



Factors affecting the nutritional status of toddlers between the ages of 12-59 months in the workplace of UPTD Puskemas Batu Kambing

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Abstract

Nutritional problems in children at this time are still high. Malnutrition will have an impact on the development and growth of children. The purpose of this study is to find out the Factors Related to the Nutritional Status of Toddlers Aged 12 – 59 Months in the Working Area of the UPTD Batu Kambing Health Center in 2023. The type of research used is quantitative with a crosssectional research design. The population is all mothers who have toddlers aged 12-59 months totaling 610 with a sample of 86 people. The sampling technique is purposive sampling. This research has been carried out in March – April 2023 at the UPTD Batu Kambing Health Center. The data used were primary data and secondary data, namely by conducting interviews with respondents, univariate and bivariate data analysis using the Chi-Square test. The results of the study were less than half, namely 21 respondents (24.4%) who experienced malnutrition, 36 respondents (41.9%) who had a low level of knowledge, 28 respondents (32.6%) with poor parenting and 37 respondents (43.0%) who had a history of infectious diseases. The results of the statistical test showed that the relationship between knowledge and nutritional status was obtained with a value of $p = 0.005$ ($p < 0.05$), parenting style with nutritional status was obtained with a value of $p = 0.003$ ($p < 0.05$) and the relationship between history of infectious diseases and nutritional status was obtained with a value of $p = 0.007$ ($p < 0.05$). It can be concluded that there is a relationship between the level of knowledge, parenting, eating and history of infectious diseases with the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023. It is recommended to health workers to provide counseling on nutrition and the provision of PMT to undernourished children and to mothers to increase maternal knowledge about nutrition and improve maternal parenting by learning how to feed children.

Keywords: Nutritional Status, Knowledge, Parenting, Infectious Diseases

Introduction

Malnutrition is a major health problem in children under five because it can inhibit the process of growth and development and contribute to child morbidity and mortality. In general, malnutrition in children is divided into wasting (underweight according to height), stunting (less height according to age), and underweight (underweight according to age) (Indiyani, 2018).

The World Health Organization (WHO) estimates that worldwide in 2020 the prevalence of children under five with nutritional problems will be 7.7%, tending to increase from the prevalence of nutritional problems in 2019 of 7.5% and still higher than the WHO target of <5% in 2025 (WHO, 2020). Of the total prevalence of nutrition problems in the world, 69% are in the ASEAN region and 23% are in Africa (ASEAN, 2020).

Based on the report of the Nutritional Status Survey of Toddlers in Indonesia in 2019, one of the number of nutritional problems in toddlers is stunting with an incidence rate of 27.7% and in 2021 the incidence rate of stunting in toddlers is 25.4%. Meanwhile, other nutritional problems that still occur in children under five in Indonesia are malnutrition and malnutrition with an incidence rate in 2019 of 10.2% and an increase in the last 3 years, namely in 2021 with an incidence rate of 11.4%. Meanwhile, the target set for nutritional problems in children under five is 5%, so from this data it is still above the target that has been set (SSGBI, 2021).

Based on data from the West Sumatra Province report from the Nutrition survey of children under five in 2021, the proportion of very short and short (TB/U) in children under five in West Sumatra Province is 23.3%. Meanwhile, other nutritional problems that occur in children under five in West Sumatra Province are malnutrition problems with an incidence rate in 2018 which was 14.20% and has increased in the last 3 years, namely in 2021 with an incidence of 15.4% (West Sumatra Provincial Health Office, 2021).

Based on a report by the Agam Health Office, the number of malnutrition problems in toddlers in 2020 was 12.1% and there was a decrease in the last two years in 2022 with a prevalence of 6.24% with the highest nutritional problems in Agam Regency, namely the Batu Kambing Health Center, one of which is stunting with an incidence rate in 2022 of 12.95%. Another problem is the problem of undernutrition in children under five with an incidence rate of 9.31% and wasting of 9.51% (Agam Health Office, 2022).

The nutritional status of children is influenced by various factors, which are differentiated into direct and indirect causes. The direct cause is the adequacy of food and the state of the child's health. The indirect reasons are family food security, child rearing, and environmental sanitation. According to Virdani (2018), mothers' behavior in taking care of their toddlers is closely related to the incidence of wasting in toddlers. Mothers who provide good food intake will tend to have children with good nutritional status, and vice versa, mothers with poor food parenting are also likely to have children with poor nutritional status.

Based on an initial survey conducted by researchers on 10 mothers who have toddlers, 5 of them have nutritional problems, namely with malnutrition problems. The results of the

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interview also found that the mother's parenting style was not good, especially in feeding because they only had the important principle of being full and did not care about the nutrition of the food consumed by their children. This happens because mothers do not know how to give good balanced nutrition to their children. From the results of the initial survey, children who experience nutritional problems have infectious diseases such as frequent diarrhea, ISPA, fever and others. So that it affects and triggers the occurrence of malnutrition and malnutrition in children

Based on these problems, the researcher has conducted this study on Factors Related to the Nutritional Status of Toddlers Aged 12 – 59 Months in the Working Area of the UPTD Batu Kambing Health Center in 2023.

Literature Review

Toddlers are a group of people who are vulnerable to nutrition, because this group experiences a cycle of growth and development that requires greater nutrients than other age groups so that toddlers are most susceptible to suffering from nutritional disorders. Thin children are very susceptible to infectious diseases and if malnutrition in toddlerhood continues, it can affect their intellectual performance, work capacity, and health conditions at a later age (Ariati, 2018).

The high number of nutritional problems in toddlers is supported by the results of research that has been carried out by Ambarwati (2021) on factors related to the incidence of nutritional problems in children under five at the Bantul Health Center, stating that from the results of the study, 12.5% of children under five are malnourished and 14.76% are wasting. From the results of the study, it can be seen that the number of nutritional problems in children and toddlers is still high.

Toddlers who experience nutritional problems are an important public health problem because they have a large impact and increase the risk of child illness and death. Children who are thin or wasting can result in impaired physical growth and children's intelligence, and even worse, it will have an impact on the death of toddlers. Toddlers who experience nutritional problems tend to experience slow growth because the nutrients needed for children's growth are not maximally sufficient. Malnourished children tend to experience weak thinking power because the growth of brain cells cannot develop optimally (Ministry of Health of the Republic of Indonesia, 2018).

According to Soekirman (2020), nutritional parenting is a change in the attitude and behavior of mothers or other caregivers in terms of feeding, the diversity of good foods such as the fulfillment of balanced foods in children will make a great contribution to the growth and development of toddlers so that it will reduce the incidence of malnutrition.

Another factor that can affect nutritional problems in toddlers is the lack of parental knowledge about nutritional problems, especially knowledge about nutrition so that parents cannot provide good food for children which ultimately affects children's nutrition. Parental

knowledge greatly contributes to nutritional problems in children, especially mothers' knowledge about the importance of providing balanced nutrition for children under five (Jannah, 2018).

This is supported by a study conducted by Anjaswara (2020) on the relationship between knowledge and nutritional problems in toddlers at the Anak Air Health Center which stated that 67.1% of respondents who had low knowledge about nutrition were found to have most of them have children with malnourished status. The results of the statistical test showed a relationship between knowledge and the nutritional status of children under five with a p value of 0.006.

In addition, a history of infectious diseases is also one of the factors related to nutritional problems in toddlers. The results of Santos et al's research in 2020 showed that immunization and common infectious diseases such as diarrhea, ISPA have an important role in the nutritional status of toddlers. Infections contribute to energy, protein, and other nutrient deficiencies due to decreased appetite resulting in reduced food intake. Illness in children has a negative effect on children's growth. In a study by Mgongo et al in Tanzania (2017), it was stated that children who were sick in the last month increased the risk of developing nutritional problems.

Research by Gezahegn, Kassahun, and Dube in Ethiopia, shows that diarrhea is associated with the incidence of malnutrition in children. Research by Mgongo et al Tanzania stated that 68.1% of children who have infectious diseases experience wasting. The type of infectious disease he experiences is such as diarrhea in children, so that with the occurrence of diarrhea, children tend to lose weight quickly. Another infectious disease that can trigger wasting in children is fever, in this study 43.5% of children with fever experienced weight loss.

Research Method

This type of research is a quantitative research with a cross sectional method approach. The research was conducted at the Batu Kambing Health Center, this research was carried out in March – August 2023. The number of samples was 86 people, namely toddlers aged 12 – 59 months. The purposive sampling technique means that samples are taken based on predetermined criteria (Notoadmodjo, 2012). The research was conducted using a questionnaire. The data analysis carried out in this study was univariate and bivariate analysis. Univariate analysis to see the frequency distribution of each variable. Bivariate analysis was carried out to see the relationship between independent variables. Analysis was carried out using the Chi Square Test at a confidence level of 95% and the data was processed using SPSS.

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Result

Table 1 The relationship between knowledge level and nutritional status of toddlers aged 12 – 59 months at UPTD Puskesmas Batu Kambing in 2023

Level	Nutritional Status of Toddlers Age 12 – 59 months						SUM	P	
Of knowledge	Bad		Less		Good			Value	
	n	%	n	%	n	%	N	%	
Low	2	5,6	14	38,9	20	55,6	36	100	0,005
Tall	0	0	7	14,0	43	86,0	50	100	
Jumlah	2	2,3	21	24,4	63	73,3	86	100	

Based on table 1 for the relationship between the level of knowledge and the nutritional status of toddlers aged 12 – 59 months obtained from 36 respondents who had a low level of knowledge, there were 2 people (5.6%) who had a poor level of knowledge and 20 people (55.6%) who had a poor toddler nutritional status, 14 people (38.9%) who had a poor toddler nutritional status and another 20 people (55.6%) whose toddler nutritional status was in the good category. The results of the statistical test obtained a value of $p = 0.005$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between the level of knowledge and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

Table 2 Relationship Between Parenting Style and Nutritional status of toddlers aged 12 – 59 months at UPTD Batu Kambing Health Center In 2023

Parenting	Nutritional Status Of Toddlers Age 12 – 59 Months						Sum	P Value
	B ad		Less		Good		N	% %
	n	%	n	%	n	%		
Not Good	1	3,6	13	46,4	14	50,0	28	100
Good	1	1,7	8	13,8	49	84,5	58	100
Jumlah	2	2,3	21	24,4	63	73,3	86	100

Based on table 2 for the relationship between parenting style and nutritional status of toddlers aged 12 – 59 months obtained from 28 respondents who had parenting in the poor category, there were as many as 1 person (3.6%) of toddlers had nutritional status in the poor category, 13 people (46.4%) of the nutritional status of toddlers in the poor category and 14 people (50.0%) of the nutritional status of toddlers in the good category. The results of the statistical test obtained a value of $p = 0.003$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between parenting style and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

Table 3 Relationship Between History Of Infectious Disease and Nutritional Status of Toddlers aged 12-59 Months at UPTD Batu Kambing Health Center In 2023

History of Infectious diseases	Nutritional Status Of Toddlers Age 12-59 Months								P Value
	Bad		Less		Good		Sum	%	
	n	%	n	%	n	%	N		
Ada	2	5,4	14	37,8	21	56,8	37	100	0,007
Tidak ada	0	0	7	14,3	42	85,7	49	100	
Jumlah	2	2,3	21	24,4	63	73,3	86	100	

Based on table 3 for the relationship between the history of infectious diseases and the nutritional status of toddlers aged 12 – 59 months obtained from 37 respondents who had a history of infectious diseases, there were 2 people (5.4%) of toddlers with nutritional status in the poor category, 14 people (37.8%) with the nutritional status of toddlers in the poor category and 21 people (56.8%) with the nutritional status of toddlers in the good category. The results of the statistical test obtained a value of $p = 0.007$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between the history of infectious diseases and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

Discussion

The Relationship Between Knowledge and Nutritional Status of Toddlers Aged 12 - 59 Months

Based on the results of the study for the relationship between knowledge level and nutritional status of toddlers aged 12 – 59 months obtained from 36 respondents who had a low level of knowledge, there were 2 people (5.6%) who had a nutritional status of toddlers in the poor category, 14 people (38.9%) whose nutritional status of toddlers were in the poor category and 20 people (55.6%) whose nutritional status of toddlers was in the good category. The results of the statistical test obtained a value of $p = 0.005$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between the level of knowledge and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

This is supported by a study conducted by Anjaswara (2020) on the relationship between knowledge and nutritional problems in toddlers at the Anak Air Health Center which stated that 67.1% of respondents who had low knowledge about nutrition were found to have most of them have children with malnourished status. The results of the statistical test showed a relationship between knowledge and the nutritional status of children under five with a p value of 0.006.

According to the theory, factors that can affect nutritional problems in toddlers are the lack of parental knowledge about nutritional problems, especially knowledge about nutrition

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so that parents cannot provide good food for children which ultimately affects children's nutrition. Parental knowledge greatly contributes to nutritional problems in children, especially mothers' knowledge about the importance of providing balanced nutrition for children under five (Jannah, 2018).

The researcher assumes that, in this study, there is a relationship between knowledge and the nutritional status of toddlers aged 12 – 59 months. Knowledge contributes to nutritional problems in toddlers. If the mother does not know about good nutrition in toddlers, it will have an impact on the growth and development of toddlers because their food intake will be disrupted, causing the toddler to be more at risk of nutritional problems such as malnutrition and malnutrition. Knowledge is all learning activities that take place throughout maternal care in all situations of children's life activities so that this greatly affects the degree of children's health, one of which is knowledge about nutrition . Knowledge that plays the most important role in children's nutritional status is knowledge about nutrition, especially in the presentation of nutritious food menus to children guided by the principle of a balanced menu. If the mother's knowledge about a balanced menu is lacking, the child will be more at risk of experiencing nutritional problems.

The Relationship between Parenting Patterns and the Nutritional Status of Toddlers Aged 12 - 59 Months

Based on the results of the study, it was found that the relationship between parenting style and the nutritional status of toddlers aged 12 – 59 months was obtained from 28 respondents who had parenting in the poor category, there were as many as 1 person (3.6%) of toddlers had nutritional status in the poor category, 13 people (46.4%) of the nutritional status of toddlers in the poor category and 14 people (50.0%) of the nutritional status of toddlers in the good category. The results of the statistical test obtained a value of $p = 0.003$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between parenting style and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

The results of the research by Casando et al. (2020) found that there was a relationship between parenting style and the nutritional status of children aged 12 – 59 months at the Paal Merah II Health Center in Jambi City by using the chi-square statistical test obtained a P value of 0.018, so that it can be concluded that the better the parenting style, the better the nutrition in the child.

According to Soekirman (2020), mothers' behavior in taking care of their toddlers is closely related to nutritional problems in toddlers. Mothers who provide good food intake will tend to have children with good nutritional status, and vice versa, mothers with poor food parenting are also likely to have children with poor nutritional status. Nutritional parenting is a change in the attitude and behavior of mothers or other caregivers in terms of feeding, the diversity of good foods such as the fulfillment of balanced foods in children will make a great contribution to the growth and development of toddlers so that it will reduce the incidence of malnutrition.

Researchers assume that one of the factors that can affect the occurrence of nutritional problems in children is parenting. If the mother's parenting style is not good, it will have an impact on the child's nutritional status, for example, the mother does not serve nutritious and balanced food. In this study, there is a relationship between parenting style and nutritional status in toddlers aged 12 – 59 months where mothers whose parenting style is not good, most of their children experience malnutrition. This could be because in this study mothers rarely pay attention to the principle of balanced nutrition in children and there are still many mothers who allow their children to choose their own food ingredients so that this is one of the poor parenting styles. Parenting style that plays an important role in the nutritional status of children is parenting in feeding and serving foodstuffs. Maternal parenting that pays attention to nutrients will produce a good nutritional status because the substances obtained from the food ingredients consumed and have a very important value in children to maintain body processes in growth and development so that it affects the nutritional status of children.

The Relationship Between History of Infectious Diseases and the Nutritional Status of Toddlers Aged 12 - 59 Months

Based on the results of the study for the relationship between the history of infectious diseases and the nutritional status of toddlers aged 12 – 59 months obtained from 37 respondents with a history of infectious diseases, there were 2 people (5.4%) of toddlers with nutritional status in the poor category, 14 people (37.8%) with the nutritional status of toddlers in the poor category and 21 people (56.8%) with the nutritional status of toddlers in the good category. The results of the statistical test obtained a value of $p = 0.007$ ($p < 0.05$), meaning that H_0 was rejected and H_a was accepted, so it can be concluded that there is a significant relationship between the history of infectious diseases and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023.

In a study by Mgongo et al in Tanzania (2017), it was stated that children who were sick in the last month increased the risk of developing nutritional problems. Research by Gezahegn, Kassahun, and Dube in Ethiopia, shows that diarrhea is associated with the incidence of malnutrition in children. Research by Mgongo et al Tanzania stated that 68.1% of children who have infectious diseases experience wasting. The type of infectious disease he experiences is such as diarrhea in children, so that with the occurrence of diarrhea, children tend to lose weight quickly. Another infectious disease that can trigger wasting in children is fever, in this study 43.5% of children with fever experienced weight loss.

The researcher assumes that, in this study, there is a relationship between the history of infectious diseases and the nutritional status of toddlers. A history of infectious diseases contributes as a cause of malnutrition and malnutrition in toddlers because children who experience infectious diseases will tend to trigger malnutrition so that it affects nutritional status. If a child experiences an infectious disease for a long time, it will have an impact on decreasing indigestion so that it can inhibit the growth and development of children, one of which triggers the occurrence of malnutrition and even malnutrition. Infections contribute to energy, protein, and other nutrient deficiencies due to decreased appetite resulting in reduced food intake. Illness in children has a negative effect on children's growth so that if children

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experience infectious diseases for a long time, it will affect their nutritional status because children will experience weight loss.

Conclusion

Based on the results of the research carried out, there is a significant relationship between the level of knowledge, parenting and infectious diseases and the nutritional status of toddlers aged 12 – 59 months at the UPTD Batu Kambing Health Center in 2023. It is hoped that health workers, especially midwives or nurses at the health center, will provide an overview of how to overcome nutritional problems in toddlers, so that in the future preventive efforts can be made by providing counseling on nutritional needs in toddlers and mothers who have toddlers can also pay more attention to the nutrition of toddlers to help prevent malnutrition and malnutrition problems in toddlers.

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