



THE RELATIONSHIP OF MOTHER'S KNOWLEDGE, ATTITUDES AND ACTIONS REGARDING BALANCED NUTRITION AND THE INCIDENT OF WASTING IN TODDLER

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ABSTRACT

Wasting is a nutritional status problem where a toddler's weight decreases drastically, or even below the normal range where the toddler's weight does not match his height or z score. Objective: The aim of this research is to determine the relationship between mothers' knowledge, attitudes and actions regarding balanced nutrition with the incidence of wasting in toddlers in Medan Deli District, Medan City. Method: The type of research used is analytical research with a cross sectional approach. The population in this study was 32 mothers who had wasting toddlers. The samples used in the research were mothers who had wasting toddlers aged 24 months - 59 months in the work area of the Medan Deli Health Center, Medan City, totaling 32 respondents using total sampling techniques. Results: The research results that have been collected using questionnaires and data analyzed using univariate and bivariate analysis show that the majority of mothers have sufficient knowledge, 16 respondents (50.0%), 16 respondents (50.0%) have positive and negative attitudes and 27 respondents (84.4%) had good actions. The chi square test shows that there is a relationship between mothers' knowledge about balanced nutrition and the incidence of wasting in toddlers, $p = 0.048$, there is a relationship between mothers' attitudes about balanced nutrition and the incidence of wasting in toddlers, $p = 0.033$, and there is a relationship between mothers' attitudes about balanced nutrition and the incidence of wasting. in toddlers $p = 0.033$. There is a relationship between maternal actions regarding balanced nutrition and the incidence of wasting in toddlers, $p = 0.032$. Conclusion: There is a significant relationship between mothers' knowledge, attitudes and actions regarding balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

Keywords: attitudes and actions of mothers; knowledge; toddler wasting

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INTRODUCTION

Law Number 36 of 2009 concerning health states that health includes elements of physical, mental, spiritual and social health that enable everyone to live socially and economically productive lives. Health is a human right and one element of prosperity that must be realized in accordance with the nation's ideals. One of the efforts to improve health status which is the government's responsibility is through improving nutrition. Efforts to improve nutrition have the aim of improving the nutritional quality of individuals and society, including through improving food consumption patterns, knowledge about balanced nutrition, improving nutritional awareness behavior and increasing access and quality of nutrition and health services in accordance with advances in science and technology (Kemenkes RI, 2017).

Nutrition has a close relationship with the incidence of death in children under 5 years of age. Based on data published in the Lancet Journal in 2013, as many as 44.7 percent of infant

deaths were caused by low birth weight (LBW), failure to provide breast milk, stunted (short) toddlers, thinness, and deficiencies in vitamin A and the mineral zinc. According to UNICEF-WHO-The World Bank, an estimated 165 million children under five years old in the world have decreased compared to 253 million in 1990. High prevalence rates among children under five years of age are found in Africa (36%) and Asia (27%), and are often not recognized as a public health problem (Sinaga, 2023).

Wasting is the condition of a child whose weight decreases over time until their total body weight is far below the standard growth curve or their weight based on their height is low (thin) and shows weight loss (acute) and severe (Ministry of Health of the Republic of Indonesia, 2020). Wasting is a nutritional status problem where a toddler's weight decreases drastically, or is even below the normal range where the toddler's weight does not match his height or z score.(Darwis, 2019). Many factors cause malnutrition and wasting, including inadequate nutritional needs, infectious diseases and inadequate child care. Nutritional problems that occur at an early age will result in disturbances in the development of children's intelligence in addition to disturbances in physical growth, even worse, impact on death. Therefore, nutritional improvement programs, especially those carried out at an early age, need to receive attention so that there is no loss of generation (Suriani, 2021).

Based on 2018 Riskesdas data, there were 17.7 percent of under-five children with malnutrition and malnutrition, consisting of 13.8 percent of toddlers with under-nutrition status and 3.9 percent with poor nutritional status (Riskesdas, 2018). The prevalence of wasting in Indonesia is still high and remains a public health problem. From the results of the SSGI 2022 research, it was found that there was a reduction in the proportion of national stunting by 2.8%, from 24.4% in 2021 to 21.6% in 2022. The proportion of children with overweight nutritional status in 2022 was 4.5%, smaller than in in 2021, namely 3.8%. However, there was an increase in the proportion of wasting from 7.1% in 2021 to 7.7% in 2022 and underweight from 17.0% in 2021 to 17.1% in 2022 (SSGI, 2022)

Based on SSGI data in 2022, North Sumatra is ranked 21st out of 34 provinces where there is still wasting under five with a percentage of 7.8% (SSGI, 2022). However, the problem of malnutrition and malnutrition is still in the high category in Indonesia according to the MDGs standard of 15 percent, the prevalence of wasting based on the SDGs has increased, namely from 4.50 percent in 2021 to 4.80 percent in 2022. According to SSGI data In 2022, the percentage of Wasted toddlers (BB/TB) in Medan City is still quite high, ranking 12th out of 33 regencies/cities in North Sumatra Province with a percentage of 9.2% (SSGI, 2022). Based on data from the North Sumatra Provincial Health Service through the SIGIZI TERPADU application, namely the Electronic Community-Based Nutrition Recording and Reporting (ePPGBM) application, in the fourth quarter of 2023, 32 children under five were found with wasted nutritional status in Medan Deli District, Medan City. (Dinas Kesehatan Provinsi Sumatera Utara, 2023).

Based on an initial survey conducted in January 2024 of 30 mothers of toddlers who came to the posyandu, data was obtained through interviews that the majority of mothers still did not understand balanced nutrition and also still believed in myths or family beliefs regarding feeding behavior for toddlers. For example, mothers still believe that when serving food, priority is given to adults, for example fathers, even though food should be given priority to toddlers because toddlers need nutritional intake for their growth period and toddlers cannot provide their own food. During the interview, the toddler's mother also said that her child did not want to eat and the toddler's mother just let it go until the child wanted to eat. There are

also mothers of toddlers who, when their child cries, don't want to eat, but are instead given snacks such as food stalls so that the child will eat.

Toddlers aged 1 – 5 years are an age group that is very vulnerable to malnutrition, which can have an impact on brain development, intelligence, physical growth and metabolic disorders. Toddlers are also pre-school children where children are experiencing very rapid growth and development and activity compared to when they were babies, and at this age, nutritional needs will also increase. The nutritional problems that most often occur in children under five are poor nutrition, undernutrition, wasted, stunted, fat and obese (Laila, 2020). The problem of malnutrition in children under five is directly influenced by food intake. Malnutrition problems occur due to failure to fulfill daily nutritional needs over a certain period of time. The nutritional adequacy of children under five according to the 2019 regulations of the Minister of Health of the Republic of Indonesia aged 1 - 5 years is: for macronutrients, calories are 1350 - 1400 kcal, 25 grams of protein, 50 grams of fat and 220 grams of carbohydrates, while for micronutrients, namely Vitamin A 450 mcg, Vitamin C 45 mg, Fe 10 mg, zinc 5 mg, etc. (Kemenkes RI, 2019).

One important factor that influences the nutritional status of toddlers is the mother's knowledge about nutrition in toddlers. Maternal knowledge about toddler nutrition is all the information the mother has regarding the food substances needed for the toddler's body and the mother's ability to apply them in everyday life. Knowledge about good nutrition will certainly make the nutritional status of toddlers good too (Suriani, 2021). Having knowledge about good balanced nutrition will give rise to attitudes and shape behavior to act in fulfilling the nutrition of their toddlers. Apart from that, good knowledge will improve the mother's way of fulfilling her toddler's nutrition, so that the growth and development of the toddler can be fulfilled. So good knowledge makes it possible to have good nutritional status (Devi, 2020).

Nutrient intake is influenced by the availability of food, the mother's knowledge, attitudes and good behavior regarding nutrition as well as how to process the food into food that the child likes and likes without reducing the nutritional content of the food (Darwis, 2019). If the mother's knowledge regarding balanced nutrition is low and the mother's behavior in fulfilling the child's nutrition is still very limited, then the child's nutrition will not be adequate and this could have an impact on the child's health. To overcome this problem, changes are needed starting from the mother's knowledge, attitudes and actions to be able to fulfill children's nutritional requirements to improve children's diet so that they can get a good source of protein at a cheap and easy to obtain price. Because the mother is the spearhead who has a very important role in providing nutrition for her children in the household (Mulyati, 2021) Based on secondary data and the results of the initial survey that has been carried out, The aim of this research is to determine the relationship between mothers' knowledge, attitudes and actions regarding balanced nutrition with the incidence of wasting in toddlers in Medan Deli District, Medan City.

METHOD

This research uses quantitative methods with analytical research with a cross-sectional approach. Population In this study, there were 32 mothers who had wasting toddlers. The sample used in this research was mothers who had wasting toddlers aged 24 months to 59 months, totaling 32 respondents in the Medan Deli Health Center Working Area, Medan City. The sampling technique in this research used a total sampling technique. This research was carried out in January - February 2024. The data collection technique used in this research

was using a questionnaire research instrument about balanced nutrition and the data collected was processed and analyzed statistically using univariate and bivariate analysis (Chi-Square Test).

RESULTS

Table 1, it is known that of the 32 respondents based on the age of the respondents, the majority (59.4%) were aged 25-35 years. Based on the respondents' last education, the majority (65.6%) were at the high school level. Based on the age of toddlers, the majority (84.4%) were aged 25-59 months. Based on the gender of toddlers, there are equal numbers of boys and girls (50.0%). Based on the weight of toddlers, the majority (87.5%) weigh <10 kg. Based on the height of the toddlers, the majority (93.7%) have a height of 50-120 cm.

Table 1.
Characteristics of Respondents Based on Mother's Age, Mother's Last Education, Toddler's Age, Toddler's Gender, Toddler's Weight, and Toddler's Height

Category	f	%
Mother's Age		
< 24 Years	7	21.9
25 – 35 Years	19	59.4
> 40 Years	6	18.7
Mother's Last Education		
Elementary School	0	0
Junior High School	11	34.4
Senior High School	21	65.6
S1	0	0
Toddler Age		
24 Months	5	15.6
25-59 Months	27	84.4
Toddler Gender		
Man	16	50.0
Woman	16	50.0
Toddler Weight		
< 10	28	87.5
10 – 15	4	12.5
15 – 20	0	0
Toddler Height		
<50	2	6.3
50 – 120	30	93.7

Table 2, it is known that out of 32 respondents there were 18 wasting toddlers in the malnourished category (56.3%) and 14 toddlers in the malnourished category (43.7%). Based on mothers' knowledge about balanced nutrition, the majority of respondents had sufficient knowledge, 16 respondents (50.0%), 11 respondents (34.4%) had good knowledge, and 5 respondents (15.6%) had poor knowledge. Based on mothers' attitudes about balanced nutrition, it can be seen that the results of respondents with positive attitudes and negative attitudes were equal, namely 16 respondents (50.0%). Based on mothers' actions regarding balanced nutrition, the majority of respondents had good actions, 27 respondents (84.4%), 5 respondents (15.6%) had adequate actions.

Table 2.
Frequency Distribution Based on Toddler Wasting Categories, Mother's Knowledge, Mother's Attitude, and Mother's Actions

Category	f	%
Toddler Wasting		
Not enough	18	56.3
Bad	14	43.7
Mother's Knowledge		
Good	11	34.4
Enough	16	50.0
Not enough	5	15.6
Mother's attitude		
Positive	16	50.0
Negative	16	50.0
Mother's Actions		
Good	27	84.4
Enough	5	15.6
Not enough	0	0

Table 3, it can be seen from the 32 respondents who are mothers of wasting toddlers that those with good and sufficient knowledge both have toddlers in the malnourished category, namely 8 respondents (72.7%) with good knowledge and 8 respondents (50.0%) with good knowledge. sufficient, whereas for toddlers in the malnourished category there were more respondents with sufficient knowledge, namely 8 respondents (50.0%) and only 3 respondents (27.3%) with good knowledge. Of the respondents with less knowledge, 2 respondents (40.0%) had toddlers in the malnourished category and 3 respondents (60%) had toddlers in the malnourished category. The results of the Chi-Square Test obtained a value of $p = 0.048$ ($p < 0.05$), which means that H_0 was rejected, which means there is a significant relationship between maternal knowledge about balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

Table 3.
Distribution of the Relationship Between Mothers' Knowledge About Balanced Nutrition and Wasting Incidents in Toddlers City

Knowledge	Toddler Wasting						P Value
	Not enough		Bad		Total		
	f	%	f	%	f	%	
Good	8	72.7	3	27.3	11	100.0	0.048
Enough	8	50.0	8	50.0	16	100.0	
Not enough	2	40.0	3	60.0	5	100.0	

Table 4, it can be seen that of the 32 respondents who were mothers of wasting toddlers with a positive attitude, there were 6 respondents (37.5%) who had wasting toddlers in the malnutrition category and 10 respondents (62.5%) had wasting toddlers in the malnutrition category, whereas with The negative attitude was that 12 respondents (75.0%) had wasted toddlers in the malnourished category and 4 respondents (25.0%) had wasted toddlers in the malnourished category. The results of the Chi-Square Test obtained a value of $p = 0.033$ ($p < 0.05$), which means that H_0 was rejected, which means there is a significant relationship between mothers' attitudes about balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

Table 4.
Distribution of the Relationship between Mother's Attitudes Regarding Balanced Nutrition and Wasting Incidents in Toddlers

Attitude	Toddler Wasting						P Value
	Not enough		Bad		Total		
	f	%	f	%	f	%	
Positive	6	37.5	10	62.5	16	100.0	0.033
Negative	12	75.0	4	25.0	16	100.0	

Table 5, it can be seen that of the 32 respondents who were mothers of wasting toddlers with good actions, 13 respondents (48.1%) had wasting toddlers in the malnutrition category and 14 respondents (41.9%) had wasting toddlers in the malnutrition category, whereas with sufficient action, there were 5 respondents (100.0%) who had wasting toddlers in the malnourished category and there were no respondents who had malnourished toddlers. The results of the Chi-Square Test obtained a value of $p = 0.032$ ($p < 0.05$), which means that H_0 was rejected, which means there is a significant relationship between maternal actions regarding balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

Table 5.
Distribution of the Relationship between Maternal Actions Regarding Balanced Nutrition and Wasting Incidents

Action	Toddler Wasting						P value
	Not enough		Bad		Total		
	f	%	f	%	f	%	
Good	13	48.1	14	41.9	27	100.0	0.032
Enough	5	100.0	0	0	5	100.0	

DISCUSSION

The Relationship between Mother's Knowledge About Balanced Nutrition and Wasting Incidents in Toddlers

Based on the results of the research that has been carried out, it was found that mothers' knowledge about balanced nutrition and the incidence of wasting in toddlers showed that those with good and sufficient knowledge both had toddlers in the undernourished category, namely 8 respondents (72.7%) with good knowledge and 8 respondents (50.0%) had sufficient knowledge, while among toddlers in the malnutrition category there were more respondents with sufficient knowledge, namely 8 respondents (50.0%) and there were only 3 respondents (27.3%) with good knowledge. Of the respondents with less knowledge, 2 respondents (40.0%) had toddlers in the malnourished category and 3 respondents (60%) had toddlers in the malnourished category. The results of the Chi-square statistical test obtained a value of $p = 0.048$ ($p \text{ value} < 0.05$), meaning that there is a significant relationship between maternal knowledge about balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

In line with research conducted by (Anggraeni, 2020) on the Relationship between Knowledge, Attitudes, Community Health Center Facilities regarding Balanced Nutrition and Nutrition Fulfillment Behavior in Toddlers, a p-value of 0.047 was obtained which was smaller than $\alpha = 0.05$ ($0.000 < 0.05$) and H_0 was rejected by H_a accepted which means that there is a relationship between knowledge and maternal behavior in fulfilling nutrition for toddlers aged 12-59 months. According to Notoatmodjo (in Masturoh & Anggita, 2018) that knowledge is the result of a person's knowledge of objects through their senses. Each person's

knowledge will be different depending on how each person perceives an object or thing. The five human senses for sensing objects are sight, hearing, smell, taste and touch. When sensing to produce knowledge it is influenced by the intensity of attention and perception of the object. A person's knowledge is mostly obtained through the sense of hearing and the sense of sight (Notoatmodjo, 2014). Balanced nutrition is an arrangement of daily intake whose types and amounts of nutrients are in accordance with the body's needs (Kemenkes RI, 2022). In this case, the basis for balanced nutrition for toddlers in the household starts from the mother's knowledge. The mother's knowledge in this matter is very crucial because the mother is the person most responsible for providing food to her children.

From the results of research that has been conducted, the majority of respondents or mothers of toddlers have sufficient knowledge with the categories of undernourished and malnourished toddlers totaling 8 respondents. If the mother has good knowledge, the risk of wasting in toddlers will be reduced, and vice versa if the mother has Lack of knowledge will increase the risk of wasting in toddlers. Mothers' knowledge about balanced nutrition for toddlers can be influenced by various factors, including level of education, personal experience, access to information obtained, and culture or traditions in the family (Soedarsono, 2021). Based on the research results, researchers are of the opinion that a housewife who is used to serving food to her family members every day must have basic knowledge and skills about healthy menus in accordance with balanced nutritional guidelines. So that the food served is attractive to consume and healthy to maintain health status. Mothers must have extensive knowledge regarding nutritional needs for their children. starting from the nutrition needed, calorie needs, healthy eating patterns, and how to process food properly and correctly. Mothers must get reliable sources of information regarding balanced nutrition, such as nutrition consultants, pediatricians, or mothers can get information from official websites that can be searched on the internet (Munawaroh, 2022). Therefore, mothers' knowledge about balanced nutrition for toddlers plays an important role in forming healthy eating habits and providing a strong foundation for the growth and development of their children so that

The Relationship between Mother's Attitudes Regarding Balanced Nutrition and Wasting Incidents in Toddlers

Based on the results of research that has been conducted, it shows that the majority of mothers' attitudes regarding balanced nutrition and the incidence of wasting in toddlers have a negative attitude, as many as 12 respondents (75.0%). The results of the Chi-square statistical test obtained a value of $p = 0.033$ (p value < 0.05), meaning that there is a significant relationship between mothers' attitudes about balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City. Attitude is an expression of a person's feelings that reflects his or her likes or dislikes towards an object (Damiati, et al. 2017). Attitude is a positive or negative feeling, a mental state that is always prepared, studied and regulated through experience which has a special influence on a person's response to objects, people and circumstances (Azwar 2011 in Laila's research, 2020).

From the results of research that has been conducted, respondents have a negative attitude regarding balanced nutrition, which means that respondents or mothers of toddlers have sufficient knowledge about balanced nutrition but are not yet able to accept, respond, appreciate and be responsible (Notoatmojo in Shinta, 2019) regarding nutritional knowledge. balanced. It is also supported by (Notoatmodjo in Veriza, 2018), someone who has high knowledge does not necessarily have good behavior towards a situation or situation. In line with research conducted by (Devi, 2020) regarding the relationship between the knowledge

and attitudes of mothers of toddlers regarding the provision of additional food with the incidence of wasting risk in toddlers at Posyandu in Getasbari Village, the results of statistical tests using the chi square statistical test with a 2x2 table found an Expected value of less than 5. , then the Fisher Exact Test was used to obtain a P value of $0.020 < (\alpha = 0.05)$, which means there is a significant relationship. The level of parents' knowledge about nutrition greatly influences behavior and attitudes in choosing food for their children. Good nutritional conditions will determine the high percentage of nutritional status nationally. Ignorance about foods that have good nutrition will lead to choosing the wrong foods and low levels of nutrition contained in these foods and will cause the child's nutritional status to be poor or lacking (Devi, 2020).

For example, the mother's attitude towards choosing healthy food. Mothers who care about their children's health try to choose healthy and nutritious food for their toddlers. This includes choosing a variety of foods that cover all food groups, such as fruits, vegetables, proteins, and whole grains. Mothers who care about nutrition will pay close attention to their children's diet. Mother will try to provide healthy and nutritious food in every meal (Shaluhiyah, 2020). Therefore, researchers assume that A positive maternal attitude will reflect the mother's commitment to the health and optimal development of their children through balanced and quality food intake. Vice versa, if the mother's attitude is negative it will not reflect the mother's commitment to the health and development of their children through balanced and quality food intake.

The Relationship between Mothers' Actions Regarding Balanced Nutrition and Wasting Incidents in Toddlers

Based on the results of research that has been carried out, it was found that mothers' actions regarding balanced nutrition and the incidence of wasting in toddlers, the majority of respondents had good actions, 14 respondents (41.9%). The results of the Chi-square statistical test obtained a value of $p = 0.032$ (p value < 0.05), meaning that there is a significant relationship between maternal actions regarding balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City. Action is an attitude that does not necessarily automatically manifest in an action (overt behavior). For the formation of an attitude to become a real action, supporting factors or enabling conditions are needed, including facilities. Apart from the facility factor, support factors are also needed from other parties in actions or practices (Notoatmodjo 2007 in research by Anggraeni, 2020).

Based on the results of research that has been conducted, the dominant respondents have good actions. Even though from the results of research that has been carried out, respondents have sufficient knowledge and have negative attitudes, some respondents act well. As stated (Notoatmodjo 2007 in Anggraeni's research, 2020) that action will be realized if there are supporting factors from other parties or there are supporting factors for facilities. The researcher assumes that this means that good actions can be realized due to support from health facilities, such as the distance between the health facility and the respondent's house which makes it easy for the respondent to get health facilities, it could be other health facilities that can be obtained for free such as getting vitamins from the posyandu, nutritional services and others.

In terms of fulfilling balanced nutrition for toddlers, A good mother's personal actions must be able to cover various aspects, such as choosing food, providing adequate portions, ensuring nutritional variety, and serving food in a healthy way. Mothers must be a good example in terms of healthy eating patterns and behavior. Mothers must show their children how

important it is to eat a healthy and balanced diet. For example, mothers teach their children to eat vegetables from an early age, and do not get their children into the habit of eating fast food (Wulandari, 2019). Therefore, researchers assume that it is important to increase mothers' awareness about the importance of balanced nutrition in toddlers and how their daily practices can affect their children's health. Provide support and resources to mothers to help them understand and implement balanced nutrition practices in their daily lives.

CONCLUSION

The research results showed that the majority of mothers had sufficient knowledge, 16 respondents (50.0%), 16 respondents (50.0%) had positive and negative attitudes and 27 respondents (84.4%) had good actions. The chi square test shows that there is a relationship between mothers' knowledge about balanced nutrition and the incidence of wasting in toddlers, $p = 0.048$, there is a relationship between mothers' attitudes about balanced nutrition and the incidence of wasting in toddlers, $p = 0.033$, and there is a relationship between mothers' attitudes about balanced nutrition and the incidence of wasting. in toddlers $p = 0.033$. There is a relationship between maternal actions regarding balanced nutrition and the incidence of wasting in toddlers, $p = 0.032$. There is a relationship between mothers' knowledge, attitudes and actions regarding balanced nutrition and the incidence of wasting in toddlers in Medan Deli District, Medan City.

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