

**ORIGINAL ARTICLE**

# The Correlation between Parenting Patterns and The Incidence of Wasting among Toddlers in Tempurejo Village, Kediri City

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**ABSTRACT**

**Background:** Wasting is a nutritional status problem characterized by weight-for-length or weight-for-height, and it can be influenced by various factors, including parenting patterns. This study aims to determine the relationship between parenting patterns and the incidence of wasting in Tempurejo, Kediri. **Methods:** This study employed a quantitative approach with a cross-sectional design, involving 178 respondents selected through purposive sampling. **Results:** Frequency of age 12-36 (143), frequency of democratic parenting (94), authoritarian parenting (92), and permissive parenting (96). Democratic ( $p=0.011$ ), authoritarian ( $p=0.017$ ), and permissive ( $p=0.007$ ) parenting styles were associated with wasting. **Conclusions:** Parenting styles (democratic, authoritarian, and permissive) were significantly correlated with the incidence of wasting among toddlers in Tempurejo Village, Kediri City. These findings highlight the importance of parental understanding, particularly among mothers, in supporting optimal child growth and development.

**Keywords:** Parenting patterns, Parenting styles, Wasting, Toddlers, Cross-sectional study

**INTRODUCTION**

Indonesia, as a developing country, continues to face nutritional problems among children under five years old. In developing countries, children often experience impaired physical growth due to poor dietary intake. This is caused by several things, such as poverty, poor economic circumstances, insufficient income, and lack of food intake. Age, gender, activity, weight, and height are all factors that affect each person's nutritional needs (Putri et al., 2021).

One of the important indicators used to assess the success of health programme development in Indonesia is the nutritional status of the community. Wasting is one of the key primary nutritional status health monitoring indicator that is most sensitive to socioeconomic changes in assessing the magnitude of nutritional problems in the community.

Globally, the prevalence of wasting is 6.9%, according to UNICEF-WHO- World Bank Group Joint Child Malnutrition Estimates (World Health Organization, 2023). The Survey on the Status of Nutrition Indonesia (SSGI) in 2022 is estimated at 7.2%. The SSGBI shows a decrease in the prevalence of wasting among under-fives in 2019 and 2021 to 7.4% and 7.1%, respectively. The prevalence of wasting in Jawa Timur then increased to 7.9% in Kediri. Wasting in East Java only decreased to 7.2% by 2022 (Lely Yuana, 2024). Of the 39 cities and districts in Jawa Timur with the highest incidence of wasting, Kediri is ranked 11th in 2022 and 9th in 2023 (Dinas kesehatan, 2023). Data from the Kediri City Health Office shows that the rate of wasting among under-fives is still high. Ngletih Health Centre recorded the highest percentage of wasting cases, 11.4 per cent, and Tempurejo Village had the highest number of wasting cases, 509 under-fives.

The results of research conducted with the nutrition program manager at Ngletih Health Centre in Kediri on Thursday, 24 October 2024, showed that parenting is the cause of wasting. Age, gender, activity, weight, and height are factors that affect each person's nutritional needs (Putri et al., 2021). The results of preliminary research show that parenting patterns have a significant correlation with the amount of wasting that occurs in toddlers at the Ngletih Health Centre and are the main factor causing wasting problems. Since 2021-2023, the data on wasting cases in children under five has increased. Wasting is a condition in which a child is underweight or overweight based on the Weight-for-Length (BB/PB) or Weight-for-Height (BB/TB) indices (Kemenkes, 2020).

Children affected by wasting are at risk of developmental delay, decreased immune system function, increased risk of infectious diseases, and death, especially in severely wasted children. When children experience rapid weight loss due to low calorific intake and recurrent infectious diseases, wasting occurs. As a result, children experience decreased exposure to their environment, increased frequency of crying, less socialisation with fellow children, fewer feelings of joy, and more apathy. The child may experience behavioural disorders, cognitive impairment, decreased learning achievement, and even risk of death in the long run.

Toddlers have a fast-growing body and require a lot of nutrients per kilogram of their body weight. Children under five years old who are experiencing growth and development are vulnerable to protein-calorie deficiency. Therefore, toddlers require excellent nutrition for their growth and development process (Yesvi Zulfiana et al., 2023). Caregiving parents are usually highly involved in supporting their children's growth through basic education, stimulation, and care. Compared to other age groups, toddlerhood is considered a golden period in life and requires special attention. As this is the period of a child's growth and development, proper parenting is very important, especially in terms of nutrition.

Parenting is also related to a person's nutrition. Parenting includes exclusive

breastfeeding, nutritious complementary feeding, treatment when sick, environmental hygiene, cleanliness of living quarters, and cleanliness of clothing (Nindyningrum et al., 2023). According to research (P. P. Sari et al., 2020), the parenting style applied by each family is different. Authoritarian parenting, democratic parenting, and permissive parenting are the most common. How someone parents and nurtures their child has an impact on their parenting. Parenting is different, and parenting should be tailored to the child's development.

Authoritarian parenting is characterised by parents who impose their will on their children, strictly regulate their behaviour, and give physical punishment if they make mistakes or do not act according to standards. In this parenting style, children are not given the freedom to make decisions, especially those related to themselves.

Because the parents are responsible for all decisions. One of the characteristics of this parenting is the dominant, if not absolute, power of the parents, punishment for children who disobey their parents, and the child's opinion is not heard, so the child is not at home. Restrictive and punitive parenting, non-cooperating parental attitudes, strict application of rules, and many parents demanding children without giving them a chance to talk about what they produce.

Authoritative (Democratic) parenting uses a rational and democratic approach. Parents are very concerned about it and always fulfil it by considering realistic factors of interests and needs. Parents also teach children that they do not have to fulfil all of the children's wishes and understand the importance of fulfilling life's needs. Parents also supervise and give children the freedom to do activities and socialise with their friends. This parenting can have an impact on children: they have the opportunity to communicate and think, they learn to put themselves in the place of others, and the exchange of experiences can make learning easier.

Permissive parenting is when parents give full freedom to their children and do not provide too much guidance or control; parents are lax and let children control themselves. With a significance

value of 0.023, this study is in line with the research of Fatkuriyah & Sukowati (2022). Based on the explanation of parents' lifestyles, it can be concluded that parents' lifestyles can influence their students. Influenced by permissive parenting, which emphasises permissive behaviour by showing excessive affection and discipline but less to the child, so that parental power is derived from the child. It prioritises the child's feelings over his or her behaviour or overconfidence.

In establishing parenting, it is important to support the development of parenting. According to the paper, there are a number of variables that can influence parenting (Harlock, 2010) in written work (Wiwit Pangestu, 2022). These include age, occupation, neighbourhood, parental education, gender, and health services.

The study Hawazen et al., (2024) examined the relationship between maternal knowledge, parenting, and environmental sanitation with the wasting rate of under-fives. The study found that 43.6% of under-fives were wasted, 58.4% had insufficient maternal knowledge, 60.4% had adequate parenting, and 50.5% had poor environmental sanitation. The study showed that maternal knowledge (less than 0.000), parenting (less than 0.008), and environmental sanitation (less than 0.000) were correlated with the incidence of wasting. Afrah's study (2024) found that maternal diet influenced wasting when addressing under-five malnutrition.

Based on the assessment, education, knowledge, occupation, parenting, BMI, age, and birth spacing are maternal factors that cause wasting in under-fives. Based on the results of research conducted by Fibriyanti et al. (2024), it can be concluded that parenting and income have an influence on the incidence of wasting. This study aims to determine the relationship between parenting patterns and the incidence of wasting in Tempurejo, Kediri.

## METHODS

This study used a quantitative design to investigate the association between parental. Income level and the incidence of wasting. This

study used a cross-sectional analytical observational approach. This study investigated 320 under-fives who were wasting in Tempurejo Village, Pesantren Sub-district, Kediri. They were aged between 12 and 59 months. Samples were selected using purposive sampling based on specific characteristics relevant to the study objectives. This study collected 178 under-fives aged between 12 and 59 months.

The criteria used for the sample in this study consisted of inclusion and exclusion criteria. The inclusion criteria were toddlers aged 12–59 months, toddlers whose mothers were willing to participate as research respondents and had signed the informed consent form, and toddlers residing in Tempurejo Village, Pesantren District, Kediri. Meanwhile, the exclusion criterion was toddlers with physical or congenital disabilities.

## RESULTS AND DISCUSSION

The results of a study in Tempurejo Village, Kediri City. Showed that parenting is the most influential factor affecting wasting cases in under-fives and is the most influential factor. There is a strong correlation between these two factors and the amount of waste that occurs in the area.

**Table 1.** Respondent Characteristics

Characteristics	Frekuensi (f)	Presentase %
Toddler Age		
12-36 months	143	80.3
37-50 months	35	19.7
<b>Total</b>	<b>178</b>	<b>100</b>

Based on the results of Table 1, the frequency distribution of toddler characteristics based on age in this study, the majority were aged 12-36 months, as many as 142 toddlers (80.3%).

**Table 2.** Frequency Distribution of Wasting Status in Toddlers in Tempurejo Village, Kediri City

Wasting	Frekuensi (f)	Presentase (%)
Wasting	50	28,1
No Wasting	128	71,9
<b>Total</b>	<b>178</b>	<b>100</b>

Based on the results of the frequency distribution of wasting status in toddlers in this study, the majority of toddlers were in the wasting category, with as many as 50 toddlers (28.1%).

**Table 3.** Respondent Characteristics Based on Parenting Style

Category	Frequency (f)	Percentage (%)
<b>Democratic</b>		
Poor	94	52,8
Good	84	47,2
Total	178	100
<b>Authoritarian</b>		
Poor	92	51,7
Good	86	48,3
Total	178	100
<b>Permissive</b>		
Poor	96	53,9
Good	82	46,1
Total	178	100

Based on the frequency distribution of parenting characteristics in this study, the majority of parents have less democratic parenting, as many as 94 (52.8%). Based on the frequency distribution of parenting characteristics in this study, the majority of parents have less authoritarian parenting, as many as 92 (51.7%). Based on the frequency distribution of parenting characteristics in this study, the majority of parents have less permissive parenting, as many as 94 (52.8%).

These findings indicate that suboptimal parenting patterns are still common among parents in Tempurejo Village. This condition may contribute to the higher risk of wasting among toddlers. Therefore, improving parenting practices is essential to support optimal child growth and development. Community-based interventions and health education are needed to raise parents' awareness about appropriate parenting patterns.

**Table 4.** The Correlation between parenting patterns and the incidence of wasting in toddlers in Tempurejo Village, Kediri City.

Parenting		Wasting Status				Total	P value
		Wasting		No Wasting			
		f	%	f	%		
<b>Democratic</b>	Less	34	26,4	60	67,6	94	0,011
	Good	16	23,6	68	60,4	84	
	<b>Total</b>	<b>50</b>	<b>50</b>	<b>128</b>	<b>128</b>	<b>178</b>	
<b>Authoritarian</b>	Less	33	25,8	17	24,2	92	0,017
	Good	59	66,2	69	61,8	86	
	<b>Total</b>	<b>50</b>	<b>50</b>	<b>128</b>	<b>128</b>	<b>178</b>	
<b>Permissive</b>	Less	35	27	61	69	96	0,007
	Good	15	23	67	59	82	
	<b>Total</b>	<b>50</b>	<b>50</b>	<b>128</b>	<b>128</b>	<b>178</b>	

Based on the results of the chi square test, the relationship between democratic parenting and the incidence of wasting in Table 2, the majority have less democratic parenting and have toddlers with wasting categories as many as 34 toddlers (26.4%). The results of bivariate analysis with a median value of 29 and a p value (0.011) mean that the hypothesis is accepted, which means there is a relationship between democratic parenting and the incidence of wasting in Tempurejo Village, Kediri City.

Based on the results of the chi square test, the relationship between authoritarian parenting and the incidence of wasting, as shown in Table 2, the majority have less authoritarian parenting and have toddlers with wasting category, as many as 33 toddlers (25, 8%). The results of bivariate analysis with a median value of 24 and obtained p value (0.017), then the hypothesis is accepted, which means there is a relationship between authoritarian parenting and the incidence of wasting in Tempurejo Village, Kediri City.

Based on the results of the chi square test, the relationship between permissive parenting and the incidence of wasting in Table 2, the majority have less permissive parenting and have toddlers with wasting categories as many as 35 toddlers (27%). The results of bivariate analysis with a median value of 15 obtained a p value (0.007), so the hypothesis is accepted, which means that there is a relationship between permissive parenting and the incidence of wasting in Tempurejo Village, Kediri City.

### ***Respondent Characteristic***

Based on the age of toddlers in the wasting and non-wasting groups, 143 (80.3%) were aged 12-36 months. Based on research by Anna Resqiah Asri & Nooraeni (2020), the results showed that the age of toddlers affects the incidence of wasting.

In addition, it was found that children aged less than two years (0-23 Months) tended to experience wasting 1.357 times compared to children aged more than two years (24- 59 months).

### ***The Correlation between parenting patterns and the incidence of wasting***

Based on Table 3, the results of the chi-square test show a p-value (0.008), which means that there is a relationship between the level of parental income and the incidence of wasting in toddlers aged 12-59 months in Tempurejo Village, Kediri City. Based on the research that has been done, wasting is more in the category of less parenting as many as 34 respondents (26.4%), as many as 16 respondents (23.6%) in the category of good parenting, which means that most mothers of toddlers in this study are included in democratic parenting, because the results of previous maternal research show that mothers pay less attention to their children in terms of regulating the food given, setting the right food menu limits for children, and maintaining their children's emotions (Melinda Karim et al., 2023).

Basically, democratic parenting incorporates the parent's role in providing the child's food and giving the child the opportunity to choose his or her food. In this parenting pattern, parents are not only

responsible for providing the child's food but also for maintaining appropriate emotions and rules for their child. Although mothers with democratic parenting who have toddlers with poor nutritional status can be caused by the lack of knowledge of mothers on how to provide balanced nutrition for their children. Mothers also provide control and support, but the lack of knowledge about democratic parenting makes them unable to provide optimal care.

This result is in line with HL. Bloom's theory, which states that many variables can influence disease. For example, democratic parenting may affect genetic wasting. According to this study, parents should continue to pay attention and teach their children about democratic parenting. In this way, parents can teach their children how to socialise and solve problems well, which will be very useful for living in society (Romadonika, 2024).

Based on Table 3, the results of the chi-square test show a p value (0.001), which means that there is a relationship between the level of parental income and the incidence of wasting in toddlers aged 12-59 months in the Tempurejo Village, Kediri City. Based on the research conducted, wasting is more in the category of parenting, with fewer than 33 respondents (25.8%), and as many as 59 respondents (66.2%) in the category of good parenting. So that in this study, a small proportion of mothers of toddlers are included in authoritarian parenting, because parents control children's food without paying attention to the child's needs.

Wishes, a stressful eating atmosphere will cause children to become thinner. (Nurlianawati et al., 2023). Parents are demanding but unresponsive and do not give the child choices. For example, when feeding, parents give strict rules but are not responsive to the child's needs. The child becomes passive and lacks courage, and the uncomfortable dining atmosphere makes the child fussy and uninterested in eating, which causes the child to become thin (Maulani & Julianawati, 2022). This result is in line with HL. Bloom's theory, which states that many variables can influence disease. For example, genetically inherited authoritarian parenting may influence the incidence of wasting.

According to this study, parents should continue to pay attention and provide children with good authoritarian parenting. This is because parental attitudes are very important for children's development, especially their cognitive development. This is important because preschool age is a period where they imitate others, especially parents (Massardi et al., 2025).

Based on Table 3, the results of the chi-square test show a p-value (0.008), which means that there is a relationship between parental income level and the incidence of wasting in toddlers aged 12- 59 months in Tempurejo Village, Kediri City. Based on the research conducted, wasting was more prevalent in the category of poor parenting, as many as 37 respondents (21.1%), as many as 13 respondents (28.9%) in the category of good parenting. So, in this study, a small proportion of mothers of toddlers follow permissive parenting because the results of previous studies show that mothers let their children eat if they don't want to, give food when their children ask, and give freedom to their children to snack outside (Massardi et al., 2025). This result is in line with HL. Bloom's theory, which states that many variables can influence disease. For example, democratic parenting may affect genetic wasting

This study is in line with research by Fatkuriyah & Sukowati (2022), with a significance value of 0.023. Permissive parents can lead to a lack of independence, where children are taken for granted and left alone. They are also not rewarded or incentivised when they succeed and are not reprimanded when they fail. However, parents who spoil their children by fulfilling all their wishes so that the children grow out of control mean that they always obey their children's wishes and desires.

## CONCLUSIONS

Based on the results of the research conducted, it can be concluded as follows. The age characteristics of most toddlers are 12-36 months old, with as many as 143 toddlers (80.3%). The frequency of wasting status in toddlers was examined in this study; the majority of toddlers were in the wasting category, 50 toddlers (28.1%).

There are democratic parenting variables, the majority of parenting patterns are less than 94 (52.8%), authoritarian parenting variables, the majority of parenting patterns are less than 92 (51.7%), and permissive parenting variables, the majority of parenting patterns are less than 96 (53.9%). There was a relationship between democratic parenting and the incidence of wasting, with a p-value of 0.011.

There is an association between authoritarian parenting and wasting with p-value (0.017). There is a correlation between permissive parenting and the incidence of wasting, with a p-value of 0.007. Parenting style is significantly correlated with the incidence of wasting among toddlers in Tempurejo Village, Kediri City. These results highlight the importance of parental roles, particularly mothers, in supporting optimal child growth and development.

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