

# Factors Associated with the Nutritional Status of Children Aged 3 - 5 Years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

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## ABSTRACT

*Nutritional problems are essentially a public health problem, but overcoming them cannot be done with a medical approach and health services alone. The causes of nutritional problems are multifactorial, therefore the approach to overcoming them must involve various related sectors. Based on data from the South Sulawesi Health Service in 2005, there were 14,650 (3.45%) children under five who were malnourished. Meanwhile, in the city of Maros, there were 463 (2.40%) children under five who were malnourished, and in particular at the Hasanuddin Mandai Community Health Center in 2006 there were 35 (10.17%) children aged 3 - 5 years who were malnourished. This study aims to determine the factors related to the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. The research design used in this research is analytical descriptive using the "Cross Sectional Study" approach method. The sample in this study was 77 children aged 3 - 5 years who were at the location at the time of the research using Nurbaiti the Purposive Sample technique. The way to collect data is by taking measurements of the child's weight, then making observations and distributing questionnaires to respondents. To determine the factors related to the nutritional status of children aged 3 - 5 years, the Pearson Chi Square Test was used with a significance level of  $\alpha = 0.05$  in SPSS version 12. The results of the study showed that there was a significant relationship between the factors of children's diet and mother's knowledge., maternal occupation and parenting patterns with children's nutritional status, but there is an insignificant relationship between maternal education and family income and nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.*

Keywords: *Children's Eating Patterns, Maternal Characteristics, Children's Nutritional Status.*

## INTRODUCTION

Nutritional needs are very important needs in helping the growth and development process in babies and children, considering that the benefits of nutrition in the body can help the growth and development process of children, as well as preventing the occurrence of various diseases due to lack of nutrition in the body such as lack of energy and protein, anemia, deficiencies. iodine and vitamin A, potassium deficiency and others which can hinder the child's growth and development process. It is hoped that meeting the nutritional needs of children will enable them to grow quickly according to their age and development and can improve the quality of life and prevent morbidity and mortality.<sup>1</sup>

Lack of nutritious food will cause growth retardation in children. What is even more worrying is that children's development is disrupted. The effect of malnutrition on mental and brain development depends on the severity, duration and time of brain growth itself. This impact

on brain growth is vital because the brain is one of the vital 'assets' for children to be able to become quality human beings in the future, so good nutritional status must be achieved as early as possible.<sup>11</sup>

In Indonesia, efforts to overcome the problem of malnutrition have been carried out for a long time and the reduction in prevalence has been quite satisfactory, but the four main nutritional problems, namely protein energy deficiency (KEP), vitamin A deficiency (VAD), iron deficiency anemia, iodine deficiency (IDD) are still a problem. the problem of malnutrition that must be addressed until now. Implementation of nutritional improvements has been carried out through various activities to meet the nutritional needs of individuals, groups or communities, but since the economic crisis occurred in mid-1997 until now, the problem of malnutrition has become an increasingly obvious problem, especially in rural families, which generally consist of poor family.

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Malnutrition in children can be a continuation of a state of malnutrition that began in infancy or it can arise from factors that become prevalent during childhood. Bad dietary habits can be accompanied by chronic illness, accompanied by fussy eating habits, from other family members, or accompanied by disruption of parental relationships. Difficulty eating between the ages of 3 – 5 years is often the result of excessive parental pressure to eat and subsequent anxiety if the child does not adapt to some changing standards.<sup>10</sup>

Nutritional problems are essentially a public health problem, but overcoming them cannot be done with a medical approach and health services alone. The causes of nutritional problems are multifactorial, therefore the approach to overcoming them must involve various related sectors. Considering that the causes are very complex, managing nutritional problems requires comprehensive cooperation from all parties. For this reason, it is necessary to have an indicator so that cases of nutritional vulnerability can be detected early. Assessment of nutritional status can be done by: clinical, biochemical, biophysical and anthropometric.<sup>22</sup>

According to the Ministry of Health (2004), in 2003 there were around 27.5% (5 million children under five were malnourished), 3.5 million children (19.2%) were undernourished, and 1.5 million children were malnourished (8.5%).<sup>11</sup> Based on data from the South Sulawesi Health Service in 2005, there were 14,650 children under five (3.45%) experiencing malnutrition. And in the city of Makassar, it is known that 1856 toddlers (3.28%) are malnourished. Meanwhile, in the city of Maros, there are 463 toddlers (2.40%) who experience malnutrition. Until now, the number of children under five with malnutrition and malnutrition has not decreased significantly. Even though various efforts are made to overcome this with hundreds of millions of rupiah each year.<sup>6</sup>

From the results of a survey conducted at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency, it turned out that during 2006 there were 35 children aged 3 - 5 years (10.17%) experiencing malnutrition. Despite these problems, the researcher chose this location as a research location because the scope of the work area is relatively broad, so it is hoped that the required sample will be met with a location that is very conducive as a research location.

## **METHODS**

This research uses a cross sectional study method, namely that all variables, both independent and dependent, are measured in quantity and at the same time or the research subjects are only observed once. This research was carried out in the working area of the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. To obtain the desired data or information, researchers used a questionnaire as a data collection instrument which was developed based on matters related to children's nutritional status.

## **RESULTS**

This bivariate analysis was carried out with the aim of finding out factors related to children's nutritional status which was carried out using the chi square statistical test with a significance level of  $\alpha = 0.05$  or a confidence level of 95% as stated below:

**The relationship between children's diet and nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency.**

Of the 44 children with good eating patterns, 36 (46.75%) had good nutritional status and 8 (10.39%) had poor nutritional status, while of the 33 children with poor eating patterns, 13 (16%) had good nutritional status (89%) people, and 20 (25.97%) people with poor nutritional status can be seen in the table.

Table 1. Distribution of the Relationship between Children's Eating Patterns and the Nutritional Status of Children Aged 3 – 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Dietary habit Child	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%			
Good	36	46.75	8	10.39	44	57.14	0,000
Not enough	13	16.89	20	25.97	33	42.86	
Total	49	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007

OR = 6.923 CI = 95%

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.000$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between children's eating patterns and the nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. In analysis using the Odds Ratio with a confidence level of 95%, a value of 6.923 was obtained, meaning that a child's poor diet has a 7 times greater chance of malnutrition in children.

**The relationship between maternal education and nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency**

Of the 54 mothers with higher education, 37 (48.05%) had good nutritional status and 17 (22.08%) had poor nutritional status, while of the 23 mothers with low education, 12 (15.59%) had good nutritional status. People, and those with poor nutritional status were 11 (14.28%) people. This can be seen in the following table:

Table 2. Distribution of the Relationship between Maternal Education and Nutritional Status of Children Aged 3 – 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Mother's Education	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%			
Tall	37	48.05	17	22.08	54	70.13	0.172
Low	12	15.59	11	14.28	23	29.87	
Total	49	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.172$  is greater than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is rejected or there is no relationship between maternal education and the nutritional status of children 3 - 5 years old at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

**The relationship between maternal knowledge and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.**

Of the 50 mothers with good knowledge, 37 (48.05%) had good nutritional status and 13 (16.89%) had poor nutritional status, while of the 27 mothers with poor knowledge, 12 (15.59%) had good nutritional status. %) people, and 15 (19.47%) people had poor nutritional status, which can be seen in the following table:

Table 3. Distribution of the Relationship between Mother's Knowledge and Nutritional Status of Children Aged 3 - 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Mother's Knowledge	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%	N	%	
Good	37	48.05	13	16.89	50	64.94	0.01
Not enough	12	15.59	15	19.47	27	35.06	
Total	12	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007

OR = 3.558 CI = 95%

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.01$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between maternal knowledge and the nutritional status of children aged 3-5 years at the Hasanuddin Mandai Community Health Center, Mandai District.

In analysis using the Odds Ratio with a confidence level of 95%, a value of 3.558 was obtained, meaning that a mother's lack of knowledge has a 4 times greater chance of malnutrition occurring in children.

The relationship between maternal employment and nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency

Of the 15 working mothers, 6 (7.80%) had good nutritional status and 9 (11.69%) had poor nutritional status, while of the 62 mothers who did not work, 43 (55.84%) had good nutritional status.) people, and 19 (28.57%) people had poor nutritional status, which can be seen in the following table:

Table 4. Distribution of the Relationship between Mother's Employment and Nutritional Status of Children Aged 3 – 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Mother's Job	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%	N	%	
Doesn't work	43	55.84	19	24.67	62	80.52	0.034
Work	6	7.80	9	11.69	15	19.48	
Total	49	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007

OR = 3.395 CI = 95 %

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.034$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between maternal employment and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

In analysis using the Odds Ratio with a confidence level of 95%, a value of 3.395 was obtained, meaning that if a mother works, she will have a 3 times greater chance of malnutrition occurring in children.

### **The relationship between parenting styles and nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency**

Of the 55 parents with a democratic parenting style, 40 (51.95%) had good nutritional status and 15 (19.48%) had poor nutritional status, while of the 19 parents with an authoritarian parenting style, 9 had good nutritional status. (11.69%) people, and 13 (16.88%) people with poor nutritional status, can be seen in the following table:

**Table 5.** Distribution of the Relationship between Parenting Patterns and Nutritional Status of Children Aged 3 – 5 Years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Parenting Style	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%			
Democratic	40	51.95	15	19.48	55	71.43	0.009
Authoritarian	9	11.69	13	16.88	22	28.57	
Total	12	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007      OR = 3.852      CI = 95 %

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.009$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between parental parenting patterns and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

In analysis using the Odds Ratio with a confidence level of 95%, a value of 3.852 was obtained, meaning that authoritarian parenting patterns have a 4 times greater chance of malnutrition in children.

**The relationship between family income and nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency**

Of the 49 families with sufficient income, 35 (45.46%) people had good nutritional status and 14 (18.18%) people had poor nutritional status, while from 28 families with low income, 14 (18.18%) had good nutritional status. %) people, and those with poor nutritional status were also 14 (18.18%) people, which can be seen in the following table:

**Table 6.** Distribution of the Relationship between Family Income and Nutritional Status of Children Aged 3 – 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency

Income Family	Child Nutritional Status				Total		<i>p</i>
	Good		Not enough		N	%	
	N	%	N	%			
Enough	35	45.46	14	18.18	49	63.64	0.060
Low	14	18.18	14	18.18	28	36.36	
Total	12	63.64	28	36.36	77	100.00	

Source: Primary Data, 2007

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.06$  is greater than  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is rejected or there is no relationship between family income and the nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

**Multivariate Analysis**

Multivariate analysis is carried out by connecting all independent and dependent variables that are meaningful to see the magnitude of the influence of each variable after analyzing them together. From the results of the bivariate analysis, it was obtained that 3 independent variables included children's eating patterns, mother's knowledge and parenting patterns which had a significant influence with a  $p$  value  $< 0.05$  were included in the multivariate regression analysis.

After conducting a logistic regression analysis of the three independent variables, the results of the analysis showed that of the three independent variables, the most influential was the child's diet with a value of  $p = 0.001$ . Thus, children's diet is the factor most related to the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. This shows that a child's poor eating pattern will have a big influence on the nutritional status of children aged 3 - 5 years, because a poor eating pattern is

directly related to the child's nutritional intake, whether the meal times are regular with nutritious types of food. This can be seen in the following table:

Table 7. Multivariate analysis related to nutritional status of children aged 3 – 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency

Variable	Coefficient Regression	df	Sig	OR
Mother's Knowledge	0.105	1	0.066	3,558
Parental parenting style	0.101	1	0.008	3,852
Mother's Job	0.116	1	0.005	3,395
Children's diet	0.100	1	0.001	6,923

Source: Primary Data, 2007

After the research was carried out, it was processed and presented the frequency distribution of maternal education level, the highest of which was higher education, namely 54 (70.13%) people. For mothers' jobs, the majority found were those who did not work, namely 62 (80.52%) people. The highest family income is sufficient income, namely 49 (63.64%) families. The majority of mothers' knowledge was good knowledge, namely 50 (64.94%) families. The most common parenting style is democratic parenting, namely 55 (71.43%) people. The majority of children's eating patterns are good eating patterns, namely 44 (57.14%) people.

The results of processing children's data show that from anthropometric measurements of the BW/U index adjusted to WHO-NCHS indicators, it was found that 49 (63.64%) children had good nutritional status and 28 (36.36%) children were malnourished. . The facts above illustrate that the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, in general, is more likely to have good nutritional status than those who have poor nutritional status. The obstacle in this research was that at the time the research was conducted, few mothers visited the Posyandu so the expected sample size would take a long time. The results of this research will discuss several factors related to the nutritional status of children aged 3 - 5 years, including the following :

### **The relationship between children's diet and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.000$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between children's eating patterns and the nutritional status of children aged 3-5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. In analysis using the Odds Ratio with a confidence level of 95%, a value of 6.923 was obtained, meaning that a child's poor diet has a 7 times greater chance of malnutrition in children.

Based on the research results, there were 36 (46.75%) people who had good nutritional status with a correct diet and 20 (25.97%) people who had poor nutritional status with a poor diet. This happens because a good diet means that the child gets the nutritional needs that contain nutritious substances, so that the child's nutritional status is well controlled. Likewise, vice versa, if a child's diet is deficient then nutrients such as carbohydrates, proteins, fats, minerals, vitamins which are really needed by the body are not fulfilled, so that cells or body tissues can experience a decline in function which will affect the child's growth and development. Elly Nurachmah<sup>4</sup> (2001) in Apriyanti (2005), states that a person's nutritional status also depends on their diet, namely the type of food consumed has an effect on nutrition. Children's eating patterns, in terms of the type of food they eat, are greatly influenced by family income. A high or sufficient family income is expected to be able to support the type of food that should be provided by the family, namely nutritious food. However, even so, it is not a basis that a high income means the family's nutritional status will be good without good knowledge about the importance of nutrition.

There are 8 (10.39%) children who have poor nutritional status and have a good diet, this happens because, even though the child eats 3 times a day or more, if the food processing is not in accordance with health requirements it still has no nutritional value. for child growth and

development. This is also influenced by mothers' lack of knowledge, which is shown by 27 (35.06%) mothers.

There are 13 (16.89%) children who have good nutritional status and have a poor diet. This happens because even though the child's diet is only twice a day, the food consumed contains lots of nutrients, and food processing is in accordance with health requirements. then the food consumed will be beneficial for the child's growth and development.

A child's correct diet is very important and must be paid attention to, because children really need proper nutrition for their growth. If this is not fulfilled, the child could suffer from malnutrition. Therefore, in the environment children live in, especially families, it is necessary to make children's eating habits pay attention to health and nutrition. <sup>2</sup>

### **The relationship between maternal education and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value of  $p = 0.172$  is greater than the value of  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is rejected or there is no relationship between the level of maternal education and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

The distribution of respondents based on maternal education level showed that 18 (23.38%) children had high education and poor nutritional status. This shows that highly educated mothers do not always have good nutritional status for their children, this is due to the mother's very busy routine, where mothers tend to spend a lot of time at work like working mothers, this is shown by the presence of 15 (19.48%) working mother.

Meanwhile, it was found that 12 (15.59%) children had low education but the child's nutritional status was good, this was because mothers with low education had little opportunity to work outside the home so most of their time was spent at home with their children and someone who finished elementary school was not necessarily less well off. prepare food according to nutritional requirements compared to people with higher education, because even if they have low education, if that person gets a lot of information and always participates in nutritional education, their knowledge will be better. Mac Dowell said that there was no real difference in the nutritional knowledge of teacher candidates and elementary school graduates, both of whom knew little compared to those who were illiterate <sup>4</sup>.

### **The relationship between maternal knowledge and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.01$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between maternal knowledge and the nutritional status of children aged 3-5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. In the Odds Ratio analysis with a 95% confidence level, a value of 3.558 was obtained, meaning that a mother's lack of knowledge has a 4 times greater chance of malnutrition occurring in children.

Based on the research results, there were 37 (48.05%) children who had good nutritional status with good knowledge because good maternal knowledge about the importance of nutrition for children's growth and development is expected to produce good behavior towards fulfilling adequate nutrition for their children. for example, mothers are provided with knowledge about the composition of nutrients in various local food ingredients, which are none other than carbohydrates, proteins, fats, vitamins and minerals that make up the food to be consumed. This knowledge is supported by a person's education. This is supported by Notoatmodjo (2003) who said that the level of knowledge is greatly influenced by educational background, the higher the education, the better the level of understanding of a concept, a sharp way of thinking and examination which automatically provides a good perception of the object being observed. However, this does not guarantee that low education means less knowledge. Because even if the person has low education, if the person gets a lot of information and often attends nutritional counseling, their knowledge will be better.

The presence of 12 (15.59%) children with good nutritional status with low maternal knowledge occurred because mothers, in implementing parenting patterns for their children, always gave attention and affection to their children, especially their children's food needs or family eating habits that paid attention to health and nutrition. so that children's nutritional status is also well controlled.

According to research by Suarni (2003), knowledge about nutrition will influence attitudes and behavior in assessing food and will then influence the individual's nutritional condition. Mother's knowledge about family nutrition greatly determines the choice of serving food in the family for children under five so that in the end it greatly influences nutritional status.<sup>4</sup>

The results of this research are in line with research by Masjude (2004) which states that a series of experiences of an individual interacting with the environment can produce knowledge that can be useful for the individual, so that good knowledge will also enable optimal nutritional status. This is supported by active cadres in each environment and frequent outreach on nutrition so that it can contribute to the level of nutritional knowledge.<sup>4</sup>

### **The relationship between maternal employment and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.034$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between maternal employment and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. In analysis using the Odds Ratio with a confidence level of 95%, a value of 3.395 was obtained, meaning that if a mother works, she will have a 3 times greater chance of malnutrition occurring in children.

Based on the research results, there were 9 (11.69%) children who had poor nutritional status with mothers who worked, this happened because the mothers did not pay enough attention to their children's needs, especially nutritional needs which are very important for growth and development and were too busy with their work so that the children's nutritional status not well controlled. Mothers who have dual roles are often faced with conflicts between work interests and their presence in the family. High work demands and time consuming often hinder the fulfillment of the need for togetherness in the family, caring for and nurturing children, including meeting children's nutritional needs.<sup>23</sup>

There are 43 (55.84%) children with good nutritional status whose mothers do not work, because not working means that the mother can fully care for the child, care for the child and provide attention so that nutritional status can be well controlled.<sup>23</sup>

### **The relationship between parenting patterns and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.009$  is smaller than the value  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_a$  is accepted or there is a relationship between parental parenting patterns and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency. In analysis using the Odds Ratio with a confidence level of 95%, a value of 3.852 was obtained, meaning that authoritarian parenting patterns have a 4 times greater chance of malnutrition in children.

Based on the research results, there are 40 (51.95%) children who have good nutritional status with a democratic parenting style, this happens because parents in caring for their children always give love and attention to their children's food needs, always encourage their children to eat, provide the opportunity to choose foods that contain nutrients so that children are always motivated to eat so that the child's nutritional status is also good.

There are 13 (16.88%) children who have poor nutritional status with an authoritarian parenting style, this occurs because the children do not receive enough attention and affection from their parents, they often receive punishment so that the children are very depressed, with children being depressed, the children become stressed and this causes a lack of nutrition. the child's desire or appetite and this will affect the child's nutritional status. Baldin<sup>24</sup> (1987) found

in his research by comparing families with democratic and authoritarian patterns in raising their children, that care from democratic parents gave rise to characteristics of initiative, courage, more enthusiasm and more purpose. On the other hand, the more authoritarian the parents are, the less disobedient the child becomes, waiting, unable to plan things and showing signs of fear. This can illustrate that the child will decrease his desire to eat because he does not receive enough encouragement or praise and he will not obey his parents' orders because he feels pressured and is always forced without his complaints or wishes being listened to at all.

There were 15 (19.48%) children who had poor nutritional status with a democratic parenting style, this occurred because the family's income or income was inadequate so that the family's needs were not properly met. This will of course affect the nutritional status of the family, especially for children who are in the process of growing.

### **The relationship between family income and children's nutritional status**

Based on the chi square test with Pearson Chi Square, the calculated value  $p = 0.060$  is greater than  $\alpha = 0.05$ . From this analysis it can be interpreted that  $H_0$  is rejected or there is no relationship between family income and the nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

The distribution of respondents based on income showed that 14 (18.18%) children had sufficient income and poor nutritional status. This shows that families who have sufficient income, especially mothers, spend more time earning a living than being at home with their children, so parents are unable to control their children's condition, especially their children's nutritional status. This is contrary to the theory that adequate income will support children's growth and development, including child nutrition, because parents can provide all children's needs, both primary and secondary. On the other hand, low family income can limit basic needs, including nutritious food, resulting in malnutrition. If the average household income increases, food quality will improve which will support family nutrition.<sup>18</sup> Apart from that, even though the income is sufficient, without having or paying attention to knowledge of nutritious food ingredients, unconsciously because of the various delicious foods that are prioritized, the growth and development of the body, health can experience problems because there is no balance between the necessary nutrients. with nutrients received by the body which will affect the child's nutritional status.<sup>21</sup>

Meanwhile, it was found that 14 (18.18%) children had low income but good nutritional status. This shows that even though the income is low, if the mother's or family's knowledge of nutritious food ingredients, which are of many varieties and which can be obtained within their abilities, is always taken into account, then each family can prepare a food dish that has nutritional value or content every day. food ingredients (obtained according to ability). In this way, each family member's body needs for nutrients can be met.<sup>21</sup>

### **CONCLUSION**

From the results of research on factors related to the nutritional status of children aged 3 - 5 years at Hasanuddin Mandai Health Center, Mandai District, Maros Regency with a sample size of 77, conclusions can be drawn; (1) There is a relationship between eating patterns and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center; (2) There is no relationship between maternal education and the nutritional status of children aged 3 - 5 years at the Hasanuddin Manda Community Health Center; (3) There is a relationship between maternal knowledge and the nutritional status of children aged 3 - 5 years at the Hasanuddin Manda Community Health Center; (4) There is a relationship between maternal employment and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center; (5) There is a relationship between parenting patterns and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center ; (6) There is no relationship between family income and the nutritional status of children aged 3 - 5 years at the Hasanuddin Mandai Community Health Center; (7) Of all the factors studied, the one that has the greatest relationship is children's eating patterns and the nutritional status of

children aged 3 - 5 years in the working area of Hasanuddin Mandai Community Health Center, Mandai District, Maros Regency.

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