

Relationship Between Knowledge Level And Mother's Education Level Regarding Wasting In Posyandu Kasih Bunda

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Keywords

Wasting; education; knowledge; malnutrition

Abstract

Wasting is a common nutritional problem in Indonesia. Wasting itself is a condition where a child experiences malnutrition or undernutrition with a weight/height score below normal. Causes of wasting include nutritional intake, infectious diseases, family conditions such as education and maternal knowledge. Maternal education is an important factor in preventing stunting. The higher the mother's education level, the higher the mother's level of knowledge about wasting in children. Mothers with higher education generally have an easier time understanding health information, are more critical in receiving information, and have wider access to information sources. The purpose of this study was to analyze the relationship between maternal knowledge and education levels regarding wasting at the Posyandu Kasih Bunda Post. The sample of this study was 30 people. Data analysis used the chi-square test with $\alpha = 0.05$. Based on the results of the study, it was found that there was no relationship between education ($p = 0.612$ and 0.725) and knowledge levels ($p = 0.781$ and 0.834) about wasting. The conclusion is that there is no relationship between education and maternal knowledge about wasting at the Posyandu Kasih Bunda in Palembang. Many factors influence wasting, such as economic factors, nutrition, disease, and parental attitudes. Furthermore, the government's role in preventing wasting, such as by increasing health and nutrition promotion, is also crucial.

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1. Introduction

Child growth is an important indicator for assessing nutritional status. Wasting occurs when a child is too low in weight for their height, usually due to rapid weight loss or failure to gain weight. The prevalence of wasting is measured based on WHO standards, with a weight-for-height value of less than -2 SD in children under five years of age (WHO, 2023). The number of toddlers categorized as wasting indicates the extent of the acute malnutrition problem that persists in this age group. In Indonesia, approximately 1 in 12 toddlers experiences wasting. This indicates that children under five have a weight that is not in proportion to their height, indicating a state of malnutrition or acute malnutrition. (Kemenkes RI, 2022). In 2022, an estimated 45 million children under five worldwide were experiencing wasting. This condition has a significant impact, affecting approximately 6.8% of the global toddler population ("Africa - Regional Overview of Food Security and Nutrition 2023," 2023). Wasting increased in Indonesia from 2021 to 2023. In 2023, the wasting rate was around 8.5%. Only 40 percent received the minimum intake required for optimal growth and development

(UNICEF, 2022).

Beyond the health impacts, malnutrition (wasting) in toddlers can also reduce the quality of a country's human resources. Malnutrition has serious implications for national resilience and security on a broader scale. The World Health Organization (WHO) states that wasting is a major health problem that directly contributes to high morbidity rates. Without intervention or additional assistance, toddlers experiencing wasting are at risk of worsening malnutrition and beginning to show signs of growth failure (WHO, 2025).

One of the causes of wasting is Inadequate nutritional intake can stunt a child's growth and even put them at risk of stunting. At this age, children are in a phase of rapid and significant growth, so they need adequate nutrition to support optimal body development and physiological function (Setyawati & Hartini, 2018). Wasting has short-term impacts on children's health, such as increased risk of mortality, morbidity, and potential disability. In the long term, this condition can stunt adult height growth, diminish cognitive abilities, reduce economic productivity, impact reproductive health, and increase vulnerability to non-communicable diseases (Mkhize & Sibanda, 2020; UNICEF, 2015).

Another supporting factor in preventing wasting is knowledge, which can be seen from education levels. Education plays a crucial role in a person's ability to receive and understand information. Individuals with higher education tend to absorb and process information more easily than those with lower levels of education. This acquired knowledge provides mothers with the necessary tools to care for and meet the needs of their toddlers in their daily lives (Lailatul & Ni'mah., 2015). Maternal education is a risk factor causing wasting (Soedarsono & Sumarmi, 2021).

1.1 Literature Review

A mother's knowledge plays a central role in the parenting process, particularly regarding food selection, meal frequency, food preparation methods, and providing nutritional needs appropriate to her toddler's age. Mothers with a good understanding of nutrition tend to be able to provide balanced meals, pay attention to food hygiene, and adjust portion sizes to meet their child's growth and development needs. Conversely, a lack of knowledge can lead to inappropriate eating patterns, increasing the risk of nutritional problems such as wasting, stunting, or underweight (Suriani et al., 2021). It is greatly influences how she selects, prepares, and provides food to her child. Mothers who have a good understanding of balanced nutrition are better able to adjust food types, portions, and meal frequency to suit their child's growth and development needs. Furthermore, a strong understanding also helps mothers recognize signs of malnutrition early and take appropriate action (Soedarsono & Sumarmi, 2021).

Factors such as education and previous experience can shape how mothers understand nutritional information. Access to information sources—for example, counseling at integrated health posts (Posyandu), the mass media, or health workers—also plays a significant role in broadening a mother's knowledge. Family traditions and local culture often influence children's eating patterns; if the culture supports healthy eating practices, the risk of wasting is lower. Conversely, if the family's culture or habits do not support the consumption of nutritious foods, the risk of wasting can increase. Therefore, improving mothers' nutritional knowledge through education and easy access to information is a crucial step in preventing wasting (Soedarsono & Sumarmi, 2021).

In other words, the better a mother's nutritional knowledge, the greater the chance that her toddler will receive adequate nutrition and maintain optimal nutritional status. This study shows that the incidence of wasting in toddlers at the Johan Pahlawan Community Health Center (Puskesmas UPTD) remains above the WHO target, although it has decreased from 2022 to 2023. This study used a cross-sectional approach and a quantitative correlational design, with a sample size of 70 toddlers experiencing wasting as the study population. The sampling technique used was total sampling. Analysis using the Chi-Square test proved that maternal knowledge, exclusive breastfeeding, and infectious diseases have a significant relationship with the incidence of wasting ($p < 0.05$). Thus, these three factors are important determinants that contribute to wasting in toddlers. Efforts to increase education regarding exclusive breastfeeding and infection prevention need to be

strengthened by health workers, and support from toddler mothers is essential through active participation in health education activities (Fadiyah et al., 2025). Based on the literature that has been described, this study aims to determine the relationship between parental education and the level of education on wasting.

2. Research Methods

This research used cross-sectional study involved all toddlers aged 13–59 months attending integrated health posts (Posyandu) in Palembang City, with a total population of 30 toddlers. The sample was randomly selected using a total sampling technique, resulting in all 30 toddlers as respondents. Primary data collection was conducted through interviews using a questionnaire. Weight was measured using a digital scale (electric scale), while height and length were measured using a microtoise or lengthboard.

The knowledge level variable included understanding of balanced nutrition, nutrient content in food, and child health. Knowledge levels were classified into three categories: poor, adequate, and good. Data are presented in the form of frequency tables and cross-tabulations illustrating the relationship between maternal education level, maternal knowledge, and parenting practices with toddler nutritional status based on weight/height and height/age indicators. Data analysis was performed using the chi-square statistical test with a significance level of $\alpha = 0.05$.

3. Result and Discussion

Table 1 presents univariate analysis data on children's nutritional status, which shows that 3 children (13.4%) experienced wasting. Twenty children (63.3%) were in the normal nutritional status category. in line with other research show that majority of children had normal nutritional status 78.4%, and children with overweight or obesity nutritional status had a figure twice as high 14.7% . As many as 186 Indonesian children, or approximately 7.0%, experienced wasting. This figure illustrates that, although the proportion may seem small, wasting remains a significant health problem because it indicates a state of acute malnutrition (Purwadi et al., 2023).

Table 1. Nutritional Status of Toddlers at Posyandu in Palembang City Based on Weight/Height Index in 2025

Variable	Number (n)	Percent (%)
Overweight	7	23,3
Normal	20	63,3
Wasting	3	13,4

Based on Table 2, more boys suffer from wasting, with 10.5% of boys and 9.1% of girls. Wasting is more common in children aged 13-36 months than in children aged 37-59 months, at a ratio of 2:1. The highest prevalence of wasting is in children aged 13-36 months, at 93.7%.

Table 2. Percentage of Wasting Toddlers Based on Age and Gender at Integrated Health Posts (Posyandu) in Palembang City in 2025

Variable	Wasting		Non-Wasting		Total	
	Number (n)	Percent (%)	Number (n)	Percent (%)	Number (n)	Percent (%)
Age (Months)						
13-36	2	14,3	12	85,7	14	100
37-59	1	6,3	15	93,7	16	100
Gender						
Boy	2	10,5	17	89,5	20	100
Girl	1	9,1	10	90,9	10	100

Table 3. Cross-table between education level and knowledge level with wasting incidents at Posyandu in Palembang City in 2025

Variabel	Nutritional Status Index Based on Weight/Height				Total		P Value
	Wasting		Non wasting		n	%	
	n	%	n	%			
Level of Education							0,612
Elementary School	1	33,3	2	66,7	3	100	
Junior High School	1	11,1	8	88,9	9	100	
Senior High School	1	6,3	15	93,7	16	100	
Diploma/ Bachelor	0	0	2	100	2	100	
Knowledge Level Not Good	2	20	8	80	10	100	0,725
Enough	1	6,3	15	93,7	16	100	
Good	0	0	4	100	4	100	

Table 3 shows that parents education level with wasting for elementary school was 33.3%, junior high school 11.1% and high school 6.3%. While for those who did not suffer from wasting, the highest number was at the high school level, namely 93.7%. parental education level has no relationship with wasting. The p-value is 0.612, a significance level below 0.05. Similarly, parental knowledge level shows no relationship, with a p-value of 0.725.

However, it is different from other studies revealed that there was a strong relationship between the incidence of wasting in toddlers and the level of maternal knowledge, indicated by a significance value of $p = 0.042$ (Fadiyah et al., 2025). Wasting still occurs frequently in mothers with low levels of knowledge. This suggests a relationship between maternal knowledge and wasting (Heriyanti & F, 2025). Many factors cause differences in the results of this study, such as parental occupation, income, residential environment, infectious diseases and others.

Parents' knowledge of nutrition significantly influences their behavior and attitudes when choosing food for their children. Good nutritional status determines the national nutritional status percentage. Lack of knowledge about nutritious foods can lead to poor food choices and low nutritional content, which can lead to poor or deficient nutritional status in children (Sari & Putri, 2020). Knowledge arises when a person receives external stimuli through the senses—such as seeing, hearing, or feeling—which are then processed by the brain to become understanding. Because each person's perceptual processes differ, the ability to comprehend information will also vary. These differences can be influenced by factors such as education, experience, environment, and exposure to information (Aulia et al., 2024; Notoatmodjo, 2012).

Mothers need to have extensive knowledge about their children's nutritional needs, from the types of nutrients needed, appropriate calorie intake, healthy eating patterns, and how to prepare food properly. Therefore, mothers should obtain information from trusted sources, such as nutritionists, pediatricians, or through official websites accessible online. A good understanding of toddlers' nutritional needs is very important because it determines the quality of intake the child receives every day (Munawaroh et al., 2022). While education does play a significant role in the occurrence of wasting in children, income, marital status, and family size also play a significant role. The majority of respondents were housewives with incomes below the minimum wage.

4. Conclusions

Wasting is more common in children aged 13-36 months than in children aged 37-59 months, at a ratio of 2:1. analysis data on children's nutritional status, which shows that 3 children (13.4%) experienced wasting. Twenty children (63.3%) were in the normal nutritional status category Parents education level with wasting for elementary school was 33.3%, junior high school 11.1% and high school 6.3%. While for those who did not suffer from wasting, the highest number was at the high school level, namely 93.7%. parental education level

has no relationship with wasting. The p-value is 0.612, a significance level below 0.05. Similarly, parental knowledge level shows no relationship, with a p-value of 0.725. There are many factors that influence why there is no relationship between knowledge and education levels and wasting. One of them is economic factors, namely low income levels and others.

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