

# Mother's Knowledge and Attitude Correlated with Nutritional Status of Children

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## Abstract

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**Background:** Nutritional status is a health status that is produced by the balance between nutritional needs and inputs and for growth and development. Nutritional problems have also become a problem in South Sulawesi, especially in Makassar.

**Objective:** This study aimed to determine the relationship between mothers' knowledge and attitudes with nutritional status of children in the working area of Batua Health Center Makassar.

**Methods:** This was an observational study with a cross-sectional approach. The population was 116 children aged 1-5 years. The sampling technique used purposive sampling with a sample of 54 children. This study used questionnaires and observation sheet to collect data.

**Results:** The Chi-square test showed a significance value of  $X^2$  calculation (18.917) >  $X^2$  table (3.841) and, which means that there was a correlation between mother's knowledge and children's nutritional status. Also, the Chi-square test showed significance value of  $X^2$  calculation (14.464) >  $X^2$  table (3.841), indicating that there was a correlation between mother's attitude and children's nutritional status.

**Conclusion:** There is a relationship between mothers' knowledge and attitudes with nutritional status of children. It is recommended to parents, especially mothers, to pay more attention to children's food intake and get used to children to eat regularly and provide nutritious food every day so that children's nutritional intake can be met.

**Keywords:** Attitude; children; knowledge; nutritional status

## Introduction

Nutritional status is a health status that is produced by the balance between nutritional needs and inputs and for growth and development. Toddlers need six main nutrients, including carbohydrates, proteins, fats, vitamins, minerals, and water. These nutrients can be obtained from food consumed daily. A person's nutritional needs are the amount that is estimated to be enough to maintain health in general. There must be a balance between nutrient intake and output so that a good nutritional status is obtained (Tridiyawati, 2019).

The nutritional status of toddlers has a huge influence on realizing quality human resources in the future. Nutritional status is related to children's intelligence. The formation of intelligence at an early age depends on the intake of nutrients received by the children. The lower the intake of nutrients received, the lower the nutritional status and intelligence level of the children. Poor nutrition in infancy and children, especially those less than 0-60 months old, can result in impaired physical growth and intelligence of children. Toddlers are the age group that most often suffer from malnutrition. Nutritional needs for children at the beginning of their life are very important. If the development and growth of toddlers are disturbed, it can have bad consequences that cannot be avoided, where the worst manifestation can lead to death (Yusridawati & Kawati, 2020).

Low economic status, diarrhea, and ignorance of parents due to low knowledge, attitude and education are the causes of malnutrition in children. Mother's knowledge and attitude about

nutritional status is necessary to form positive behaviors in terms of meeting nutritional needs as one of the important elements that support a person's health status, to produce the behaviors needed to maintain, maintain or improve good nutritional status (Katarina Lit, 2019). One of the facts that affects the nutritional status (underweight, wasting, and overweight) in toddlers is that most parents choose food for their toddlers without considering the nutrients needed for their toddlers. The level of knowledge and attitude of parents about nutrition is essential for the children. The attitude of mothers who are still unaware of the nutrition of their toddlers can affect nutritional problems. In order for children to get balanced nutrition and be influenced by a positive mother's attitude or a good mother's attitude in food selection and nutrition, a good foster care policy is needed which is a manifestation of the mother's attitude in food selection (Nurdiana & Wisanti, 2021).

Based on data from the city of Makassar Health Office, the prevalence of malnutrition in Makassar was 16.39%, while the prevalence of undernutrition status was 6.8%. In 2023, the number of children aged 1-5 years was 116 people in Batua Health Center working area. The most nutritional status problems, was in Batua Village which was 26 children with malnutrition and 24 children with undernutrition. Based on the description above, the researchers were interested to find out "The Relationship between Knowledge and Attitude of Mothers with Nutritional Status in Children at Batua Health Center Working Area".

## Methods

### Study Design

This was quantitative study with a cross-sectional approach.

### Samples/Participants

The population in this study was children aged 1-5, which was a total of 116 respondents. The sampling technique used purposive sampling. The inclusion criteria included: 1) children aged 1-5 year; 2) willing to be respondent; 3) completing the questionnaire. The exclusion criteria included: 1) refusing to be respondent; 2) unable to communicate well.

### Instruments

This study employed observation sheet and questionnaire to collect data.

### Data Collection

This study was conducted in 2023 at Batua Health Center Working Area. Data were obtained directly by researchers. Furthermore, researchers provided informed consent to respondents as a sign of consent to participation and provided questionnaires to respondents.

### Data Analysis

All data were analyzed using the SPSS statistical program. Descriptive statistics were used to analyze the participants' characteristics. Bivariate analysis was used to measure the relationship between the research variable. This study utilized the Chi-square test to evaluate the relationship between mother's knowledge and attitudes of mothers and nutritional status.

### Ethical Considerations

This research has received research permit from Makassar Health Department with Number: 440/117/PSDK/IX/2023.

## Results

Table 1 showed that majority of mothers aged 26-35 years, accounting for 46 respondents (85.2%), education level of senior high school, accounting for 41 respondents (75.9%), and working as housewife, accounting for 29 respondents (53.7%). Table 2 depicted that most children aged three years, accounting for 25 respondents (48.1%) and female was 28 respondents (51.9%).

Table 1. Characteristics of Respondents

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Age (Years)</b>		
26 - 35 Years	46	85.2
36 - 45 Years	8	14.8
<b>Education</b>		
Junior high school	5	9.3
Senior high school	41	75.9
Diploma/S1	8	14.8
<b>Work</b>		
Housewife	29	53.7
Self-employed	18	33.3
Civil servant	7	13
<b>Total</b>	<b>54</b>	<b>100</b>

Table 2. Characteristics of Respondents

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<b>Age (Years)</b>		
2 years	4	7.4
3 Years	26	48.1
4 Years	16	29.6
5 Years	8	14.8
<b>Gender</b>		
Male	26	48.1
Female	28	51.9
<b>Total</b>	<b>54</b>	<b>100</b>

Source: Primary Data, 2023

Table 3 showed that over half respondents had good knowledge, accounting for 28 respondents (51.9%) and positive attitude about children's nutrition, which were 28 respondents (51.9%). Also, over half children had good nutritional status which were 29 respondents (53.7%).

Table 3. The Overview of Mother's Knowledge and Attitude and Children Nutritional Status

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Mother's Knowledge</b>		
Less	26	48.1
Good	28	51.9
<b>Mother's Attitude</b>		
Negative	26	48.1
Positive	28	51.9
<b>Children Nutritional Status</b>		
Less	25	46.3
Good	29	53.7
<b>Total</b>	<b>54</b>	<b>100</b>

Table 4 showed that of 26 mothers had less knowledge about nutritional status, 20 (76.9%) children experienced malnutrition and 6 (23.1%) children had good nutrition. Furthermore, of 28 mothers had good knowledge, 5 (17.9%) children experienced malnutrition while 23 (82.1%) children had good nutrition. Also, the Chi-square test showed significance

value of  $X^2$  calculation (18.917) >  $X^2$  table (3.841), which means that there was a correlation between mother's knowledge and children's nutritional status.

Table 4. Relationship between Mother's Knowledge and Nutritional Status of Children

Mother's Knowledge	Nutritional Status				Total	$X^2$
	Malnutrition		Good nutrition			
	n	%	n	%	n	%
Less	20	76.9	6	23.1	26	100
Good	5	17.9	23	82.1	28	100
<b>Total</b>	<b>25</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>54</b>	<b>100</b>

Table 5 showed that of 26 mothers had negative attitude about nutritional status, 19 (73.1%) children experienced malnutrition and 7 (26.9%) children had good nutrition. Furthermore, of 28 mothers had positive attitude, 6 (21.4%) children experienced malnutrition while 22 (78.6%) children had good nutrition. Also, the Chi-square test showed significance value of  $X^2$  calculation (14.464) >  $X^2$  table (3.841), which means that there was a correlation between mother's attitude and children's nutritional status.

Table 5. Relationship between Mother's Attitude and Nutritional Status of Children

Mother's Attitude	Nutritional Status				Total	$X^2$
	Malnutrition		Good nutrition			
	n	%	n	%	n	%
Negative	19	73.1	7	26.9	26	100
Positive	6	21.4	22	78.6	28	100
<b>Total</b>	<b>25</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>54</b>	<b>100</b>

## Discussion

Nutritional status is a condition caused by an imbalance between the intake of nutrients from food and the need for nutrients that are needed for metabolism. Each individual needs a different intake of nutrients. This depends on the age, gender, body activity during the day, and body weight (Selptiyani, 2021). This study showed that those who had good nutritional status were 29 responden (53.7%), and those who had poor nutritional status were 25 responden (46.3%). Variable characteristics based on the nutritional status of the research obtained malnourished status in 25 responden (46.3%) where the problem was caused by the mother of children who was a young mother, where the child was less aware and experienced in the treatment of children until they generally took care of the child based on the experience of their mother. In addition, the fact that the young age of the mother will pay more attention to the children is more important, so if the mother is mature, the child's treatment and nutrition will be more important.

The results of this research was in line with the study by Indrayani, et al. (2020) that children with good nutritional status were 83.3% responden, the mothers of children with good knowledge were 40.6% respondent, and respondents with positive attitude were 76.0%. Nutrients that are not functional in the body include carbohydrate, fat, and protein. Nutrients that are functional for metabolism process include mineral, vitamins, and protein. The nutrients consumed by children will be used as energy in carrying out their activities (Adriani and Wirjatmadi, 2019).

Poor knowledge of respondents about nutritional status because they do not know that snacks can interfere with children's appetite and nutritional disorders. In addition to a good responden knowledge, they already know that carbohydrates, fat, protein, vitamins, and minerals contain the nutrients that the body needs. This study showed that there is a relationship between mothers' knowledge and children nutritional status. This finding was in line with a study by Yunita (2020). Nutritional intake is very related to the stage of growth and development of children at this time. Therefore, it is necessary to have an optimal nutritional intake in supporting the growth and development of children. The knowledge of mothers who are not well fed will know how to manage eating habit of children, while mothers who have poor knowledge will less aware of nutrition. In this study, there are mothers who have poor knowledge but the nutritional status of their children is good because they get information about children nutrition from the health practitioner when there is health education program.

Attitude exists in humans that can lead to behavior. If the mothers have a good attitude about nutrition, they will give show good behavior as well in improving ther children nutritional status. This study showed that there is a relationship between mothers' attitudes and children nutritional status. This finding is in line with the study carried out by Jannah (2022), which found that there was a significant relationship between attitudes and nutritional status of children. This means that the higher the level of mothers' attitude towards nutrition, the more positive the nutritional status of the children will be, and vice versa.

Based on the authors' assumption if the mother has a good knowledge of the children nutrition, the mother can make a decision to improve the health of her child. Improvement of the attitude can be done by paying attention to the nutrition component of children's meal. It includes how veegetable and other foods are processed in a good and healthy ways. Also, giving meals to children regularly everyday can also affect the nutritional status of children.

## Conclusion

This study shows that over half respondents had good knowledge and positive attitude towards children's nutritional status. Moreover, there is a relationship between mother's knowledge and attitudes towards children's nutritional status at Batua Health Center Working Area.

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