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Children's Nutrition Status 7-12 Months Based on Age, Education and Job of their Mother in South Sulawesi

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Abstract

The problem of malnutrition and malnutrition is one of the main health problems faced by developing countries including Indonesia. The incidence of cases of malnutrition is still very high, especially in South Sulawesi, although it is known until now that there are very many negative effects caused by malnutrition.

Purpose: Knowing the nutritional status description of children aged 7-12 months based on age, education and employment of mothers in Jeneponto Regency.

Method: This study uses a quantitative descriptive method with a cross-sectional design approach. Sampling with a total sampling of 131 people. The study was conducted in Jeneponto Regency, South Sulawesi.

Results: Based on the BB/U index, mothers aged 30-34 years had children with poor nutritional status of 1 person (2.7%) but the BB/TB index of mothers aged 25-29 years had children with normal nutritional status as many as 32 people (94.1%). Based on the BB/U index, mothers with elementary school education have children with good nutritional status as many as 32 people (97%), and educated mothers who do not complete elementary school have children with poor nutritional status of 1 person (5%). Based on the BB/U index, mothers who did not work had children with good nutritional status as many as 100 (90.9%) but based on the index BB/TB mothers who did not work had children with very thin nutritional status of 2 people (1.8%)

Conclusion: Mothers aged 30-34 years and mothers with education who did not complete elementary school had children with poor nutritional status, mothers who did not work had children with very thin nutritional status.

Keywords: *Nutritional status of children, age, education, mother's work.*

Introduction

Malnutrition in children can cause several negative effects such as slow growth, prone to disease, decreased level of intelligence, and mental disruption. So that serious malnutrition can ultimately cause death[1]. According to WHO, 54% of the causes of infant and toddler deaths are due to poor child nutrition. The risk of dying from a child who is malnourished is 13 times greater than a normal child[2]. In general, the proportion of malnutrition and undernourishment in toddlers in terms of body weight according to age (BB/U) is less and worse nutrition 17.7%, while the percentage of nutritional status in South Sulawesi Province has decreased compared to 2013 even though it is still higher than national standards[3].

In South Sulawesi there are four districts/cities with the most cases including Bone (16 cases), Pinrang (15 cases), Wajo (11 cases) and Jeneponto (8 cases) (Health Profile of South Sulawesi Province in 2008). In Jeneponto Regency in 2014 it was found that the percentage of children under five weighed 82.08% of the 36,127 toddlers available. Of the 29,652 toddlers

weighed found toddlers with good nutrition as many as 28,625 toddlers (97.64%), malnutrition as many as 687 toddlers (2.32%) and malnutrition as many as 16 people (0.04%)[4]

Efforts to improve infant nutrition are based on that malnutrition at less than 2 years of age will have an impact on decreasing physical growth, brain development, intelligence, a productivity, and this impact is largely irreparable[5] Micronutrients are needed for brain development d ng gestation and infancy. This is an important period for brain formation, laying the foundation for the development of cognitive, motor and socio-emotional skills during childhood and adulthood[6].

Based on this phenomenon, the purpose of this study was to determine the nutritional status description of children aged 7-12 months based on anthropometric index BB/U, TB/U, and BB/TB in Bontoramba District and Binamu District, Jeneponto Regency.

Materials and Method

The design of this study used a quantitative descriptive method to determine the description of the nutritional status of children aged 7-12 months, with a cross-sectional approach. The total sample was 131 people in the Bontoramba and Binamu Subdistricts of Jeneponto Regency. The sampling technique is the total sampling method. Data on maternal and child characteristics were collected through direct interviews using questionnaires, while children's nutritional status was determined based on anthropometric index (Department of Health, 2011), by measuring body weight according to age (body/age), height/body length by age (TB/U) and body weight according to height (BB/TB). To measure body weight, digital baby scales are used, while length boards are used to measure body length.

Results

Respondents Characteristic

Table 1: Characteristics of Respondents in Jeneponto Regency

Variabel	n (131)	%
Sex		
Male	68	51,9
Female	63	48,1
Baby Age (month)		
7	35	26,7
8	23	17,6
9	21	16,0
10	19	14,5
11	15	11,5
12	18	13,7
Mother Age (year)		
15–19	13	9,9
20–24	30	22,9
25–29	34	26,0
30–34	37	28,2
≥ 35	17	13,0
Mother Education		
UnfinishedElementary School	20	15,3
Graduated Elementary School	33	25,2
Yunior High School	33	25,2
Senior High School	30	22,9
Diploma	15	11,4
Mother Job		
Unemployment	110	84,0
Employment	21	16,0

The highest maternal education in the low education group was 33 elementary school and junior high school graduates (25.2%) and the lowest was 15 (11.4%) higher education (Diploma). Regarding the work of the mother, there were at most 110 non-working groups (84%) and those working as many as 21 people (16%).

Distribution of Nutritional Status of Children Based on Mother's Age

Table 2 Distribution of Nutritional Status of Children Based on Mother's Age

Nutritional Status	Mother Age (Year)											
	15-19		20-24		25-29		30-34		≥ 35		Total	
Indeks BB/U	**n**	**%**	**N**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**N**	**%**
Malnutrition	0	0,0	0	0,0	1	5,3	1	2,7	0	0,0	2	1,5
Poor Nutrition	1	7,7	0	0,0	3	8,8	4	10,8	3	17,6	11	8,4
Good Nutrition	12	92,3	30	100	30	88,2	32	86,5	14	82,4	118	90,1
Total	**13**	**100**	**30**	**100**	**34**	**100**	**37**	**100**	**17**	**100**	**131**	**100**

Nutritional Status	Mother Age (Year)											
	15-19		20-24		25-29		30-34		≥ 35		Total	
Indeks TB/U												
Stunting	4	30,8	6	20,0	16	47,1	7	18,9	3	17,6	36	27,5
Normal	9	69,2	24	80,0	18	52,9	30	81,1	14	82,4	95	72,5
Total	**13**	**100**	**30**	**100**	**34**	**100**	**37**	**100**	**17**	**100**	**131**	**100**
Indeks BB/TB												
Very Thin	0	0,0	0	0,0	0	0,0	0	0,0	2	11,8	2	1,5
Thin	1	7,7	0	0,0	2	5,9	3	8,1	1	5,9	7	5,3
Normal	11	84,6	29	96,7	32	94,1	32	86,5	14	82,4	118	90,1
Fat	1	7,7	1	3,3	0	0,0	2	5,4	0	0,0	4	3,1
Total	**13**	**100**	**30**	**100**	**34**	**100**	**37**	**100**	**17**	**100**	**131**	**100**

Based on the index BB/TB, mothers aged 25-29 years had children with normal nutritional status as many as 32 people (94.1%) and the age of mothers> 35 years had children with very thin status as many as 2 people (11.8%).

Distribution of Children's Nutritional Status Based on Mother's Education

Table 3: Distribution of children's nutritional status based on Mother's Education

Nutritional Status	Mother's Education											
	Unfinished Elementary School		Graduated Elementary School		Yunior High School		Senior High School		Graduated		Total	
	N	%	n	%	N	%	N	%	N	%	n	%
Indeks BB/U												
Malnutrition	1	5,0	1	3,0	0	0,0	0	0,0	0	0,0	2	1,5
Poor Nutrition	1	5,0	0	0,0	4	12,1	2	6,7	4	26,7	11	8,4
Good Nutrition	18	90,0	32	97,0	29	87,9	28	93,3	11	73,3	118	90,1
Total	**20**	**100**	**33**	**100**	**33**	**100**	**30**	**100**	**15**	**100**	**131**	**100**
Indeks TB/U												
Stunting	3	15	13	39,4	11	33,3	5	16,7	4	26,7	36	27,5
Normal	17	85	20	60,6	22	66,7	25	83,3	11	73,3	95	72,5
Total	**20**	**100**	**33**	**100**	**33**	**100**	**30**	**100**	**15**	**100**	**131**	**100**
Indeks BB/TB												
Very Thin	1	5,0	0	0,0	1	3,0	0	0,0	0	0,0	2	1,5
Thin	1	5,0	1	3,0	3	9,1	0	0,0	2	13,3	7	5,3
Normal	17	85,0	31	93,9	29	87,9	28	93,3	13	86,7	118	90,1
Fat	1	5,0	1	3,0	0	0,0	2	6,7	0	0,0	4	3,1
Total	**20**	**100**	**33**	**100**	**33**	**100**	**30**	**100**	**15**	**100**	**131**	**100**

In table 3, it appears that the nutritional status of children is based on the BB/U index, so mothers with elementary school education have children with good nutritional status as many as 32 people (97%) and educated mothers do not complete primary school with 1 poor child (5%). Based on the TB/U index, the mothers who graduated from high school had 25 children with normal nutritional status (83.3%) and mothers who graduated from elementary school had 13 stunting children (39.4%). Based on the BB/TB index, mothers with elementary school education had children with normal nutritional status as many as 31 people (93.9%) and educated mothers who did not complete elementary school had children with very thin nutritional status of 1 person (5%).

Distribution of Children's Nutritional Status Based on Mother's Work

Table 4: Distribution of children's nutritional status based on Mother's Work

Nutritional Status	Mother occupation					
	Unemployment		Employment		Total	
	n	%	N	%	n	%
Indeks BB/U						
Malnutrition	2	1,8	0	0,0	2	1,5
Poor Nutrition	8	7,3	3	14,3	11	8,4
Good Nutrition	100	90,9	18	85,7	118	90,1
Total	**110**	**100**	**21**	**100**	**131**	**100**
Indeks TB/U						
Stunting	31	28,2	5	23,8	36	27,5
Normal	79	71,8	16	76,2	95	72,5
Total	**110**	**100**	**21**	**100**	**131**	**100**
Indeks BB/TB						
Very Thin	2	1,8	0	0,0	2	1,5
Thin	5	4,5	2	9,5	7	5,3
Normal	99	90,0	19	90,5	118	90,1
Fat	4	3,6	0	0,0	4	3,1
Total	**110**	**100**	**33**	**100**	**131**	**100**

Source: Primer Data, 2018

Based on the index BB/TB, mothers who do not work have children with normal nutritional status as many as 99 people (90%) and very thin nutritional status of 2 people (1.8%).

Discussion

Characteristics of Respondents: A person's health status is influenced by four factors, namely behavior, health services, genetics and environment[7]. One of the things related to the environment is culture. Cultural factors influence a person's health status according to the theory of nursing known as Sunrise Model[8].

In this study the age of most children at the age of 7 months was 35 people (26.7%) and the least at age 11 months were 15 people (11.5%). This is consistent with a study that produces findings that age is one of the things that affects children's development[9].

The highest maternal age at the age of 30-34 as many as 37 people (28.2%) and the least at age 15-19 years as many as 13 people (9.9%).

The highest maternal education in the low education group was 33 elementary school and junior high school graduates (25.2%) and the lowest was 15 (11.4%) higher education (Diploma).

Child Nutrition Status based on Mother's age: In reality there are still many women who give birth at <20 years and > 35 years with normal nutritional status of children. This is due to the seriousness of the mother in caring for, caring for and raising her child. Adequate attitudes and knowledge of child nutrition will have an impact on the pattern of feeding given to children under five so that it influences the nutritional status of children under five.[10]

Short child conditions can be prevented but cannot be cured so that improvement efforts are more emphasized on prevention efforts. The improvement efforts that have been made emphasize the identification and rehabilitation of children with severe malnutrition. Whereas the recent improvement efforts have been emphasized on prevention efforts through a combination of aspects of nutrition, disease and treatment/treatment[11]

Child Nutrition Status based on mother's education: According to the researchers' assumptions, the influence of education on the nutritional status of children is due to the fact that the education in the research location is quite good but the education that

respondents have is still not practiced in everyday life. The higher the level of education, knowledge, skills there is the possibility that the better the level of family food security, the better the care of children, and the more families use existing health services and vice versa [12].

Someone who just graduated from elementary school is not necessarily less able to arrange foods that meet nutritional requirements than other people with high education. Because even if the education is low if the person is diligent in listening to nutrition counseling it is not impossible that his nutritional knowledge will be better. It's just that it must still be considered that the level of education factors also determine whether or not someone is easy to absorb and understand the knowledge of nutrition they obtain [13].

A study also showed that there was no relationship between maternal education level (p = 0.646) and family income (p = 1,000) with stunting in toddlers[14]. Although it is understood that increasing the ability of mothers through health education can be done to maximize growth and development of children.

One alternative with health education using the modeling approach that has been carried out by nurses is effective in increasing knowledge, practical ability, mother's confidence in breastfeeding and stimulating babies which in turn can optimize infant growth[15].It was concluded that increasing maternal empowerment through health education improves baby growth[16].

Conclusion

As a health worker especially focusing on public health, it is very wise to prioritize promotive and preventive efforts without ignoring curative and rehabilitative efforts.

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Conflict of Interest: Nil

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