period is also known as the golden age, where the basics of sensory, thinking, speaking abilities are formed, as well as intensive intellectual mental growth and the beginning of moral growth.

Development is an increase in the structure and function of the body which is more complex in the ability of gross motion, fine motion, speech and language as well as socialization and independence (Ministry of Health, 2006). The most important phase in growth and development is infancy and toddlerhood because that is the most important time for parents to build the

foundation for growth and development of the baby. The process of growth and development in infancy and toddlerhood is a very important process in determining the future of children physically, mentally and behaviorally (Maryunani, 2010).

One of the efforts to detect deviations in child development is early detection, so that prevention, stimulation, healing and recovery efforts can be given correctly according to the indications. Detection for growth and development is an effort that needs to be supported, because it is one way to prepare quality future generations (Yuniarti, 2015). The quality of today's children is a determinant of the quality of Human Resources (HR) in the future. Human development of the future begins with the development of today's children. To prepare quality human resources, it is necessary to prepare so that children can grow and develop as optimally as possible according to their abilities.

Nutrition is one of the important components in supporting the continuity of the growth and development process. Nutrition becomes a necessity to grow and develop during the growth period. In nutrition there is a need for nutrients needed for growth and development such as protein, carbohydrates, fats, minerals, vitamins, and water. If a person's nutritional needs are not met or not met, it can inhibit growth and development (Hidayat, 2008).

The nutritional status of toddlers is a crucial thing that parents must know. Reviewed from the information, it is known that under-fives with malnourished status are in the golden phase tends to be irreversible. In addition, toddlers with disabilities nutrition also has an impact on the development of the toddler's brain, so that his body's immunity becomes stronger weak and susceptible to disease or infection (Sholikah, Rustiana & Yuniastuti, 2017).

Nutritional status is a picture of what a person consumes over a long period of time. Therefore, the availability of nutrients in a person's body, including infants and toddlers, determines whether the nutritional status of infants and toddlers is less, optimum or more. Food given to infants and toddlers will be used for body growth, therefore nutritional status and growth can be used as a measure to monitor the nutritional adequacy of infants and toddlers, where all growth and health of toddlers is closely related to adequate food intake. Optimal growth and development in toddlers requires food that is suitable for growing toddlers (Maryunani, 2010). The lack of nutritious food intake for toddlers and the ability of parents to unite the growth and development of toddlers are the most important factors affecting the nutritional status of toddlers. Fuada, Mulyati and Hidayat (2011) stated that the related factors with nutritional status in children under five including: utilization of health services and numbers adequate protein consumption.

Based on the results of data from the Central Statistics Agency (BPS), in 2018 toddlers Indonesians aged 0-59 months with malnourished status showed prevalence of 17.70%. As for toddlers aged 0-23 months based on nutritional status index Weight/Length in 2017 in East Java Province the prevalence is very thin by 2.7% and 7.8% thin (Ministry of Health, 2017). In the growth and development of children need nutrients so that the process of growth and development goes well. The nutrients consumed by children will affect their nutritional status. Differences in nutritional status have a different effect on each child's development, if balanced nutritional needs are not met properly then the achievement of growth and development of children will be hampered.

The average annual achievement of stunting reduction is 2.0% (2013–2021) with a stunting prevalence rate in 2021 of 24.4%. Innovation efforts are needed to achieve 2.7% per year in order to achieve the target of 14% (RPJMN target) with the accuracy of the intervention carried out. The prevalence of stunting under five in East Java Province from 2019 to 2021 has decreased from 26.9% to 23.5%. However, this figure has not yet reached the national target of 14%. For this reason, an effective effort is needed to reduce the prevalence of stunting according to the national target in 2024 (SSGI, 2021). In order to determine the food that suits the needs of the body, humans must learn and practice from an early age. While the food consumed today has a very big role in determining the quality of life of children in the future.

Efforts to encourage the improvement of health status, namely by providing good nutrition, it is hoped that the growth and development of children will be good, in addition to improving the health status of children. These efforts can be carried out through various activities, including Family Nutrition Improvement Efforts (UPGK). The UPGK activities are encouraged and directed at improving nutritional status, especially for people who are vulnerable or have a high risk of death or illness, including toddlers (Hidayat, 2008:4).

RESEARCH METHOD

This study used analytical research, namely by using a correlation design. By using a Cross Sectional approach. The population in this study were all toddlers aged 1-5 years at Posyandu Melati, Denanyar Village, Jombang Regency. as many as 31 toddlers. The sample in this study was some toddlers aged 1-5 years at Posyandu Melati, Denanyar Village, Jombang Regency, with the formula for calculating the estimated sample size. Hypothesis tests for a population proportion (one-sided test) of 30 children under five. In this study, the independent variable was the nutritional status of toddlers aged 1-5 years at Posyandu Melati, Denanyar Village, Jombang Regency. In this study, the dependent variable was the development of toddlers aged 1-5 years at Posyandu Melati, Denanyar Village, Jombang Regency.

RESULTS AND DISCUSSIONS

Characteristics of Respondents by Age Group

Table 1: Characteristics of Respondents Based on Toddler Age Groups at Posyandu Melati, Denanyar Village, Jombang Regency in December 2021

No	Age	Total	Percentage (%)
1	12 - 18 month	0	0
2	19 - 24 month	4	13,3
3	25 - 36 month	14	46,7
4	37 - 48 month	8	26,7
5	49 - 60 month	4	13,3
Total		30	100

Characteristics of Respondents by Gender

Table 2: Characteristics of Respondents by Gender at Posyandu Melati, Denanyar Village, Jombang Regency in December 2021

No	Gender	Total	Percentage (%)
1	male	13	43,3
2	female	17	56,7
Total		30	100

Toddler Nutritional Status

Table 3: Frequency Distribution of Nutritional Status of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village, Jombang Regency in December 2021

No	Nutritional Status (Length/Age)	Frequency	Percentage (%)
1	Normal ($-2\sigma/d$ 2SD)	18	60

2	Stunted (<-2 SD)	12	40
	Jumlah	30	100

Toddler Development

Table 4: Distribution of the Developmental Frequency of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village, Jombang Regency in December 2021

No	Nutritional Status (Length/ Age)	Frequency	Percentage (%)
1	Appropriate	25	83,3
2	Doubt	4	13,3
3	Deviate	1	3,4
	Jumlah	30	100

Relationship between Nutritional Status and Toddler Development

Table 5: Cross Table between Nutritional Status and Development of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village, Jombang Regency in December 2021

No	Nutritional Status	Development						Jumlah
		Appropriate		Doubt		Deviate		
		f	%	f	%	f	%	
1	Normal	18	72	0	0	0	0	18
2	Stunted	7	28	4	100	1	100	12
	Jumlah	25	100	4	100	1	100	30

Correlation Coefficient 0,546**, p value : 0,002

Discussion

a. Nutritional Status of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village

Based on Table 3 shows that of the 30 respondents studied, as many as 18 respondents (60%) in the normal nutrition category, as many as 12 respondents (40%) in the short category. From these data, it is known that the nutritional status of children under five in Posyandu Melati, Denanyar Village, is mostly normal.

Nutritional status is a condition that is shown as a consequence of the balance between nutrients that enter the body and those that are needed (Maryunani, 2010: 258). Nutritional status is an expression of a state of balance in the form of certain variables, or the embodiment of certain nutrients (Supariasa, 2013: 18).

Nutritional status is a picture of what a person consumes over a long period of time. Therefore, the availability of nutrients in a person's body determines whether the nutritional state is less, optimum or more (Maryunani, 2010: 258).

Toddler period is an important period that needs to be considered for parents who have toddlers, because at this time the nutritional status of toddlers affects the growth and development of toddlers. Toddler is a golden age because if a toddler is malnourished then the child interferes with his growth and development, usually undernourished toddlers tend to be thinner and shorter than their normal nutritional peers. In addition, malnutrition can interfere with cognitive development. Toddlers will be slow to think and understand things.

b. Development of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village

Based on Table 4 shows that of the 30 respondents studied, most of the under-five developments were appropriate as many as 25 respondents (83.3%). Development is a gradual

change and improvement in the function of the body's organs, increasing and expanding one's capacity through growth, maturity or maturity, and learning (Hidayat, 2008:26).

Developmental problems in children are very important problems because to find out developmental disorders in children, so that diagnosis or recovery can be made early so that child development takes place as optimally as possible. Children who have normal development, this is because the stimulation of children is not only given by parents but also given the environment. The role of the child's environment is very important in shaping development. A healthy environment can cause toddlers to develop well, while unhealthy environmental conditions can cause children to develop unhealthy. For example, children who thrive in a loving environment can stimulate children to become better. Whereas in children who develop in an environment without affection in the sense of not caring, it will cause children to rarely get stimulation so that their development becomes hampered.

c. Relationship between Nutritional Status and Development of Toddlers Age 1-5 Years at Posyandu Melati, Denanyar Village

In this study, the calculation of statistical test data used is Spearman Rank. From the statistical test of data analysis, the results of the significance of Correlation Coefficient 0.546**, and p value : 0.002, which means there is a relationship between nutritional status and the development of toddlers aged 1-5 years. The correlation coefficient of 0.546 shows a strong correlation between the nutritional status of toddlers and the development of toddlers aged 1-5 years. Based on Table 5, it can be seen that of the 30 respondents at Posyandu Melati, Denanyar Village, there were 18 respondents (72%) with appropriate development who had normal nutrition and no respondent with abnormal nutritional status whose development was doubtful or experienced deviations.

Nutritional status is a state of health as a result of nutrient input (Maryunani, 2010). Consumption of nutritious food can determine the achievement of the level of health. One can find out how to consume well-nourished food by knowing it. If a person does not know about nutrition and consumption, it will affect his nutritional condition because that person will consume food as he pleases without taking into account good nutritional intake. So the nutritional status of toddlers is said to be good, that is, if there is a balance between the nutrients that enter the body and those needed in daily activities.

Nutritional status can affect the development of toddlers, based on the results of table 5 Respondents with dubious development who have stunted nutritional status are 4 respondents, and respondents with deviant development who have stunted nutritional status are 1 respondent. Nutritional status is a picture of what a person consumes over a long period of time. Therefore, the availability of nutrients in a person's body, including infants and toddlers, determines whether the nutritional status of infants and toddlers is less, optimum or more. Food given to infants and toddlers will be used for body growth, therefore nutritional status and growth can be used as a measure to monitor the nutritional adequacy of infants and toddlers, where all growth and health of toddlers is closely related to adequate food intake. Optimal growth and development in toddlers requires food that is suitable for growing toddlers. Studies on nutrition children show that the risk of malnutrition is low, related to stunting reduction (Khatryn, 2007)

CONCLUSION

Based on the results of statistical tests obtained p value $< \alpha$ and contingency coefficient of 0.546 so it can be concluded that there is a strong relationship between nutritional status and the development of toddlers aged 1-5 years. From the results of this study it can be concluded that nutritional status will affect the development of toddlers. In the growth and development of children need nutrients so that the process of growth and development goes well.

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