



Nutritional Status of Toddlers Aged 0-59 Months: a Descriptive Study

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Abstract: *toddlerhood is called the golden age where a person experiences rapid growth and development. However, in 2022 based on the results of the Indonesian Nutritional Status Survey (SSGI) showed that toddlers with stunting were 21.6%, toddlers with malnutrition were 7.7%, toddlers with undernutrition were 17.1% and toddlers who were obese were 3.5%. The purpose of this study was to describe the nutritional status of toddlers aged 0-59 years in Kedalon Village. The quantitative descriptive research method with observational analytics on data from nutritional status measurements in toddlers aged 0-59 years. The total sample was 192 toddlers in Kedalon Village, the data was subjected to descriptive analysis. The results of toddlers with normal height were 182 (94.79%), short height 7 (3.65%) and very short height toddlers 3 (1.56%). Toddlers with normal weight 164 (85.42%), underweight toddlers 18 (9.37%), overweight toddlers 7 (3.65%) and very underweight toddlers 3 (1.56%). Toddlers based on weight according to height with normal results 163 (84.90%), undernutrition 10 (5.21%), overnutrition 3 (1.56%) and obesity 2 (1.045) and severe malnutrition 2 (1.04%). Toddlers who are identified as having nutritional problems can be given adequate nutritional interventions so that growth and development problems do not occur in the future..*

Keywords: *Malnutrition, Nutritional Status, Overnutrition, Toddlers*

1. INTRODUCTION

The Global Nutrition Report states that in 2017, nutritional status problems in the world include the prevalence of wasting (thin) 52 million toddlers (8%) stunting (short) 115 million toddlers (23%) and overweight in the world in 2016 based on the WHO regional scope, namely Africa 11.3 million toddlers (17.3%), America 1.3 million toddlers (1.7%), Southeast Asia 48 million toddlers (26.9%), Europe 0.7 million toddlers (1.2%), while globally in the world the prevalence of children under five years of age who are underweight is 14% (94.5 million) (WHO, 2017). The 2021 edition of the UNICEF-WHO-WORLDBANK joint malnutrition estimate shows that the prevalence of malnourished toddlers is 148.2 million toddlers experiencing stunting, 38.9 million toddlers experiencing overweight, 45.4 million toddlers experiencing severe wasting, of which 13.6 million are malnourished (WHO, 2021). The Indonesian Ministry of Health (2023) stated that the trend in the nutritional status of toddlers in Indonesia based on the results of the 2022 Indonesian Nutrition Status Survey (SSGI) showed that toddlers with stunting were 21.6%, toddlers with malnutrition were 7.7%, toddlers with undernutrition were 17.1% and toddlers who were obese were 3.5%. Furthermore, in Central Java,

underweight toddlers were 17.6%, the highest in Pekalongan City was 26.5% and the lowest in Salatiga City was 11.7%, while in Wonosobo Regency it was 12.5%.

Toddlerhood is commonly referred to as the golden age, a period when humans experience rapid growth and development. At this age, children will increasingly develop in thinking, speaking, five senses and motor skills (Kartika & Rifqi, 2021). Adequate nutritional intake in quantity and quality is essential at this time. If these nutritional needs are not met, the child's growth and development will be hampered, which will ultimately cause them to become a lost generation (Welasasih & Wirjatmadi, 2012). If many toddlers are in poor or poor nutritional status, these toddlers will find it difficult to develop. Thus, nutritional problems are the most important problem for communities and families to improve the nutritional status of toddlers (Adriani & Wirjatmadi, 2012).

The main cause of malnutrition in toddlers is poverty so that children's access to food is disrupted. Another cause is the ignorance of parents due to lack of education so that nutritional knowledge is low and the emergence of taboo food behavior, where nutritious food is taboo and should not be consumed by toddlers. Ignorance about nutrition can cause someone to choose the wrong food ingredients and how to serve it. However, on the contrary, mothers with good nutritional knowledge usually practice healthy eating patterns for their children so that their nutritional needs are met (Khamson & dkk, 2010). Families have different nutritional problems depending on their socio-economic level. In wealthy families living in urban areas, the nutritional problem that is often faced is the problem of excess nutrition called overnutrition. Members of this family have a high risk of becoming obese and susceptible to disease. Meanwhile, in families with low socio-economic levels or often called poor families, they generally often face the problem of malnutrition called undernutrition. The risk of disease that threatens is infectious diseases, especially diarrhea and upper respiratory tract infections (Depkes, 2005).

Toddler nutritional problems can cause several serious effects. The consequences that can be caused by these nutritional problems include failure in physical growth and lack of optimal growth and intelligence, even causing death in toddlers. The short-term effects of malnutrition on toddler development include toddlers becoming apathetic, speech disorders and other disorders. While long-term effects such as decreased Intelligence Quotient (IQ), decreased cognitive development, sensory integration, concentration and decreased self-confidence can decrease academic achievement at

school (Silvera et. al., 2017). In addition, there are also impacts caused by excess nutrition, namely the risk of obesity and degenerative diseases that will arise later (Sudargo et al., 2014). Therefore, researchers are interested in conducting research on the nutritional status of toddlers aged 0-59 years in Kedalon Village, Kalikajar District, Wonosobo Regency.

2. LITERATURE REVIEW

Toddlers are a group of children aged 0-59 months. During this period, children require balanced nutritional intake both in terms of quantity and quality to achieve optimal weight and height (Kemenkes RI, 2014). Nutritional status is the state of the body as a result of the use, absorption, and use of food. Another definition states that nutritional status is an expression of a state of balance in the form of certain variables, or a manifestation of body status related to nutrition in the form of certain variables (Kemkes RI, 2024).

Toddler nutritional status is the nutritional state of toddlers aged 0-59 months which is determined by the Anthropometric method, based on the Weight by Age (BB/U), Height by Age (TB/U), and Weight by Height (BB/TB) indices. Weight by Age is the child's weight achieved at a certain age, Height by Age is the child's height achieved at a certain age. Weight by Height is the child's weight compared to the height achieved. The three nutritional status index values above are compared to the WHO growth standards. Z-score is the deviation value of BB or TB from the normal BB or TB value according to WHO growth standards. Limits for the category of nutritional status of toddlers according to the BB/Age, TB/Age, BB/TB index according to WHO (Izwardi, 2018).

The causes of toddler obesity include (1) genetic factors (if one parent is obese, the chance of their child being obese is around 40-50% and if both parents are obese, the chance of their child being obese is around 70-80%), (2) environmental factors (diet and physical activity patterns) and (3) drug and hormonal factors (Kemkes RI, 2018). Meanwhile, the causes of toddler malnutrition include too little food, low quality food, maternal conditions and quality of childcare, and limited access to quality health, hygiene, and sanitation services. These problems are exacerbated by poverty, low levels of education, gender and social inequality, inadequate infrastructure, high frequency of natural disasters, and other factors related to the environment and climate (UNICEF, 2022).

Toddler nutritional status is an important thing that every parent should know. The need for more attention to the growth and development of children at the toddler age is based on the fact that malnutrition during this golden period is irreversible (cannot be recovered), while malnutrition can affect the development of the child's brain. Toddler nutritional status is measured based on age, body weight (BW) and height. Nutrition is a very important part of the growth and development of toddlers which is closely related to health and intelligence. Providing poor nutrition, especially to children, will reduce the potential for community development resources. Nutrition is closely related to a person's health (Kemkes RI, 2024).

3. METHODS

Quantitative descriptive research by conducting observational analytics on data from nutritional status measurements in toddlers aged 0-59 years, both male and female, in Kedalon Village in September 2024. The researcher used a total sample of 192 toddlers who had their height body (HB), weight body (WB) and weight body according to height body (BW/TB) measured, then the data was subjected to descriptive analysis.

4. RESULTS

The study obtained 192 toddlers who took part in anthropometric measurements of height body according to age (HB/A), weight body according to age (WB/A) and weight body according to height body (WB/HB). The research data was subjected to descriptive analysis which is shown in table 1 regarding the nutritional status of toddlers based on age below.

Table 1. Nutritional Status of Toddlers Based on Age

Variabel	f	%
Toddler Age		
0-23 months	75	39,06
24-59 months	117	60,94
Total	192	100
Toddler Height Body		
Very short	3	1,56
Short	7	3,65
Normal	182	94,79
Tall	0	0,0

Total	192	100
Toddler Weight Body		
Very poor	3	1,56
Poor	18	9,37
Normal	164	85,42
More risk	7	3,65
Total	192	100
Weight body/Height body		
Malnutrition	2	1,04
Undernutrition	10	5,21
Normal	163	84,90
Risk of overnutrition	12	6,25
Overnutrition	3	1,56
Obesity	2	1,04
Total	192	100

Based on table 1 above, it can be explained that the age of toddlers who were measured was 24-59 months as many as 117 (60.94%) and toddlers aged 0-23 months as many as 75 (39.06%). Toddlers who have normal height are 182 (94.79%), short height is 7 (3.65%) and very short height is 3 (1.56%). Toddlers who have normal weight are 164 (85.42%), underweight toddlers are 18 (9.37%), overweight toddlers are 7 (3.65%) and very underweight toddlers are 3 (1.56%). Toddlers based on weight according to height with normal results are 163 (84.90%), undernutrition is 10 (5.21%), overnutrition is 3 (1.56%) and obesity is 2 (1,045) and malnutrition is 2 (1.04%).

5. DISCUSSION

The results of the study showed that toddlers who had normal height were 182 (94.79%), short height was 7 (3.65%) and very short height was 3 (1.56%). One of the impacts caused by nutritional problems in toddlers can cause toddlers to get sick easily. As mentioned by Adriani & Wirjatmadi (2012) that toddlers who experience malnutrition will get sick easily due to the inability to form antibodies or immunity as protection against infectious diseases which result in impaired growth of toddlers. The results of this study also showed that toddlers who had normal weight were 164 (85.42%), toddlers with underweight were 18 (9.37%), toddlers with overweight risk were 7 (3.65%) and toddlers with very underweight were 3 (1.56%). Another impact of toddlers who have nutritional problems can experience impaired growth and development. Research conducted in

China and Ethiopia showed that food diversity in children's eating index is related to underweight and thin body, non-diverse food has a negative effect on children's growth and development (Aemro et al., 2013; Zhang et al., 2009).

Furthermore, the results of this study showed that toddlers based on weight according to height with normal results were 163 (84.90%), malnutrition was 10 (5.21%), overnutrition was 3 (1.56%) and obesity was 2 (1.04%) and malnutrition was 2 (1.04%). Anthropometric measurements using the weight index according to height (BB/TB) or weight according to body length (BB/PB) are one way to determine an individual's nutritional status. The BB/TB or BB/PB index is classified into obese, overweight, normal, thin (wasted) and very thin (severely wasted) (Kemenkes RI, 2020). Malnutrition can be characterized by a very thin physical condition, the presence or absence of edema on both insteps, then seen from body weight according to body length or height of less than -3 standard deviations and arm circumference of less than 11.5 cm in children aged 6-59 months (Kemkes RI, 2019). Overnutrition and obesity are the causes of population death in various countries in the world compared to underweight. As many as 41 million children under the age of five are overweight and obese. The impacts of obesity include metabolic impacts and the impacts of other diseases. Metabolic impacts will increase triglycerides and decrease HDL fat and increase blood pressure, this condition is often called metabolic syndrome. The impacts of other diseases can occur in worsening asthma, osteoarthritis of the knees and hips, formation of gallstones, sleep apnea, low back pain, stroke, heart disease, liver cirrhosis, diabetes mellitus and others (Kemkes RI, 2018).

Several studies explain that factors that influence the nutritional status of toddlers include maternal knowledge, parenting patterns, parental education, economic status, infectious diseases, pregnancy spacing and history of breastfeeding. Research by Alhamid et al. (2021) states that there is a significant relationship between maternal knowledge and the nutritional status of toddlers. Furthermore, the better the parenting pattern given, the better the nutritional status of toddlers and vice versa if the mother provides poor parenting in providing food to toddlers, the nutritional status of toddlers will also be disrupted (Munawaroh, 2015). Marmi (2014) explains that parents who have a higher education will understand food better and choose good food for their children. Study Aristiyani & Mustajab (2023) logistic regression test showed that there was a significant relationship between economic status and babies with low birth weight with a p value of 0.025, underweight with a p value of 0.023 and stunting with a p value of 0.008,

meaning that there is a significant relationship between family economic status and babies with low birth weight, underweight and stunting. Study Sholikah et al. (2017) explained that factors related to nutritional status in toddlers in rural and urban areas are infectious diseases ($p < 0.05$). Infectious diseases experienced by toddlers based on the results of the study are tuberculosis, diarrhea and ARI, most people in rural and urban areas are in the furniture industry housing environment so that the air is easily polluted by wood dust. Shahjada (2014) stated that in India, children will be at greater risk of malnutrition, both previous or subsequent siblings who have a birth gap of 24 months. And Alhamid et al. (2021) stated that there is a significant relationship between breastfeeding history and toddler nutritional status.

Actions taken to overcome toddler nutritional problems, the Ministry of Health has a breakthrough to make superior resources by increasing the target of providing additional food for thin toddlers, nutritional education efforts in increasing feeding for infants and toddlers, promoting balanced nutrition and health education for the community who have toddlers in exclusive breastfeeding (Kemkes RI, 2019). UNICEF program that supports the Nigerian government to implement the National Action Plan on Food and Nutrition by strengthening public health systems and fully integrating nutrition into all aspects of the primary health care system, with specific factors on acute malnutrition management, infant and young child feeding, and micronutrient supplementation. Interventions are aligned with convergence with interventions from other sectors related to antenatal care, disease control prevention, maternal nutrition where education and counseling on how to provide adequate child food and how to optimize exclusive breastfeeding are carried out, in addition UNICEF also supports community-based programs in Nigeria that have toddlers in severe acute malnutrition treatment (UNICEF, 2016).

6. CONCLUSION

The nutritional status of toddlers in Kedalon Village is mostly good, but there are some toddlers who experience nutritional problems such as short and very short height, there are also toddlers who are underweight, very underweight, and at risk of being overweight. In addition, there are also toddlers who have poor nutrition, severe

malnutrition, excessive nutrition and obesity. It is hoped that parents and health workers can work together to overcome nutritional problems in toddlers by providing adequate nutritional interventions so that in the future their nutrition will be normal and toddlers will not experience growth and development disorders or other diseases.

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