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# Family roles and the incidence of wasting in toddlers: A Study at Pulo Lor Health Center, Jombang Regency

Ratna Dewi Permatasari, Henny Sulistyawati, and Yana Eka Mildiana

Department of Midwifery, Institute of Technology Science and Health Insan Cendekia Medika Jombang, Indonesia

Corresponding author: Ratna Dewi Permatasari (e-mail: [wahib.rifai81@gmail.com](mailto:wahib.rifai81@gmail.com))

**ABSTRACT** Toddlerhood is a very important and rapid period of life for the process of physical growth and psychomotor, mental, and social development. The nutritional problem of wasting in toddlers, especially those aged 1-5 years, is very serious and needs further treatment. Several studies have suggested that the role of the family, especially the family's parenting style, plays a significant role in nutritional problems in toddlers. The role of families who pay less attention to the diet of their toddlers has an impact on the diet that is not in accordance with the nutritional needs of children so that it has an impact on the health status of children under five. The purpose of this study was to determine the role of the family on the incidence of wasting in toddlers. The research design used analytical methods with a Cross Sectional approach. The sampling method was done by total sampling. The instrument used validity and reliability tests and secondary data from the MCH / KMS book for toddlers and measured body weight and length / height using Microtoice and and infant Body Measuring Board (in toddlers who cannot stand yet) measurements parallel to the top of the head and reading with an accuracy of 0.1 cm. The body weight was weighed in kilograms using the One Med brand baby scale dacin scale. After the questionnaire data were collected, tabulation was done and then statistical tests were carried out using the chi-square test with a level of meaning  $\alpha = 0.05$ . There is a relationship between the role of the family and the incidence of wasting obtained p value  $0.025 < 0.05$ , meaning that there is a significant relationship between maternal knowledge and the incidence of wasting in toddlers. Providing quality supplementary food /PMT is a solution that must be applied by parents who have children with impaired fulfillment of nutritional problems, parents take toddlers to the posyandu regularly to weigh body weight and measure height length for early detection of wasting event.

**INDEX TERMS** Family roles; toddler; nutritional problem; supplementary food

## I. INTRODUCTION

The toddler years are a very important period of life where a very rapid growth and development process occurs, namely physical growth and psychomotor, mental, and social development. Psychosocial stimulation must be started early and on time to achieve optimal psychosocial development. To support the physical growth of toddlers, practical guidance on food with balanced nutrition is needed, one of which is eating a variety of foods that meet nutritional requirements [1].

UNICEF reported that 45.4 million or 6.7% of children under 5 years old in the world suffered from wasting or underweight in 2020. South Asia is the region with the highest percentage, reaching 14.7%. The West and Central Africa region ranks second with the percentage of wasting in

children under 5 years of age at 7.2%. Next, the Middle East and North Africa region is 6.3% [2].

Based on the Indonesian Health Survey (SKI), the national wasting rate shows improvement with the national wasting percentage decreasing by 2.6%. The highest figure was in North Maluku Province at 6.9% of the total number of toddlers weighed, 592, although East Java reached 1.2% of the 14,071 toddlers weighed. Thus there are around 2900 toddlers who are still experiencing wasting [3].

In Jombang Regency for three consecutive years, the problem was wasting among toddlers. The percentage of malnourished toddlers in 2021 was 2.76%, then in 2022 it was 1.8%, that is, there were 1,159 wasted toddlers out of all 67,886 wasted toddlers, and in 2023 the percentage of wasted toddlers in Jombang Regency in 2023 was 0.6 %, namely

there are 420 malnourished toddlers out of all toddlers weighing 70,682 toddlers with the highest figure being 2.7% or around 12 toddlers in the Pulo Lor Health Center working area. (Jombang Health Office Profile, 2023), to overcome this problem cannot only be handled by the health sector but there also needs to be integration between the government, private sector, NGOs, and the community such as the Nutrition Recovery Park where one of the activities is providing additional recovery food (PMT). Based on local food ingredients with regional specialties adapted to local conditions. [4].

In the initial survey conducted by researchers at the Pulo Lor Community Health Center, 12 toddlers experienced wasting. Researchers met 4 mothers whose children under five were wasted at the posyandu in the Pulo Lor working area. The first informant was a mother who had a 19-month-old toddler. The mother said her toddler only wanted to drink breast milk, and wanted to eat but only a little. This may occur due to the mother's lack of knowledge in providing food intake to her toddler.

The second informant is a mother who has an 11-month-old toddler. The mother knew that her child was malnourished and according to her, the reason was that the mother's toddler had difficulty feeding her because the mother did not change her toddler's food menu from morning to evening, which was due to economic factors.

The third informant is a mother who has a 49-month-old toddler. The mother said that the reason why the mother's toddler was thin was due to economic factors so the mother could not give her toddler a varied diet. The fourth informant is a mother who has a 36-month-old toddler. The mother said her child did not want to drink formula milk, her child still drinks breast milk to this day, and it is difficult to feed her. Mothers give the same menu to their toddlers and other family members due to economic factors and the mother's lack of knowledge in changing her toddler's food menu.

Even though it has decreased, cases of severe waste and wasting are still a nutritional health issue in Indonesia because they have not achieved the goals set in the National Medium Term Development Plan (RPJMN) and the Strategic Plan (Renstra), namely the wasting rate is below 9.5% and is still far below international standards set by the World Health Organization and the World Health Assembly, namely reducing and maintaining under-five wasting under 5% by 2025 [5]. Malnutrition in toddlers can be caused by several factors, including inadequate intake and the presence of infectious diseases, as well as poor parenting patterns and low birth weight.

Wasting is caused by several factors, namely insufficient food intake and infectious diseases which are direct factors. Family food security, child care patterns, and inadequate health and environmental services are indirect factors [6] Wasting has such a big impact that it is still considered a public health problem. Children under five who are wasting can indirectly experience nutritional deficiencies which in the end can have an impact on healthy growth, infectious diseases, and children's intelligence. Malnutrition

that is not resolved during infancy can affect intellectual performance, work capacity, and health conditions in later life [6]. Several factors related to the incidence of wasting are carbohydrate intake, food expenditure [7], infectious diseases, exclusive breastfeeding, completeness of immunizations [8], maternal age and LBW [9].

Even though the number is still below the national target figure, the number of children under five must still be a concern. There are still incidents of wasting of toddlers, especially in East Java due to a lack of nutritional intake, and a lack of public understanding about the nutritional value of toddlers, in this case indirectly related to the role of the family. The role of the family as a motivator, educator, and facilitator in providing a good diet for family members with stunted toddlers supports health [10].

Apart from that, the family plays a role in fulfilling adequate dietary patterns and nutritional needs [11] Good eating patterns for toddlers are generally problematic due to many influencing factors, including in terms of family perception and knowledge of health, family culture, environment, and availability. Food and media or sources of information. At this age, most children only like to eat one type of food. The role of the family is not paying attention to their toddler's diet so that the food given is not by the child's nutritional needs [12].

According to the results of an initial survey in the Pulo Lor Community Health Center working area which was conducted on families with wasting toddlers, the results showed that the role of families with good eating patterns was around 30% and the role of families with poor eating patterns was around 70%. Wasting can be prevented by providing counseling to families in managing their toddler's diet by providing food with high protein or high nutritional content and various adequacies, in other words by providing additional quality food. [11].

The government program aims to be free of waste by organizing the Healthy Indonesia program with a family approach [9]. The target for toddlers is to monitor growth and development, providing additional food and providing optimal health services. On the availability of food in sufficient quantity and adequate quality and available at all times, namely through increasing food ingredients and diversifying and developing processed production, increasing the diversity of food consumption to strengthen food security at the household level, improving nutrition services to achieve good nutritional conditions to improving nutritional status to achieve a healthy life [13].

Based on the description of the problem above, this research aims to determine the relationship between the role of the family and the incidence of wasting among toddlers in the Pulo Lor Jombang Health Center Work Area.

## II. METHODOLOGY

In this study the design used was a Cross Sectional approach [14]. The purpose of the study was to determine the relationship of family roles to the incidence of wasting in toddlers in the Pulo Lor Jombang Health Center Region. The

population was 12 toddlers. The sample in this study were families with wasting toddlers at Pulo Lor Health Center, Jombang Regency, totaling 12 toddlers. The sampling technique in this study used Total Sampling, namely Total sampling is a sampling technique where the number of samples is the same as the population [14]. Respondents are parents or caregivers of toddlers. The instrument used was a closed questionnaire based on [15] using a Likert scale. The instrument has been tested for validity and reliability of the instrument in addition to using secondary data from the KIA / KMS book for toddlers and measuring body weight and length / height using Microtoice and infant Body Measuring Board (in toddlers who cannot stand yet) measurements parallel to the top of the head and reading with an accuracy of 0.1 cm. The body weight was weighed in kilograms using the One Med brand baby scale dacin scale. The data was processed using frequency distribution and then chi-square statistical test was conducted to determine the relationship between family roles and the incidence of wasting with a significance level ( $\alpha$ ) = 0.05. This study has obtained ethical eligibility from the Health Research Ethics Commission (KEPK) at ITSKes Insan Cendekia Medika Jombang, with Number: No. 013/KEPK/ITSKES-ICME/I/2024.

III. RESULT

The respondents in this study were mothers/caregivers of 12 wasting toddlers aged 12-59 months who were wasting in the working area of the Pulo Lor Health Center, Jombang Regency in 2024 (January-March 2024).

TABLE 1 Frequency Distribution of Respondent Characteristics in the Pulo Lor Community Health Center area in 2024			
No	Respondent Characteristics	n	%
1	Child's age		
	a. Median		34,00
	b. Min-Maks		12-59
2	Height of the child		
	a. Mean		82,74
	b. Standard Deviation		11,09
3	Child's weight		
	a. Mean		77,87
	b. Standard Deviation		9,87
4	Family Form		
	a. Nuclear family	2	16,6
	b. Big family	8	66,6
	c. The family divorced	2	16,6
5	Education		
	a. No school	2	16,6
	b. SD	5	41,6
	c. SMP	2	16,6
	d. SMA	2	16,6
	e. PT	1	8,3
6	Working Status		
	a. Doesn't work	7	58,3
	b. Work	5	41,6
7	Family income		
	a. <Rp. 2.500.000/month	9	75
	b. >Rp. 2.500.000/month	3	25
8	number of children in the family		
	a. < 2 children		

9	b.	> 2 children	5	41,6
			7	58,3
	a.	Man	7	58,3
		Woman	5	41,6

Source: Researcher Primary Data 2024

Table 1.1 explains that toddlers aged 12-59 months in the Pulo Lor Community Health Center area are classified as wasting with a median age value of 34.00. The age range for toddlers has a child's height with an average of 82.74 and a standard deviation of 11.09. The range in toddler age has a child's weight with an average of 77.87 and a standard deviation of 9.87. Children under five in the Pulo Lor Community Health Center area have a large family of 8 families (66.6%) with the majority of families' education levels being elementary school in 5 families (41.6%) and non-working status in 5 families (41.6%). The status of caregivers for toddlers in families where the majority do not work has 7 families (58.3%), with family income < IDR 2,500,000.00 for 9 families (75.0%). The opinion of the majority of families is below the minimum wage for Jombang Regency but they have to finance a large number of families, namely the number of children in the family is >2 children, 7 families (58.3%) with the majority being male, 7 toddlers (58.3%).

TABLE 2 Indicators of family roles in the Pulo Lor Community Health Center area in 2024			
Indikator	Mean	Median	Min-Maks
a. Informal Roles			
a. Our family has quite a lot of free time to discuss the hobbies of each family member	2,74	3,00	1-4
b. We always discuss the division of tasks and responsibilities of each family member in terms of housework	2,72	3,00	1-4
Total	2,677	3,00	1-4
2. Informal Roles			
a.Each family member has their duties and responsibilities in terms of completing homework	2,82	3,00	1-4
b. When we ask other family members to do something, the results are what we want	2,99	3,00	1-4
c. Our family has no problems meeting our financial obligations	3,23	3,00	1-4
d. Distribution of tasks fairly and evenly to all family members	3,01	3,00	1-4
e. We are satisfied with the division of tasks in completing the household work that has been given	3,00	3,00	1-4
f. We always remember what our homework duties and responsibilities are	3,02	3,00	1-4
Total	2,829	3,00	1-4

Source: Researcher Primary Data 2024

Table 2 with the highest average value in question number 7 with the same median and minimum maximum value, namely a median of 3.00 minimum of 1, and maximum of 4. Table 2 shows that the formal role indicator has the highest average value of 2.829 with a minimum value of 1.5 and a maximum value of 3.7. The informal role indicator has the lowest mean value of 2.677 with a minimum value of 1.0 and a maximum value of 4.0.

**TABLE 3**

**Distribution indicators of family roles in the Pulo Lor Community Health Center area in 2024**

Variable	n	%
Family Role		
Good	3	25 %
Currently	6	50 %
Not enough	3	25 %

Source: Researcher Primary Data 2024

Table 3 shows that the implementation of family roles in the Pulo Lor Community Health Center Area, Jombang Regency is mostly in the medium category, 6 families (50%) while the remaining 3 families (25%) have family roles in the good and poor categories.

**TABLE 4**

**Frequency distribution indicators of answers to each question on toddler food consumption and wasting incidents in the Pulo Lor Community Health Center area in 2024**

No	Question	Answer			
		Yes		No	
		f	%	f	%
1	Mothers give their toddlers a different food menu at each mealtime	5	41,6	7	58,3
2	mothers provide nutritious food to their toddlers	5	41,6	7	58,3
3	Mother gives milk and vitamins to her toddler	7	58,3	5	41,6
4	Mother gives mother's toddler food 3 times in 1 day	8	66,6	4	33,3
5	Mother gives side dishes to every meal of her toddler	7	58,3	5	41,6
6	mother gives fruit and vegetables to her toddler	5	41,6	7	58,3
7	mother gives snacks other than rice to her toddler	5	41,6	7	58,3
8	The mother provides the same food menu for her toddler as the other family members	10	83,3	2	16,6
9	Mother provides food portions according to the needs and age of the mother's toddler	9	75	3	25
10	Mother gives snacks containing flavoring food ingredients to her toddler	10	83,3	2	16,6

Source: Researcher Primary Data 2024

Table 4 above shows that the food consumption statements most often answered "Yes" are statements number 8 and 10, namely the mother provides the same snack menu for the toddler as the other family members and the mother does not provide snacks containing flavoring ingredients. 10

respondents (83.3%). Meanwhile, the statement that was answered most often with "No" was statement 1,2,6,7, namely the mother gave a different food menu at each meal to the toddler, the mother gave nutritious food to the toddler, and the mother gave fruit and vegetables to the toddler. Mothers, mothers gave snacks other than rice to their toddlers as many as 7 respondents (58.3%).

**TABLE 5**

**Frequency Distribution Based on Waste Measurement Results in toddlers with wasting incidents in the Pulo Lor Community Health Center area in 2024**

No	Wasting	f	%
1	Very thin	5	41,6
2	Thin	7	58,3
Total		12	100

Source: Researcher Primary Data 2024

Table 5 above shows that of the 12 respondents, there were 7 underweight toddlers (58.3%) and 5 underweight toddlers (41.6%).

### Bivariate Analysis

After carrying out univariate analysis, the research results were carried out using bivariate analysis, namely using the chi-square test, the relationship between the independent variables and the dependent variable with a statistical significance limit of p-value (0.05), the following results were obtained:

**TABLE 6**

**Relationship between food consumption and wasting incidents in toddlers and wasting incidents in the Pulo Lor Community Health Center area in 2024**

No	Food Consumption	Wasting in toddlers				P value
		Very thin	Thin	Total		
		f	%	f	%	
1	Not good	3		5		0.025
2	good	2		2		
Total		5		7		

Source: Researcher Primary Data 2024

Table 6 above shows that of the 12 respondents with poor food consumption categories, the majority had thin toddlers as many as 5 respondents (41.6%), while of the 12 respondents with good food consumption categories, the majority had thin toddlers as many as 2 respondents (16.6%). The results of the bivariate test using chi square obtained a p value of 0.025 <0.05, meaning that there is a significant relationship between maternal knowledge and the incidence of wasting in toddlers at Pulo Lor Health Center, Jombang Regency.

**TABLE 7**

**Correlation between the Implementation of Family Roles and the Incident of Wasting in Toddlers in the Pulo Lor Jombang Health Center Area 2024**



Family role	wasting incident Thin(%)	Very thin n(%)	signifikan x2	OR	95%CI minimal- maksimal
Good	2(16,6%)	1(8,33%)	8,89	7,65	1,72-
Medium	1(8,33%)	1(8,33%)	(0,001)		31,712
Less	4(33,3%)	3(25%)			

n % = number of respondents (presentase); OR = Odds Ratio;  $\chi^2$  = Pearson Chi-Square; 95% CI = 95 Confidence Interval  
Source: Researcher's Primary Data January – March 2024.

Table 7 shows that there is a difference between family roles and the incidence of wasting as evidenced by the Chi Square test ( $\chi^2 = 8.89$ ; p-value = 0.001), it can be concluded that there is a relationship between the implementation of family roles and the incidence of wasting in toddlers in the Pulo Lor Jombang Health Center working area. Toddlers who have families with family role implementation in the good category have a 7.65 times chance of experiencing stunting (OR = 7.65; 95% CI = 1.72-31.72). The implementation of family roles in the good category had 2 toddlers (16.6%) experiencing wasting and 1 toddler (8.33%) experiencing very thin wasting. In the implementation of family roles in the moderate category, there were 1 toddler (73.5%) experiencing wasting and 1 toddler (8.33%) was very thin, while in the poor category there were 4 toddlers (33.3%) experiencing wasting and 3 toddlers (25%) were very thin.

IV. DISCUSSION

a. Implementation of Family Roles in Pulo Lor District in 2024

The results showed that the implementation of family roles was highest with two indicators, namely informal and formal roles. The scores on the indicators have a close difference, namely the formal role indicator with a mean value of 2.677 and the informal role indicator with a mean value of 2.829. The role of the family greatly influences the incidence of wasting in children under five years of age based on family form. This study found that the majority of respondents had a large family (66.6%). The results of this study are supported by research conducted by [16] ; [17]. that the number of family members is defined as the number or number of people who usually live in one household and whose food management is managed in the same kitchen [18]. BKKBN categorizes that families with less than 4 members are classified as small families. Meanwhile, families with Having more than 4 members is classified as a large family [17].

The number of family members affects the level of food consumption which is then related to nutritional status. A large number of family members without a high income will result in uneven food distribution. The more the number of family members, the more the number of food needs that must be met. Then if the food allocation for toddlers is considered insufficient and uneven, it can interfere with child growth. Meanwhile, if the number of family members is relatively small, the needs that must be met are also reduced so that

families can allocate more income to buy more nutritious food [19].

The number of children in this family will also further affect the incidence of stunting when viewed from the family's economic status based on family income. Family income can be seen from the implementation of the role of parents, especially working fathers. In this study, most respondents had a family income of less than Rp.2,500,000.00 as many as 9 families (75.0%). Low income makes it difficult for families to obtain food with high nutritional value and variety [20]. Low-income families are less able to meet the food needs of their family members, so toddlers are more at risk of malnutrition [21]. In contrast, families with high incomes are able to provide food with higher quality and quantity, so that the nutritional needs of family members can be met Families with high incomes can provide quality food and more health services for their children so that they can prevent wasting. [22] The opposite is true where families with low income tend to provide food based on economic value rather than the nutritional value of the food, which leads to not fulfilling the nutritional adequacy of family members including toddlers, which can lead to wasting [23].

Toddlers who have families with low income are at 8.5 times greater risk of wasting. The results of this study are supported by previous research conducted at Paud Surya Ceria Pringsewu, which concluded that family income and the incidence of wasting in toddlers have a significant relationship [24].

Nutritional problems in children are also influenced by the role of parents in feeding children, namely by providing a variety of foods to children. Most parents only give two types of food in each meal, such as rice with vegetables or rice with one type of side dish. The lack of creativity of parents in providing variety or diversity of food makes children easier to eat. bored with the food given so that it makes it difficult for children to eat.

According to the taxonomy of nursing diagnoses in [25]. nursing diagnoses that are in accordance with problems related to family roles are readiness to improve relationships in domain 7 role relationships nursing interventions that can be given by nurses in toddlers to improve the implementation of family roles by increasing roles to improve relationships by clarifying and supporting behaviors that are specific roles. Things that can be done first identify the various roles in the life cycle and the usual roles in the family. Second, support the family to identify positive strategies for the management of role changes. Third, facilitate discussion about adaptation of the family role to compensate for the role of the ill family member.

b. Stunting incidents in the Pulo Lor Community Health Center area, Jombang Regency

Based on the results of the study, it shows that in the Pulo Lor Health Center Area, Jombang Regency, families who have children under five have problems with nutritional status or

wasting. In this study, it is possible that children under five have unmet nutritional intake so that the z-score value is classified as less (wasting).

According to the results of the study, 41.6% of parents of toddlers who suffered from wasting had elementary school education. A good level of parental education will make it easier for parents to understand the information obtained, in this study the majority of the education level of caregivers of toddlers is elementary school or equivalent with a high incidence of wasting. This is in line with Ibrahim's research [26] that the level of education of parents, especially mothers who generally act as the main caregiver for children, can affect the nutritional status of children. Good parenting can reduce the incidence of wasting, so the level of knowledge of family caregivers can indirectly affect the incidence of wasting.

Wasting can be prevented by providing toddler nutrition and feeding according to their age development. First, provide information in the form of written materials such as booklets and posters containing information in accordance with the needs of knowledge about nutrition for toddlers with wasting. Second, provide direction to parents/caregivers of toddlers to offer food in small portions but with frequent feedings. Third, offer foods that are high in iron and protein. Fourth, provide direction for parents/caregivers to have regular meal times and eat as a family such as eating together. Fifth, providing healthy food choices, encouraging eating raw/cooked vegetables, and inviting children to participate in meal preparation. Based on the results obtained, the researcher revealed that to achieve optimal nutritional status, it can increase the role of the family, both formal and informal roles. Involving the role of the family in fulfilling the nutritional intake of toddlers can help health workers in providing interventions for toddlers who experience nutritional status problems. Increasing the role of the family can be done by providing information and understanding of how the family must carry out its role in childcare, especially at the age of toddlers who cannot act autonomously.

Based on the results of the study, there is a relationship between food consumption and the incidence of wasting in toddlers, indicated by the results of the chi square test analysis obtained p value  $0.025 < 0.05$  with a prevalence rate of 0.765 (95% CI) which means that there is a relationship between food consumption and the incidence of wasting in toddlers and food consumption is a risk factor for wasting in toddlers at Pulo Lor Health Center, Jombang Regency. This is in line with Almatier in the book *Principles of Nutrition*, which says that the state of nutritional health depends on the level of consumption of nutrients contained in daily food. The level of consumption is determined by the quality of the dish. This study is also in line with Rahmalia Afriyani's research [27] with the title of factors that influence the incidence of wasting in toddlers aged 1-5 years at the Talang Betutu Health Center, Palembang City. Bivariate analysis showed a significant relationship between nutritional intake and the incidence of wasting (p-value = 0.001). It can be concluded that the factors

that influence the incidence of wasting are nutritional intake and history of infectious diseases based on immunization status. However, this study is not in line with research [28] entitled factors affecting the incidence of wasting in children under five in Marioriwawo District, Soppeng Regency.

The results of the researcher's data processing showed that of the 12 respondents, there were 2 respondents with a poor food consumption category, the majority had thin toddlers as many as 5 respondents (41.6%), while of the 12 respondents with a good food consumption category, the majority had thin toddlers as many as 2 respondents (16.6%). Based on the results of indepth interviews conducted by researchers, the informants were good at providing a variety of food menus to their toddlers, although the informants still provided foods that contained flavorings to the toddlers. However, another problem is that the toddlers are difficult to feed and the informants lack patience in feeding the toddlers. Besides It only feeds the toddler when the toddler asks for food, which means that the toddler is not fed according to the meal schedule due to the toddler who is difficult to eat and will cry if forced. Providing a varied food menu but the toddler is difficult to eat and difficult to drink milk. According to the researcher's assumption, food consumption is one of the factors that influence the incidence of wasting in toddlers at Pulo Lor Health Center, Jombang Regency. It is evident from the results of this study that respondents with poor food consumption have more underweight toddlers than toddlers with good food consumption. This is in accordance with the results of the questionnaire distributed by researchers who found one of the causes of wasting toddlers is the lack of patience of mothers in providing food intake to their toddlers and not feeding their toddlers according to the toddler's feeding schedule because the toddler has been fed so that the toddler's nutritional needs are not met. The relationship between the implementation of family roles and the incidence of wasting in toddlers in the Pulo Lor Health Center area, Jombang Regency. The results of the statistical test of this study showed that there was a relationship between the implementation of family roles with the incidence of wasting in toddlers in the Pulo Lor Health Center area of Jombang Regency with a p-value = 0.025, meaning that the study showed that there was a relationship between the independent variable and the dependent variable. The implementation of family roles is mostly in the good and less category with most toddlers experiencing wasting. This is in accordance with [29] that the structure of family roles can affect the incidence of stunting based on family form. Children living with nuclear families have a higher incidence of stunting compared to children living with large families and children living with single families have a lower incidence of stunting compared to children living with large families. In this study, those living with large families had a lower incidence of stunting, this can occur because children living in large families have additional family roles in terms of childcare and can affect household welfare and have a major influence on the decision-making

process of the head of the family and other male family members.

Children who live with a single family have roles in the family that are not fulfilled in the family. Other studies have shown that parental education can affect nutritional status, one of which is the incidence of stunting. This is supported by the results of research [29] which states that parents with low levels of education have children with nutritional status problems less than parents with high levels of education. Optimal implementation of family roles to support the improvement of nutritional status in toddlers so that can reduce the incidence of stunting. The role of the family can be carried out well, so the family can increase its role, especially in providing nutrition to children under five years of age. The fulfillment of nutrition in toddlers cannot be separated from the role of the family, especially families who care for children, so the fulfillment of nutrition can be done by teaching families about the nutritional needs of toddlers. Based on the results of the study, interventions that can be carried out by health workers in families who have children under five years of age with malnutrition / wasting status problems according to [29]. teaching: toddler nutrition by providing intrusions on developmentally appropriate nutrition and feeding practices. First, providing information in the form of written materials such as booklets and posters containing information in accordance with the needs of knowledge about nutrition for stunted toddlers. Second, providing direction to parents/caregivers of toddlers to offer food in small portions but with frequent feedings. Third, offer foods that are high in iron and protein. Fourth, provide direction for parents/caregivers to have regular meal times and eat as a family such as eating together. Fifth, providing healthy food choices, encouraging eating raw/cooked vegetables, and inviting children to participate in meal preparation. Based on the results obtained, the researcher revealed that to achieve optimal nutritional status, it can improve the role of the family both formal and informal roles.

Involving the role of the family in fulfilling the nutritional intake of toddlers can help health workers in providing interventions for toddlers who experience nutritional status problems. Increasing the role of the family can be done by providing information and understanding of how families must carry out their role in childcare, especially at the age of toddlers who cannot act autonomously.

## VII. CONCLUSION

After conducting research for three months at the Pulo Lor Jombang Community Health Center, the results obtained were that the implementation of family roles in the Pulo Lor Jombang Public Health Center working area showed that most of the implementation of family roles was in the poor category (33.3%), wasting incidents among toddlers in the Jombang Pulo Lor Public Health Center working area. showed that the majority experienced wasting with the criteria of being thin

(58.3%), there was a relationship between the implementation of family roles and the incidence of wasting, with a p value of  $0.025 < 0.025$ . 0.05. So it can be concluded that the role of the family is closely related to the incidence of wasting in toddlers. It is hoped that families will involve the family's role in fulfilling nutrition for toddlers so that they can improve the nutritional status of toddlers. Providing health education to families in terms of providing quality supplementary food/PMT to increase family knowledge in feeding. The role of the family is to invite toddlers to weigh their weight and measure their height to the posyandu regularly.

## VI. REFERENCES

- [1] M. and B. W. Andriani, Toddler Nutrition and Health The Role of Micro Zinc in Toddler Growth. Jakarta: Kencana Prenadamedia Group, 2014.
- [2] Unicef, "Improving Child Nutrition The achievable imperative for global progress," New York, 2013.
- [3] K. BKPK, Indonesian Health Survey Accurate Data for the Right Policy. Jakarta: Indonesian Ministry of Health, 2023..
- [4] Reskades, Health profile of jombang district, vol. 13, no. 1. 2022.
- [5] Ministry of Health, "Regulation of the Indonesian Minister of Health No. 2 of 2020," vol. 2507, no. February, pp. 1-9, 2020.
- [6] M. de Onis and F. Branca, "Childhood stunting: A global perspective," *Matern. Child Nutr.*, vol. 12, pp. 12–26, 2016, doi: 10.1111/mcn.12231.
- [7] I. N. Indonesia, "RELATING TO WASTING IN CHILDREN 6 ± 59 MONTHS OF AGE IN INDONESIA IN 2010," vol. 23, no. 3, pp. 110-121, 2013.
- [8] H. Mulyati, M. Mbali, H. Bando, R. P. Utami, and O. Mananta, "Factor analysis of the incidence of wasting in children under five years of age 12-59 months at Bulili Health Center, Palu City: A cross sectional study," *AcTion Aceh Nutr. J.*, vol. 6, no. 2, p. 111, 2021, doi: 10.30867/action.v6i2.345.
- [9] H. Sajalia, Y. Lanti Retno Dewi, and B. Murti, "Life Course Factors associated with Wasting in Children under Five in East Lombok, West Nusa Tenggara," no. 36, pp. 208–208, 2018, doi: 10.26911/theicph.2018.03.39.
- [10] and E. G. J. Friedman, M., V. R. Bowden, NoTextbook of Family Nursing Research, Theory, and Practice, 5th Edition: EGC, 2010.
- [11] Ministry of Health of the Republic of Indonesia, "Handbook on the Results of the Study of the Status of Nutrition of Indonesia (SSGI) at the National, Provincial and District/City Levels in 2021," 2021.
- [12] R. Purwanti, I. Diananingrum, H. Azni, R. A. Savitri, H. Rahmarani, and N. Febrianah, "Family Assistance Program for Undernourished Toddlers in Karanganyar Health Center Area, Semarang City," *Wikrama Parahita J. Pengabd. Masy.*, vol. 4, no. 2, pp. 75-80, 2020, doi: 10.30656/jpmwp.v4i2.1976.
- [13] V. M. Aguayo and P. Menon, "Stop stunting: Improving child feeding, women's nutrition and household sanitation in South Asia," *Matern. Child Nutr.*, vol. 12, pp. 3–11, 2016, doi: 10.1111/mcn.12283.
- [14] Nursalam, Nursing Management Applications in Professional Nursing Practice, 4th Edition. Jakarta: Salemba Medika, 2014.
- [15] and E. G. J. Friedman, M., V. R. Bowden, Textbook of Family Nursing, 5th Edition, Jakarta: EGC, 2010
- [16] T. A. Budiana and D. Supriadi, "The Relationship between the Number of Family Members, Parents' Education and Child Health Insurance Participation with the Incidence of Underweight in Toddlers 24-59 Months at Puskesmas Cimahi Selatan," *J. Health Science. Bhakti Husada Heal. Sci. J.*, vol. 12, no. 1, pp. 38-50, 2021, doi: 10.34305/jikbh.v12i1.256.
- [17] Y. D. Rahayu, B. Yunariyah, and R. Jannah, "An Overview of Factors Causing the Incidence of Stunting in Toddlers in the Working Area of the Semanding Tuban Health Center," J.

- Kesehat. Masy., vol. 10, no. 2, pp. 156-162, 2022, doi: 10.14710/jkm.v10i2.32271. [18] Badan Pusat Statis, *Statistik Indonesia 2020*.
- [19] A. Maulid, Supriyadi, and S. R. Dewi, "The Relationship between Family Role and the Incidence of Stunting in Toddler Age Children in the Jelbuk Health Center Working Area, Jember Regency," *J. Kesehat. Univ. Muhamadiyah Jember*, vol. 34, pp. 1-14, 2020.
- [20] M. Rumende, N. H. Kapantow, and M. I. Punuh, "The Relationship Between Socioeconomic Status and Nutritional Status in Children 24-59 Months of Age in Tombatu Uatara District, Southeast Minahasa Regency," *J. KESMAS*, vol. 7, no. 4, pp. 2-13, 2020.
- [21] "Analysis of factors associated with malnutrition in children under five," *Pedimaternals Nurs. J.*, vol. 3, no. 1, pp. 83-91, 2014.
- [22] R. A. D. Sartika, "An Analysis on The Utilization of Health Service Program Related to Nutritional Status of Toddlers," *J. Kesehat. Masy. Nas.*, vol. 5, pp. 76-83, 2010.
- [23] L. S. Galgamuwa, D. Iddawela, S. D. Dharmaratne, and G. L. S. Galgamuwa, "Nutritional status and correlated socio-economic factors among preschool and school children in plantation communities, Sri Lanka," *BMC Public Health*, vol. 17, no. 1, pp. 1-12, 2017, doi: 10.1186/s12889-017-4311-y.
- [24] D. . Istiqomah Hasyim, "The Relationship between Economic Status and the Incidence of Wasting in Paud Surya Ceria Pringsewu," *J. Ilm. Kesehat.*, vol. 6, no. 1, pp. 20-24, 2017.
- [25] W. Bulechek, Butcher, Dochterman, *Nursing interventions classification (NIC)*. Philadelphia: Elsevier, 2013.
- [26] N. Nuraini and P. P. Lestari, "Analysis of the Relationship between Maternal Characteristics, Knowledge and Socio-Culture with the Incidence of Stunting," *J. Kesehat.*, vol. 9, no. 3, pp. 140-149, 2021.
- [27] M. N. Afriyani R, "Factors influencing the incidence of wasting in toddlers aged 1-5 years," *J. Kesehat.*, pp. 66-72, 2016.
- [28] Hendrayati, A. Amir, and Darmawati, "Factors Affecting the Incidence of Wasting in Toddlers in Marioriwawo District, Soppeng Regency," *Food Nutrition Media*, vol. 15, no. 1, pp. 56-61, 2013.
- [29] U. K. Khattak, S. P. Iqbal, and H. Ghazanfar, "The Role of Parents' Literacy in Malnutrition of Children Under the Age of Five Years in a Semi-Urban Community of Pakistan: A Case-Control Study," *Cureus*, vol. 9, no. 6, 2017, doi: 10.7759/cureus.1316.
- BL23, GV 3, GV 4 on Reducing Low Back Pain in Third Trimester Pregnancy at Jelakombo Jombang Health Center".



Henny Sulistyawati born in Jombang in 1987. Lecturer at the Institute of Technology, Science and Health, Insan Cendekia Medika Jombang, vocational faculty, department of obstetrics. The author graduated Diploma IV in midwifery in 2009 at Kadiri University. The author graduated his master's degree in family medicine in 2012 at Sebelas Maret University. First author in 2022 researches about "The Effect of Oxytosin Massage on Breast Milk Production in Postpartum Mothers".



Yana Eka Mildiana born in Jombang in 1986. Lecturer at the Institute of Science and Health Technology, Insan Cendekia Medika Jombang, vocational faculty, department of midwifery. The author passed diploma III midwifery in 2008 and Diploma IV in midwifery in 2009 at STIKES Husada Jombang. The author graduated master's degree in public health 2016 at Diponegoro University. First author in 2018 researches about "The Effect Of Baby Gym On Increasing

Development Of 6 Months Age Baby", Study in Kayangan Village, Diwek District, Jombang Regency.

## AUTHOR BIOGRAPHY



Permatasari born in Kediri East Java Indonesia in 1985. Lecturer at the Institute of Science and Health Technology, Insan Cendekia Medika Jombang, departmen of midwifery. The author passed diploma III midwifery in 2006 and passed Diploma IV midwifery in 2011 at STIKES Insan Cedekia Medika Jombang. The author graduated master's degree in public health 2017 at UNS University. First author in

2019 researches about "Effectiveness of Acupressure Techniques at Points