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## The relationship between parenting of young mother and nutritional status among under-five children in public health center of panti, Jember Regency, Indonesia

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### Abstract

**Background and Aim:** The mother plays an important role in child care, in particular to full fill a nutrition intake. However, some women are too young to have to marry and become mothers that impact on their role to take care of their children. The aimed of this study want to analyze the relationship of parenting young mother and nutritional status among under-five children in the public health center of Panti, Jember Regency.

**Methods:** A cross-sectional study was conducted among 170 mothers using consecutive sampling. A self-administered questionnaire was used to measure the sociodemographic of mothers, while parenting questionnaire that consisted of feeding practices, parenting practices, and health service practices was used measured parenting of mothers. Chi-Square test was used to answer the objective of the study.

**Results:** The score for the mother's parenting questionnaire was above 85% of good parenting. Meanwhile, the nutritional status of 70,6% of good nutrition. There were a significant relationship between parenting of young mother in feeding practices (p-value= <0,001; OR= 26,12), parenting practices (p-value= 0,007; OR= 0,281), and health service practice and the nutritional status of underfive children (p-value= <0,001; OR= 6,00).

**Conclusion:** Mother's parenting is one of the indirect factors that can influence the nutritional status of under-five children. Therefore, parenting young mothers should be optimized to improve the nutritional status of under-five children.

**Keywords:** mother's parenting, nutritional status, under-five children, young mother

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### Introduction

Malnutrition is still the biggest problem in under-five children in Indonesia <sup>[1]</sup>. Meanwhile, in 2005-2017 the average stunting prevalence in Indonesia was around (36.4%) <sup>[2]</sup>. In 2018 Jember Regency placed 8th in East Java with 17,344 stunting under-five (11.83%) <sup>[2]</sup>. Malnutrition in infants due to direct and indirect factors. Factors that are directly related to food and infection, while indirect causes can shape food security, ways of care, and health services <sup>[3]</sup>. The most important factor in fulfilling the nutritional status of under-five children is parenting <sup>[4]</sup>.

The family has an important function in meeting the needs of the family, where the father plays the head of the family and the mother plays a role in the childcare process <sup>[5]</sup>. Parenting in under-five children, the age of parents is one of the factors that can influence. An age that is still too young or too old will cause the role of care to be less than the maximum. This is because in carrying out the optimal caregiving role it requires physical and psychosocial strength in carrying it out <sup>[6]</sup>. The impact of early marriage can lead to neglect of children where parents are busy with their desires so that children receive less special attention and lack of interaction between children and parents so that it can have an impact on parenting toddlers <sup>[7, 8]</sup>. This is likely to occur because toddlers whose age is still inadequate usually have poor parenting so that it can have an impact on the nutritional status of toddlers.

One of the goals of the Sustainable Development Goals (SDGs) for the second sustainable development is to end all forms of malnutrition by 2030 <sup>[9]</sup>. Families, especially mothers, are expected to be able to provide good parenting for under-five children to facilitate the stages of growth both physically, mentally, and psychologically <sup>[10]</sup>. Mothers must know how the right activities in providing care and protection to children <sup>[4]</sup>. The pattern of caring for married mothers at an early age (young mothers) plays an important role in the nutritional status of under-five children, so further studies are needed to facilitate the healthy growth and development of children in the family. Therefore, the purpose of this study was to identify the parenting patterns of young mothers with the nutritional status of under-five children in the Panti Public Health Center. Therefore, the objective of our study was to identify parenting young mother, toddler nutritional status, and the relationship between parenting young mothers with toddler nutritional status.

### Material and methods

This research was conducted with a cross-sectional study design carried out by home visits in the work area of the Panti Public Health Center, Jember Regency (December 2019-January 2020). The inclusion criteria in this study included: 1) mothers with toddlers first child aged 2-5 years; 2) mothers with nuclear family; 3) toddlers registered at Integrated Healthcare Center. The exclusion criteria in this study include: 1) mothers who experience mental retardation; 2) mothers who refuse to become respondents; 3) toddlers are sick; 4) when the study was conducted the mother was not in place.

The researcher used 3 types of measuring instruments, namely the participant characteristics questionnaire to identify sociodemographic data of families and toddlers, mother's parenting questionnaire with several indicators such as feeding practices, parenting practices, and health care habits, and weight measurement tools using digital scales and the results are then the results WHO Anthro Plus BB/U analyzed to determine the z-score. The measurement results are then classified using standard standards from the Ministry of Health of the Republic of Indonesia based on BB/U so that they can be divided into four categories, namely over nutrition, good nutrition, low nutrition, and poor nutrition. The number of samples obtained in this study was 170 respondents determined using consecutive sampling techniques. In this study, researchers visited the subject's house assisted by a local Integrated Healthcare Center. The questionnaire was filled out using a Google form by the subject with the help of researchers.

Data processing with SPSS 20.0, then performed data analysis to determine the relationship or relationship between the variables of care for young mothers with toddler nutritional status with a chi-square test with a significance level ( $p < 0.05$ ). This study was approved by the Health Research Ethics Committee of Faculty of Dentistry, Universitas Jember with Number 661/UN25.8/KEPK/DL/2019.

### Results

The sample in this study were 170 young mothers who had their first child (2-5 years) in Public Health Center of Panti, Jember Regency. The demographic and characteristic respondents are shown in Table 1.

**Table 1:** Demographic and characteristic respondent (n=170)

Characteristic Respondent		Mother n (%)	Toddler n (%)
Age	Mean±SD	24,5 ± 4,15 tahun	39,36±12, 3 bulan
Toddler Weight	Md (P <sub>25</sub> -P <sub>75</sub> )		12,2 (10,5-13,7)
Gender	Male		91 (53, 5%)
	Female		79 (46, 5%)
Age of Married Mother	≤ 21 years	42 (24, 7%)	
	≥ 21 years	128 (75, 3%)	
Family Income	<Rp 500.000	15 (8, 8 %)	
	Rp 500.000-Rp 1.000.000	25 (14, 7%)	
	Rp 1.100.000-Rp 1.500.000	66 (38, 8%)	
	Rp 1.600.000-Rp 2.000.000	61 (35, 9%)	
	>Rp 2.000.000	3 (1, 8%)	

Note. Description: f (%) = Number of participants (percentage); Md = median; P<sub>25</sub>-P<sub>75</sub> = percentile 25-75; Mean: Average; SD: Standard Deviation;

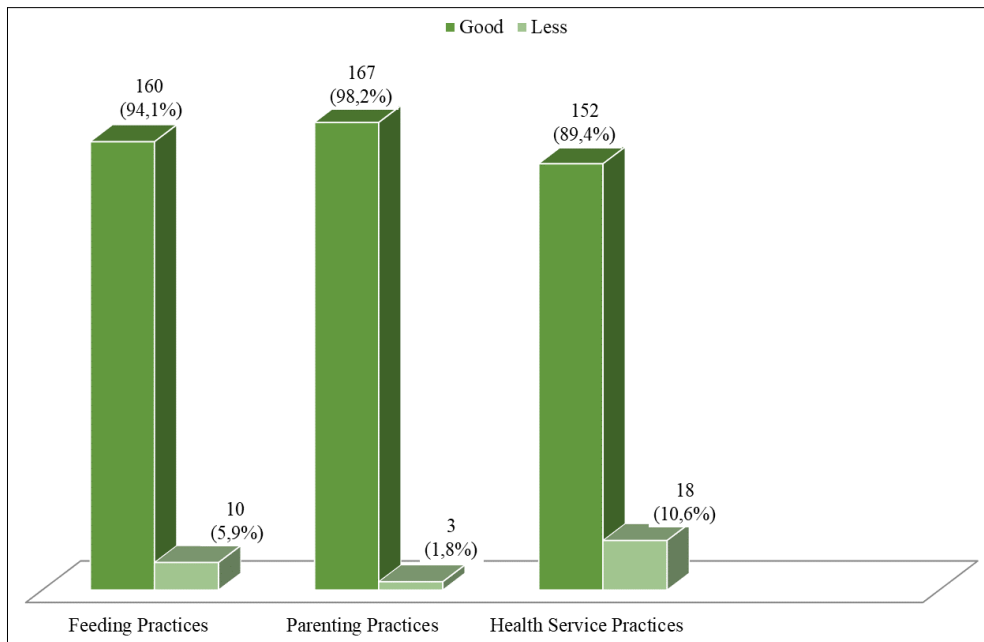
The parenting questionnaire consisted of three indicators namely feeding practices, parenting practices, and health service practices. Based on Table 2 it is known that the three indicators are not normally distributed ( $p$ -value  $< 0.05$ ), so it can be concluded that the pattern of care for young mothers in the Panti Public Health Center varies there are good parenting patterns for young mothers and parenting patterns for young mothers are less.

**Table 2:** Distribution of Parenting for Young Mothers

Indicator	Md (P <sub>25</sub> -P <sub>75</sub> )	Z	p-value
Feeding Practices	37 (33-39)	2,856	< 0,001
Parenting Practices	26 (23,75-28)	1,723	0,005
Health Service Practices	18 (18-18)	6,120	< 0,001

Note. Description: Md = median; P<sub>25</sub>-P<sub>75</sub> = percentile 25-75; Z = Calculated value Kolmogorov - Smirnov Test; Z = Kolmogorov Smirnov Test; p-value = Significant with Kolmogorov-Smirnov Test

Maternal parenting can be categorized into two based on the total score obtained, namely good parenting and less parenting. Based on Figure 1, it can be seen that the proportion of care patterns for young mothers in the Panti Public Health Center.



**Fig 1:** The proportion of Parenting for Young Mothers

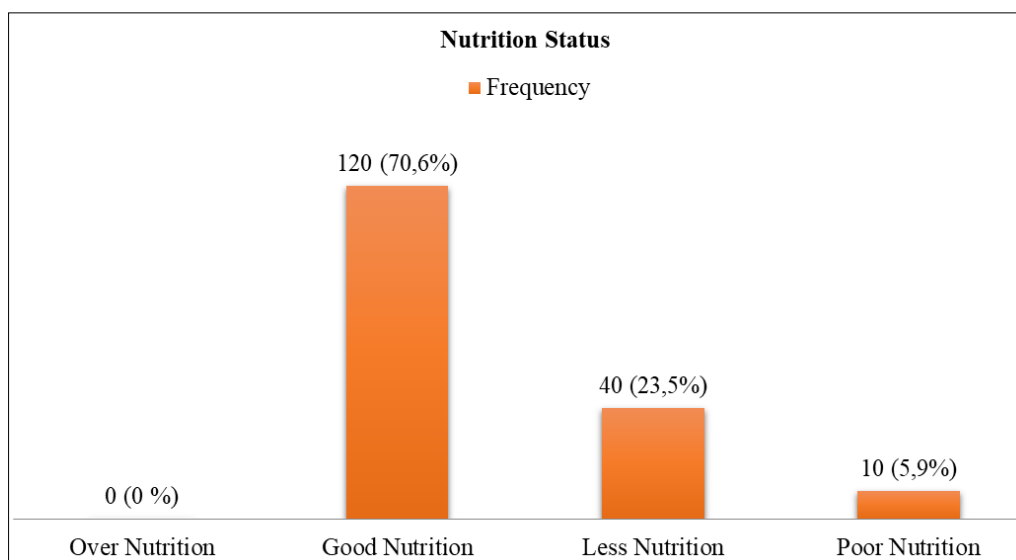
As for that, the total z-score of 170 under-five children is normally distributed ( $p\text{-value} > 0.05$ ), so it can be concluded that the nutritional status of 170 under-five children in the Panti District has a similar or uniform distribution of data. Determination of the nutritional status of under-five children based on weight measurement / U shows the results of the z-score with a mean of -1.43 and a percentile of 25-75 that is -218 - (-0.70) (Table 3).

**Table 3:** Distribution of Toddler Nutrition Status

Variable	Mean (P <sub>25</sub> -P <sub>75</sub> )	Z	p-value
Z-score	-1,43 (-2,18-(0,70))	1,032	0,862

Note. Description: Md = median; P<sub>25</sub>-P<sub>75</sub> = percentile 25-75; Z = Calculated value Kolmogorov - Smirnov Test; Z = Kolmogorov Smirnov Test; p-value = Significant with Kolmogorov-Smirnov Test

From Figure 2, it was found that the nutritional status of under-five children in Panti District, Jember Regency consisted of 120 (70.6%) good nutrition, 40 (23.5%) poor nutrition, and 10 (5.9%) poor nutrition.



**Fig 2:** Toddler Nutrition Status

Based on the results of the Chi-square test (Table 4) showed a relationship between maternal parenting in feeding with nutritional status of children with the results obtained ( $p\text{-value} = <0.001$ ; OR = 26.122; 95% CI = 3.211-212.518) that there is a relationship between parenting practices and nutritional status toddlers are indicated by the results ( $p\text{-value} = 0.007$ ; OR 0.281; 95% CI = 0.221-0.359), and there is a relationship between

health service practices and nutritional status of under five children in Panti Public Health Center, Jember Regency with results ( $p$ -value =  $<0.001$ ; OR 6.00; 95% CI = 2.107-17.086).

**Table 4:** The Relationship of Young Mother Parenting (Feeding Practices, Parenting Practices, and Health Service Practices) with Toddler Nutrition Status

Mother Parenting		Toddler Nutrition Status Category		$\chi^2$	$p$ -value	OR
		Good n (%)	Less n (%)			
Feeding Practices	Good	119 (74,4%)	41 (25,6%)	18,787	$< 0,001$	26,122
	Less	1 (10%)	9 (90%)			
Parenting Practices	Good	120 (71,9%)	47 (28,1%)	7,329	0,007	0,281
	Less	0 (0%)	3 (100%)			
Health Service Practices	Good	114 (75%)	38 (25%)	13,458	$< 0,001$	6,00
	Less	6 (33,3%)	12 (66,7%)			

Note. Description: n% = number of respondents (percentage);  $\chi^2$  = Pearson Chi-Square; OR = Odds Ratio 95% CI = 95 Confidence Interval

## Discussion

Based on the results of research from 170 respondents obtained an overview of the nutritional status of under-five children in Panti Public Health Center, Jember Regency is mostly good nutrition, namely as many as 120 toddlers (70.6%), malnutrition 40 (23.5%), and malnutrition 10 (5.9 %). Nutritional status in toddlers is known from the z-score of BB/U measurements. Parents as caregivers must maintain the growth and development of infants so as not to be hampered.

The characteristics of mothers in this study obtained the results of the majority of mothers who married at a young age ( $\geq 16$  years) as many as 42 (24.7%) respondents. Age will affect the ability and readiness of mothers in child care. Mothers who are still young are usually still not ready in terms of physical, emotional, and psychological [8]. Mothers who are married at an early age are at high risk of having undernourished toddlers and short children, this is because mothers who are married at an early age or teenage mothers can be at high risk during pregnancy and even death because they are not biologically and psychologically ready [10].

Based on the results of this study it can be seen that there is a relationship between maternal parenting both in feeding practices with the nutritional status of toddlers. The results showed that parenting in toddlers in Panti Public Health Center, Jember Regency, out of 170 respondents, 160 respondents (94.2%) had good parenting practices. The emergence of nutritional problems in infants is caused by many factors in this case, if the mother does not carry out proper feeding practices in infants can have an impact on the problem of malnutrition status in infants [11].

The most important role in the family is the mother whose duty is to take care of children and determine the stages of growth and development such as maternal behavior in breastfeeding or feeding, how to determine nutritious and healthy foods that are by following per under the large portions so that it can have an impact on improving the nutritional status of children [12]. Appropriate feeding for toddlers is very important for nutritional intake. Practicing parenting in children can include feeding according to age, mother's sensitivity in knowing when to eat, how to persuade children to increase appetite, and create a warm and comfortable eating atmosphere [4, 13]. Feeding toddlers should not wait for hungry toddlers or once a day as long as the child has eaten because as he gets older, toddlers eat also increases the nutritional needs needed [14].

Results of research conducted at the orphanage it's self after being tested static states there is a relationship between parenting practices with the nutritional status of children with results ( $p$ -value = 0.007 and OR = 0.281). The results in this study showed that the majority of parenting practices in parenting practices in Panti Public Health Center, Jember Regency, from 170 respondents found 167 mothers (98.2%) were included in the category of good parenting practices and had an impact on the nutritional status of under-five children. Caring for toddlers is fulfilling the nutritional needs of toddlers by following per under health care patterns. Unhealthy home environments and lack of self-care for toddlers can have an impact on a toddler's immune system, where toddlers will have a range of illnesses, decreased appetite, and will have an impact on nutritional status [10].

Based on the results of the study note that there is a relationship between health service practices and the nutritional status of children with results ( $p$ -value =  $<0.001$  and OR = 6.00). Health service practices for 170 respondents in the Jember District of Panti, around 152 respondents (89.4%) who have good health service habits. This is because since most of the mothers bring their children directly to health services when they are sick and also bring to the Integrated Healthcare Center to get immunizations and always monitor the stage of development of toddlers.

Health service practice is an effort made to maintain the nutritional status of children, avoid and keep away from diseases that can cause a decline in health in infants [14]. The role of parents, especially mothers, is very important in the stages of growth and development of under-fives, with frequent under-fives being brought to Integrated Healthcare Center, the nutritional status of infants can be monitored every month and matched with the Card to Health (KMS) [15]. This is because the practice of health services can prevent children from being at risk of frequent illness so that it can affect their nutritional status. A toddler is an age where there is still a range of diseases due to disrupted nutritional adequacy factors so that children have difficulty eating or decreased

appetite. Health practices in children need to get special attention from parents, especially mothers, namely by paying attention to the nutritional condition of children, completeness of immunization, and efforts to seek treatment by bringing to health facilities <sup>[16]</sup>.

The conclusion of this study is that there is a relationship between parenting young mothers in feeding practices, care practices and health service practices with the nutritional status of children under five in Panti District, Jember Regency. The existence of this research is expected later on local health workers can provide information and education about the importance of maternal parenting in monitoring the nutritional status of under five children and especially mothers should be able to implement parenting optimally.

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