

Relationship Between Parenting Patterns and Nutritional Status of Toddlers

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Abstract: In Indonesia 2022 prevalence of stunting reach 21.6%. North Jakarta occupies the second largest area in DKI Jakarta with a stunting prevalence rate of 18.5%. One of the causes of stunting is inadequate nutritional intake due to poor mother-to-child parenting styles.

Purpose: This study was to analyze the relationship between parenting feeding style and nutritional status.

Methods: The research design is quantitative. The subjects of this study were mothers and toddlers who came to the Integrated Healthcare Center in the working area of the Tanjung Priok District Health Center which consisted of 101 respondents using purposive sampling. The data analysis used was the Chi-Square.

Results: The results of this study indicate that there is a relationship between the parenting feeding style and nutritional status in children under five years (p -value = 0.000). It is suggested to Integrated Healthcare Center cadres to make home visits especially to toddlers who rarely visit the Integrated Healthcare Center.

Conclusion: The results of the research show that there is a significant relationship between maternal parenting patterns in feeding and the nutritional status of toddlers in the Tanjung Priok District Health Center working area with a p -value = 0.000. The characteristics that are significantly related to the nutritional status of toddlers are the child's gender with a p -value = 0.035 and family income/month with a p -value = 0.000.

Keywords: parenting feeding styles, nutritional status, stunting, toddlers

1. Introduction

The adolescent period is a transitional period from childhood to adulthood, and during the adolescent Indonesia has different nutritional problems, especially malnutrition or malnutrition, stunting, and excess nutrition or obesity (Kemenkes RI, 2022b). The age group that is vulnerable to nutritional problems is children aged 0-5 years or toddlers (Kemenkes RI, 2017). Stunting is a problem of child development and growth due to continuous and recurring illnesses; this can be seen from the child's length or height being below standard (Indonesian Government, 2021). Indonesia ranks fourth in the world for stunting rates in 2020 (UNICEF, 2020).

According to the Indonesian Nutrition Status Survey, the stunting rate among children under five (height for age) is 21.6% in Indonesia in 2022 (Kemenkes RI, 2022a). The Indonesian Nutrition Status Survey results also provide data on the prevalence of stunted toddlers in DKI Jakarta Province, which is 14.4% (Kemenkes RI, 2022a). The distribution of toddlers with stunting in North Jakarta City is the second largest in DKI Jakarta Province, namely 18.5% after the Thousand Islands, namely 20.5% (Kemenkes RI, 2022a).

Stunting can slow brain development, mental retardation, low learning ability, and increase the risk of chronic diseases such as diabetes, hypertension, and obesity in the long term (Kemenkes RI, 2018). According to Anwar et al., (2022) children's intelligence and cognitive decline can be affected by stunting. This occurs due to a lack of nutrition in the child's body, including the nervous system, which affects the growth and condition of the brain due to a lack of production of brain cells.

Low academic ability or education is related to a person's economic level, where low income can lead to a person's life in poverty. So another impact of stunting is the economic losses experienced by a country (Achadi et al., 2020). According to Khotimah (2022), economic benefits from increasing productivity become state expenditure as a result of stunting.

Based on a preliminary study was carried out by researchers at the Tanjung Priok District Health Center. The results of the interview showed that Warakas Village was the locus of stunting in the working area of the Tanjung Priok District Health Center. The prevalence of stunting in this area according to EPPGBM data obtained from the Tanjung Priok District Health Center is 6.01%. Regarding the background explained, researchers were encouraged to research the relationship between parenting patterns and the nutritional status of toddlers in the Tanjung Priok District Health Center Working Area.

Based on the description of the background above and the phenomena the researcher wants to examine " Is there a relationship between parenting styles and the nutritional status of toddlers?"

2. Methods

Regarding the background explained, researchers were encouraged to research the relationship between parenting patterns and the nutritional status of children under five years of age in the Tanjung Priok District Health Center Working Area. The population of this study were mothers who had children under five in the working area of the Tanjung Priok District Health Center. This research was conducted in April-May 2023 in three RWs of Warakas Subdistrict which are the locus of stunting at the Tanjung Priok District Health Center. The three RWs are (RW. 06, RW. 11, and RW. 14). The sample used was 101 respondents and the sampling technique used in this study was purposive sampling technique. The inclusion criteria were mothers and toddlers who came to the integrated service post in Warakas Village, were willing to be respondents, had a health of both mother and child book or card to health.

The dependent variable of this research is the nutritional status of toddlers (TB/U), while the independent variable is the mother's parenting style in feeding. This research uses a questionnaire sourced from Astuti Wahyu (2014). The questionnaire was tested for validity and reliability at integrated service post of Garuda, Pesanggrahan, South Jakarta with a total of 30 respondents who met the inclusion and exclusion criteria. All questionnaires were declared valid and the Cronbach Alpha value was 0.900, which means the questionnaire was reliable. The data collection technique was carried out by giving questionnaires directly to respondents according to the inclusion and exclusion criteria. This research has received an ethically proper statement from the Health Research Ethics Commission of the Health Polytechnic Jakarta III with letter No. LB.02.02/0467/2023. The analysis took the form of univariate to identify the characteristics of respondents and the bivariate analysis technique in this study used the Chi-Square test to determine the relationship between characteristics and maternal parenting patterns in feeding.

This research uses quantitative with observational analytic and cross sectional type. The purpose of this study is to see whether there is a relationship between the independent variables (mother's parenting style in feeding,) on the dependent variable, namely nutritional status of children under five years of age. This research was conducted in the work area of the Tanjung Priok District Health Center. This research was carried out in April-May 2023 in three Warakas Village Community Units which are stunting loci in the Tanjung Priok District Health Center. The three Community Associations are (RW. 06, RW. 11, and RW. 14). The sample used was 144 respondents, the sampling technique used in this study was total sampling.

The data collection technique was carried out by giving questionnaires directly to respondents according to the inclusion and exclusion criteria. were given informed consent, then filled out a questionnaire. The questionnaire in this study consisted of 17 demandingness questionnaires and 7 responsiveness questionnaires.

3. Results and Discussions

The results of the normality test that has been carried out show that the skewness calculation value is 1.371, this value is included in the range - 1.133 to 0.476, means that the data is normally distributed so that the cut off point on this variable uses the mean value.

Table 1. Frequency Distribution of Toddler Characteristics Based on age, gender, nutritional status of toddlers; age, Mother's education, Family income, Mother's Parenting Patterns in Feeding (n=101).

Toddler Characteristics	Frequency (n)	Percentage (%)
1. Age		
≤ 35 months	49	48,52%
> 35 months	52	51,48%
2. Gender		
Man	52	51,48%
Woman	49	48,52%
3. Nutritional status of toddlers		
Stunting	34	33,66%
Normal	67	66,34%
Maternal characteristics		
1. Age		
< 30 years old	54	53,46%
≥ 30 years old	47	46,54%
2. Mother's education		
Basic education	13	12,87%
Higher education	88	87,13%
3. Family income		
< Regional minimum wage	31	30,70%
≥ Regional minimum wage	70	69,30%
4. Mother's Parenting Patterns in Feeding		
Democratic	46	45,55%
Authoritarian	19	18,81%
Permissive	21	20,79%
Abandonment	15	14,85%

Source : Primary Data, 2023

Based on the table 1, the results show that the majority of toddler respondents aged > 35 months, are 52 children (51.5%), the majority of toddler respondents were male, are 52 children (50.5%), and the majority of respondents had normal nutritional status, are 67 children (66.3%) and almost all of them were stunted, are 34 children (33.7%).

Based on the table, it is known that the majority of mothers are > 30 years old, are 54 people (53.5%), then the majority of mothers are at a higher education level (high school, bachelor's degree) 88 people (87.1%), and their family income is /month mostly ≥ minimum wage, are 70 people (69.3%) and < minimum wage, almost 31 people (30.7%). The distribution of parenting patterns in feeding applied by mothers is almost the majority of mothers with democratic feeding parenting patterns, are 46 people (45.5%).

Table 2. Frequency Distribution of Respondents Based on Mother's Parenting Patterns for Toddlers with Stunting Nutritional Status Problems

Parenting Patterns in Feeding	Frequency (n)	Percentage (%)
Democratic	6	13,0%

Authoritarian	9	47,4%
Permissive	9	42,9%
Abandonment	10	66,7%

Based on table 2, the results of the analysis of 101 respondents show that the most mothers who have toddlers with stunting nutritional problems apply neglectful parenting, are 10 people (66.7%). Meanwhile, there were only 5 mothers who applied neglectful parenting with normal toddlers (33.3%).

Table 3. The Relationship between Toddler Age and the Risk of Depression

Toddler Age	Nutritional Status of Toddlers				P value	O R
	Stunting		Normal			
	n	%	n	%		
≤ 35 months	20	40,8%	29	59,2%	0,206	1. 87 2
> 35 months	14	26,9%	38	73,1%		

Based on table 4.6, there are 20 children aged 13-35 months with stunting (40.8%). Meanwhile, there were 14 children aged 36-59 months with stunting (26.9%). The results of the chi-square test regarding the relationship between toddler age and toddler nutritional status showed a p-value = 0.206, which means there is no significant relationship between toddler age and toddler nutritional status. The results of this study are not in line with research by Sugianti and Putri (2022) which states that there is a relationship between the age of toddlers and the nutritional status of toddlers, p-value = 0.001. The research states that this occurs due to poor feeding practices, poor breastfeeding and weaning, introduction of complementary breast milk foods that are not diverse and adequate, and low supplementation.

Table 4. Relationship between Gender and Nutritional Status of Toddlers

Gender	Nutritional Status of Toddlers				P value	O R
	Stunting		Normal			
	n	%	n	%		
Man	23	44,2%	29	55,8%	0,035	2,7 40
Woman	11	22,4%	38	77,6%		

The results of the analysis in table 4 show that there are 23 male toddlers with stunting (44.2%). Meanwhile, 11 female toddlers were stunted (22.4%). The results of the chi-square test regarding the relationship between toddler gender and toddler nutritional status showed a p-value = 0.035, which means there is no significant relationship between toddler gender and toddler nutritional status. This is in line with research by Yuningsih and Perbawati (2022) with a p-value = 0.04, which means there is a relationship between gender and the incidence of stunting. In this study, there were 28 stunted male toddlers (34%) and only 10 stunted female toddlers (12%).

Deswita et al., (2022) stated that boys are more at risk of experiencing stunting. This is because boys are generally more active in playing outside home, so there is a greater chance of playing in a dirty environment and consuming more energy, but energy intake is less adequate. Therefore, good parenting patterns are needed so that nutritional status is maintained so that children can carry out their developmental tasks.

Table 5. Relationship between Maternal Age and Nutritional Status of Toddlers

Maternal Age	Nutritional Status of Toddlers		P value	OR
	Stunting	Normal		

	n	%	n	%		
≤ 30 years old	21	38,9%	29	61,1%		
> 30 years old	13	27,7%	38	72,3%	0,327	-

The results of the analysis in table 5 were mothers aged < 30 years with stunted toddlers as many as 21 people (38.9%) while mothers aged ≥ 30 years with stunted toddlers were 13 people (27.7%). The chi-square test results show a p-value = 0.327, which means there is no relationship between maternal age and the nutritional status of toddlers.

This research is in line with research conducted by Trisyani, et al (2020) where the Fisher Exact test results with a p-value of 0.419. Researchers are of the opinion that maternal age greatly influences the incidence of stunting. Because the older the mother, the more experience she has in caring for children. According to Paramashanti (2019) in Neherta et al., (2023) states that one of the internal factors that influences children's nutritional status is the person's age. The age of the parents will influence the parents' ability or experience in providing breast milk or complementary foods. The more experienced parents are, the better their ability to care for, raise and maintain their child's growth and development.

Table 6. Relationship between Education Level and Nutritional Status of Toddlers

Education Level	Nutritional Status of Toddlers				P value	OR
	Stunting		Normal			
	n	%	n	%		
basic education	7	53,8%	6	46,2%		
higher education	27	30,7%	61	69,3%	0,182	2.636

The results of the analysis in table 6 show mothers with basic education (Primary School - Junior Middle School) with stunted toddlers as many as 7 people (53.8%). Meanwhile, mothers with higher education (High School - Bachelor's degree) with stunted toddlers were 27 people (30.7%). Based on the Chi-Square test, the relationship between maternal education level and toddler nutritional status shows a p-value = 0.182, which means there is no significant relationship between maternal education level and toddler nutritional status.

This research is in accordance with Lailatul and Ni'mah's research (2015) with Chi-Square calculation results p-value = 0.121, which means there is no significant relationship between the mother's education level and the nutritional status of toddlers. This is not in accordance with research conducted by Gustina et al., (2020) which states that there is a relationship between maternal education and the incidence of stunting p-value = 0.014. According to researchers, the level of education is closely related to the level of knowledge that mothers have to prevent the nutritional problem of stunting in children. This is in line with Santoso et al., (2021) that a person's level of education will influence their ability to receive and process information.

Table 7. Relationship between Family Income/Month and Nutritional Status of Toddlers

Family Income/ Month	Nutritional Status of Toddlers				P value	OR
	Stunting		Normal			
	n	%	n	%		
< Regional Minimum Wage	24	77,4%	7	22,6%		
≥ Regional Minimum Wage	10	14,3%	60	85,7%	0,000	20.571

The results of the analysis in table 7 show that there are 24 families who have incomes below the regional minimum wage with stunted toddlers (77.4%) and families who have incomes ≥ regional minimum wage with 10 stunted toddlers (14.3%). This is in accordance with research conducted by Setiawan et al., (2018), namely that there is a

significant relationship between family income and the incidence of stunting. Researchers are of the opinion that family income is closely related to the incidence of stunting nutritional status problems experienced by children. This is in line with Achadi et al., (2020) who stated that low family income will affect the family's ability to meet children's nutritional food needs, especially animal protein which is needed for children's growth. The lack of food experienced by the child causes the child to become stunted.

Another research conducted by Tarigan et al, (2021) shows that the impact of Covid-19 is related to the incidence of stunting in children under five with p value = 0.000. The Covid-19 pandemic has an impact on nutritional status and eating patterns which causes toddlers to suffer from stunting. During the Covid-19 pandemic, mobility restrictions were imposed which caused many people to lose their jobs, resulting in economic difficulties which resulted in the difficulty of providing nutritious food for children under five.

Table 8. Relationship between Mother's Parenting Patterns in Feeding and Nutritional Status of Toddlers

Mother's Parenting Patterns in Feeding	Nutritional Status of Toddlers				P value
	Stunting		Normal		
	n	%	n	%	
Demokratis	6	13,0%	40	87,0%	0,000
Otoriter	9	47,4%	10	52,6%	
Permisif	9	42,9%	12	57,1%	
Pengabaian	10	66,7%	5	33,3%	

The results of the analysis in table 8 show that the majority of mothers with stunted children apply neglectful parenting, namely 10 people (66.7%) while only 6 mothers who apply neglectful parenting with normal toddlers (13.0%). The chi-square test results show the p value = 0.000. So, it can be concluded that there is a significant relationship between maternal parenting patterns in feeding and the nutritional status of toddlers. This research is in line with research by Gunawan, Pribadi and Rahmat, (2020), which found a p-value = 0.000, which means there is a relationship between parenting patterns and the incidence of stunting.

In research conducted by Afiatna and Maryanto (2021) it was stated that the majority of children who applied neglectful parenting experienced nutritional deficits. By ignoring eating behavior, parents are low in making controls, demands and responses. Authoritarian parenting style in providing food to children with high demands without responsiveness from parents. This results in children becoming passive and lacking the courage to convey to their parents their desires and needs for food (Rofiqoh et al., 2021). According to Hughes in Yumni and Wijayanti (2017), a permissive parenting style in providing food to children tends to fulfill their desires, so parents allow whatever their children want to consume. Meanwhile, democratic feeding parenting is a parenting pattern that provides feeding by parents by providing balanced demands and responses, so that children feel warmth and love from their parents (Gustina et al., 2020).

4. Conclusions

Based on the research results, it is known that the characteristics of toddlers with stunting nutritional problems are male, aged 13-35 months. Characteristics of mothers with children under five with stunting nutritional problems, are aged ≤ 30 years, highly educated (high school - bachelor degree) and income below the regional minimum wage. The results of the research show that there is a significant relationship between maternal parenting patterns in feeding and the nutritional status of toddlers in the Tanjung Priok District Health Center working area with a p-value = 0.000. The characteristics that are significantly related to the nutritional status of toddlers are the child's gender with a p-value = 0.035 and family income/month with a p-value = 0.000.

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