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The Impact of Picky Eating Behavior on Nutritional Status in Toddlers Aged 24-59 Months Using Weight and Height Measurements at Bone Health Center, Muna Regency

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ABSTRACT

Introduction: One of the Health Centers in Muna Regency, namely Bone Health Center, has 1.6% very thin toddlers, 7.4% thin toddlers, 0.5% very short toddlers, 5.7% short toddlers, 6.4% malnourished toddlers, 8.7% undernourished toddlers, 0.2% obese toddlers. Eating problems in children, one of which is picky eating which is a factor influencing the nutritional status of children. Generally, in children who behave picky, or choose food, there will be inadequacy of food intake. Based on this background, researchers are interested in conducting research on the impact of Picky Eating Behavior on Nutritional Status in Toddlers Aged 24-59 months using weight and height measurements at bone health center, Muna Regency.

Method: Using quantitative research methods with a cross-sectional approach, the population was 566 and the sample was 228 toddlers aged 24-59 months using the Lameshow formula in determining the sample. Data collection by interview using a questionnaire.

Result: X^2 count is 0.468 < X^2 table is 3.841, so there is no relationship between picky eating and nutritional status based on Weight/Height in the Bone Health Center area, Muna Regency.

Conclusion: The Health Center as a health service provider should increase outreach to the community and maximize monitoring and improvement of nutrition together with parents of toddlers, especially in the Bone Health Center area.

Introduction

Toddlerhood is a developmental period that is vulnerable to nutritional problems. Malnutrition that occurs in toddlerhood is irreversible (cannot be recovered), so it will interfere with physical and mental growth. Limited parental knowledge of energy needs, nutrition and determining food menu patterns is one of the factors that causes malnutrition (wrong nutrition). To deal with this problem, parents need to pay attention to the

quality and quantity of food consumed by toddlers. In general, intelligent children are influenced by the environment or parenting patterns that support the child to always think and act intelligently. Not only nutritious food, some easy ways are also important as guidelines for the mental and physical development of children until they are adults.[1]

Toddlers or what are commonly called babies under the age of 5 years is a period where growth and development experience rapid increases, this period is often called the golden age, which is a very important period to pay attention to the growth and development of children so that if there are abnormalities that occur, they can be detected as early as possible. During this period, toddlers need sufficient nutritional intake in greater quantities and quality because toddlers generally have quite high physical activity and are still in the learning process. The process of development and growth during toddlerhood is determined by the food consumed every day. Providing nutritional intake according to needs will result in good growth and development. Balanced nutrition is obtained from food intake that meets the nutritional needs of children as seen from age and activities in order to achieve normal body weight.[2]

Eating problems in children, one of which is picky eating which is a factor that influences the nutritional status of children. Generally, in children who behave picky, or choose food, there will be inadequacy of food intake. Children with picky eating behavior usually avoid certain foods based on color, texture or smell (such as vegetables, fruits, etc.). Children will also limit their food consumption to certain brands that are softer or lighter in color such as plain pasta, cheese pizza and so on. One effort to create physical health in toddlers is to provide healthy and nutritious food even though at this time children often have eating problems which result in children consuming less healthy and nutritious food.

Picky eaterdefined as the behavior of children who consume food with insufficient food variety and reject certain foods, both new foods and familiar foods. Picky eating or being selective in eating is one of the eating disorders in children that must be considered by families or health workers, because picky eating has a detrimental effect on children. Picky eating is included in the spectrum of feeding difficulties where children refuse to try new foods, or only want to eat certain foods. While children who are picky eaters consume fewer vegetables than non-picky eaters.[3]

The impact of picky eating behavior on children can affect their growth. Energy deficiency occurs when energy consumption is less than the energy expended by the body, which will inhibit the growth of infants and children. If not treated early and correctly, picky eating will have a long and recurring impact until they are adults experiencing physical, mental and behavioral damage, a higher risk of death, and if it gets worse it will result in anorexia and bulimia.[4]

Picky eating is included in the spectrum of eating difficulties. Picky eating or refusal of food (unfamiliar types) has an impact on the lack of variety of foods consumed, and the composition of nutrients due to the lack of variety of foods in the child's consumption pattern, is always a concern. Rejection of certain types of food, choosing food and wanting to consume certain foods, being reluctant to try new foods, limited intake of only a few types of food is part of the characteristics of Picky eating. Eating behavior disorders are related to suboptimal development, and especially children who always refuse food, choose to eat usually have less weight than non-Picky eating children.[5]

Eating problems in children, one of which is picky eating which is a factor that influences the nutritional status of children. Generally, in children who behave picky, or choose food, there will be inadequacy of food intake.[3] Shows that preschool children who experience picky eating behavior are (35.4%). The results of this study showed that (67.1%) children spend food for a long time (more than 30 minutes), (49.4%) are not interested in trying new foods, (48.1%) only like certain foods, (34.2%).[4]

The results of the 2018 Basic Health Research, the prevalence of malnutrition in

toddlers in Indonesia in 2018 was 3.9%, while undernutrition was 13.8.[6]The results of the 2020 Indonesia's Nutrition Status Survey showed that the nutritional status of underweight was 6.7%, very underweight was 1.4%, very short toddlers were 3.0%, short toddlers were 8.5%, malnourished toddlers were 1.1% and undernourished toddlers were 4.3%. The results of the 2021 Indonesia's Nutrition Status Survey showed that there were 1.2% of very undernourished toddlers, 6.1% of undernourished toddlers, 2.5% of very short toddlers, 7.0% of short toddlers, 0.9% of malnourished toddlers, 4.0% of undernourished toddlers, 24.4% of short toddlers.[7]

Based on the results of the 2021 Indonesia's Nutrition Status Survey, cases of wasting in Southeast Sulawesi Province were 6.6%, underweight toddlers were 20.9%, malnutrition was 11.37%, short toddlers were 17.67%, thin toddlers were 5.89%, cases of malnutrition from 2016 were 279 cases, 2017 were 202 cases, 2018 were 204 cases, 2019 were 271 cases, and 2020 were 471 cases.[8]

Based on data obtained from the results of the 2021 Indonesia's Nutrition Status Survey, cases of wasted toddlers in Muna Regency were 7.3%, underweight toddlers were 21.2%, malnourished toddlers were 12.30%, short toddlers were 23.11%, and thin toddlers were 4.51%. Based on data from the results of the 2022 nutritional surveillance, there were 1.3% of very undernourished toddlers, 6.8% of undernourished toddlers, 4.0% of very short toddlers, 11.3% of short toddlers, 0.5% of malnourished toddlers, 2.6% of undernourished toddlers, and 0.2% of obese toddlers.[8]

Method

This study uses a quantitative research method with a cross-sectional approach, a population of 566 and a sample of 228 toddlers aged 24-59 months using the Lameshow formula in determining the sample. Data collection by interview using a questionnaire. Data analysis using Chi square test.

Result

Table 1 shows that out of 228 respondents with normal nutritional status, there are 207 respondents or (90.8%) and those who are wasted are 21 respondents or (9.2%). Furthermore, out of 207 respondents with normal nutritional status, there are 138 respondents with picky eating or (89.6%) and 69 respondents with non-picky eating or (93.2%). And out of 21 respondents with wasted nutritional status, there are 16 respondents with picky eating or (10.4%) and 5 respondents with non-picky eating or (6.8%).

The conclusion of the results is that the calculated X^2 is .468 < X^2 table is 3.841, so there is no relationship between picky eating and nutritional status based on Weight/Height in the Bone Health Center area, Muna Regency.

Table 1.
The Relationship Between Picky Eating and Nutritional Status in the Health Center Area Bone Muna Regency

Picky Eating	Nutritional status				Total		X^2Count	X^2Table
	Normal		Wasted					
	n	%	n	%	n	%		
Picky Eating	138	89.6	16	10.4	154	100.0	0.468	3.841
Non-Picky Eating	69	93.2	5	6.8	4	100.0		
Total	207	90.8	21	9.2	228	100.0		

Discussion

Preschoolers are picky eaters. They eat only a limited variety of foods or foods prepared in a certain way and may not have a strong desire to try new foods. Children as young as 3 or 4 years old may exhibit food fads, eating only certain foods for a period of several days. As children get older, pickiness decreases. By age 5, children become more focused on the social context of eating.[4]

Based on the results of the study, it shows that out of 228 respondents with normal nutritional status, there were 207 respondents or (90.8%) and those who were wasted were 21 respondents or (9.2%). Furthermore, out of 207 respondents with normal nutritional status, there were 138 respondents with picky eating or (89.6%) and 69 respondents with non-picky eating or (93.2%). And out of 21 respondents with wasted nutritional status, there were 16 respondents with picky eating or (10.4%) and 5 respondents with non-picky eating or (6.8%). The conclusion of the results is that X^2 count is 0.468 $<X^2$ table is 3.841, so there is no relationship between picky eating and nutritional status based on Weight/Height in the Bone Health Center area, Muna Regency.

Preschool age is an important period in forming healthy eating habits in children. At this stage, children begin to learn to eat on their own, so examples are needed that can show and direct good eating behavior for children. As part of the development of social life, children learn something by imitating the behavior of those around them, including eating behavior.[9]

Preschool children have a complete set of baby teeth that are able to chew and swallow well. Children aged 3 to 5 years need 500 to 800 mg of calcium and 10 mg of iron every day.[10] A child who has picky eater behavior will be more selective about some foods related to texture, smell and appearance. Picky eaters caused by loss of appetite can occur from mild to severe levels. Mild symptoms include decreased appetite, drinking drinks that are often left over, spitting out or spitting out food and when drinking breast milk for a short time, while severe symptoms include closing the mouth tightly or refusing to eat and drink milk at all.[4]

The average preschool child will grow 6.5 to 7.8 cm per year. The average 3-year-old is 96.2 cm tall; the average 4-year-old is 103.7 cm tall and the average 5-year-old is 118.5 cm tall. The average weight change during this period is about 2.3 kg per year. The average weight of a 3-year-old child is 14.5 kg increasing to an average of 18.6 kg and by age 5 years The loss of baby fat and muscle growth during the preschool years give children a stronger and more mature appearance.[11]

A person's nutritional status can be said to be good if there is a balance between physical development and intellectual mental development. Nutritional status is influenced by two factors, namely food consumption and health. Food consumption is influenced by nutrients in food, family food programs, eating habits, health maintenance, family purchasing power, physical environment and problems.[12]

Nutritional measurement in preschool children using the Z-score indicator where researchers use weight compared to height (Weight/Height). Based on the measurement, most children have normal nutritional status of 207 (90.8%). In preschool children, children are still very dependent on their caregivers, so the food given will tend to be the same as the caregiver. If the food menu served by the family meets the child's nutritional needs, then the child will also be able to grow normally. Children prefer regularity in everyday life where children like to eat according to family time.[13]

Diet in preschool children plays an important role in the growth process in preschool children, because food contains many nutrients. Nutrients are closely related to health and intelligence and also child growth and development. If the diet is not achieved properly in preschool children, the growth period will be disrupted. So that it can cause a thin body, short, and even malnutrition in preschool children.[14]Based on the results of the

study, children with thin nutritional status were 21 children (9.2%). Preschool children who experience thin nutrition because the intake of nutrients is not comparable to the energy expended. At that time, children are in a period said to be a play period, because every time is filled with playing. And during this time toys are a very important tool for play activities. During play, children need more energy, so they need more energy to replace lost energy.[15]

The results of this study are not in line with research conducted by[4]which obtained the results of the study obtained a p-value of 0.002 <α (0.05). It is concluded that there is a significant relationship between picky eater behavior and nutritional status in preschool children at Nurul Izzah Islamic Kindergarten, West Ungaran District, Semarang Regency.

Picky eating behavior is a phase that often occurs in toddlers that does not always cause health or social problems, but picky eating behavior that occurs in extremes can have negative consequences for growth, the emergence of chronic diseases, and death. Picky eating behavior also causes children to lack micro and macronutrients which can ultimately interfere with physical growth characterized by difficulty gaining weight, impaired cognitive growth and malnutrition.[16]

Adequate nutrition can provide a valuable environment for a developing child, while nutritional deficiencies can seriously impair brain development and other functions. Nutritional needs change throughout a child's life and have a major impact on a child's physical growth and intellectual development. Nutrition provides the necessities needed to maintain health and prevent illness.[16]

The research results are not in line with the research by Shintya, that there is a relationship between picky eater behavior and nutritional status in toddlers.[17] Nutrient intake has a major impact on a child's development from infancy to adolescence. A balanced diet not only affects growth but also functions as immunity, supports intellectual ability and emotional formation. All food consumed by infants must meet daily nutritional needs. The food given must function primarily as energy for muscle activity, form new tissue, and provide a delicious and full taste.[18]Childhood is a period of rapid growth and development, therefore the need for high nutrients must be met. Childhood is also a period that is prone to experiencing nutritional problems, the benefits of nutrients for children include for optimal growth and development processes, maintaining health and restoring health when sick, carrying out various activities, and educating good habits by liking foods that contain the nutrients needed by the body.[19]

Conclusion

There is no relationship between picky eating and nutritional status based on Weight/Height in the Bone Health Center area, Muna Regency. So that the Health Center as a health service provider should increase counseling to the community and maximize monitoring and improvement of nutrition together with parents of toddlers, especially in the Bone Health Center area. For the Health Center, it should be able to increase counseling regarding the incidence of malnutrition or rules for parenting patterns in children which is one of the efforts to obtain good nutritional status in each child. The need for regular monitoring of toddler growth such as measuring height at the integrated health post regularly and optimizing the Additional Food Provision program with the use of local food for malnourished toddlers and increasing education, counseling and consultation in the field of health, especially nutrition.

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