

## OVERVIEW OF FAMILY ECONOMIC STATUS AND ENVIRONMENTAL SANITATION OF STUNTING TODDLER HOMES

Endrastya Pramahdyta, Yulia Susanti\*, Dona Yanuar Agus Santoso, Muhammad Khabib Burhanuddin  
Iqomh'

Bachelor of Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Kendal, Jl. Laut No. 31, Ngilir, Kendal, Central  
Java 51311, Indonesia

\*[yuliasusanti@stikeskendal.ac.id](mailto:yuliasusanti@stikeskendal.ac.id)

### ABSTRACT

Stunting is a malnutrition problem in children characterized by a short body with a size of  $<-2$  elementary school, this greatly affects the quality of life of children in the future. The stunting prevalence of Kendal district was recorded at 4,324 people under five. Some of the factors that cause stunting include parental caregiver practices, family income, education level, employment, number of family members, environmental sanitation, and access to health services. The purpose of this study is to determine the picture of family economic status and sanitary conditions of the home environment of stunting toddlers. This study is a descriptive survey study with a cross sectional approach with a population of 680 people, a sample of 251 people. Implementation of research in five areas of Puskesmas Kendal Regency stunting locus area. The results of this study found that the average age of parents of stunting toddlers was 33 years, mothers with high school education 43.8%, fathers with junior high school education 45.8%, male toddlers 52.6%, classification of stunting toddlers in the very short category 52.6%, the majority of family economic status under UMK Kendal 68.1%, and sanitary conditions of the family home environment in the medium category 44.6% and less 14.7%. This study describes the economic status of stunting toddler families in the low category under Kendal MSEs and the sanitary conditions of the home environment are lacking. Families are expected to strive to improve the family economy and sanitation facilities, a healthy home environment, and behave clean and healthy.

Keywords: economic status; environmental sanitation; family; stunting; toddler

### INTRODUCTION

Stunting is a condition of short and very short bodies that exceed the deficit  $-2SD$  which causes a child to fail to have a normal height according to his age. Stunting is one of the chronic nutritional problems that can be experienced by children (Andriani, 2017). Stunting is the result of a growth standard that does not reach  $-2$  standard deviations which is valued from the z-score Body length according to age (PB / U) or height according to age (TB / U) (Yadika, Berawi, Nasutin, 2019). Nutritional problems such as stunting wasting and overweight in toddlers in the world, the country of Indonesia is ranked 17 out of 117 countries that have three nutritional problems, the results of nutritional status monitoring by the ministry of health in 2017 the prevalence of stunting toddlers by 29% increased to 30.8% (Prakhasita, 2018). According to the 2018 Riskesdas report in Central Java, the prevalence of stunting rate is 32.1%, based on the decree of the Minister of National Development Planning / head of BAPPENAS No KEP.10 / M.PPN / HK / 02/2021 Kendal district is included in 30 districts / cities in Central Java to be the focus location of integrated stunting reduction interventions in 2022 with a stunting prevalence of 25.5%. The Kendal district Health Office recorded 4,324 cases of stunting children under the age of 5 years (BAPPENAS, 2021).

Stunting nutrition problems can result in impaired intelligence levels, susceptibility to disease, decreased productivity, hindered economic growth, increased poverty and inequality. International experience and evidence show that stunting can hinder economic growth and reduce labor

productivity, resulting in an 11% loss of Gross Domestic Products and reducing incomes by 20% thereby reducing 10% of total lifetime income leading to intergenerational poverty. The impact of short-term stunting includes impaired brain development, intelligence, impaired physical growth, metabolic disorders in the child's body, while the long-term impact can cause decreased cognitive abilities, decreased immunity so that it is easy to get sick, high risk for the emergence of diabetes, obesity, heart disease, blood vessels, cancer, stroke, and disability in old age, as well as uncompetitive work quality resulting in low economic productivity (Prakhasita, 2018).

Stunting is caused by several factors, including: economic status, parental education, parental employment, number of family members and sanitation of the environment around the place of residence. Other factors that cause stunting include poor caregiver practices, limited health services, lack of household access, lack of clean water from access to environmental sanitation and households without clean water facilities. The sanitation aspect of drinking water sources is more sensitive to diarrheal diseases in stunting toddlers, the higher the quality of sanitation, water and hygiene, the increase in stunting cases in toddlers (Yadika et al, 2019). The economic status of families under five who have income below the district minimum wage has a risk of stunting 7.37 times greater than that of families under five who earn above the district minimum wage, mothers who do not work have a risk of having stunting toddlers 6.58 times higher than working mothers. This is because working mothers have a higher income than non-working mothers, so they can meet the nutritious needs of their toddlers, besides that by working mothers can socialize more with others, so they can add information about nutrition. Income level is a determining factor in the quality and quantity of food, low income will result in weak purchasing power while an increase affects the improvement of health and nutritional conditions (Chayati, 2019).

Environmental factors are the second largest risk globally, especially in the status of stunted children under five worldwide caused by poor sanitation. The impact caused by poor sanitation on the occurrence of stunting is greater even though there is no significance of diarrhea in toddlers, because basically environmental health factors are prevention of infection in toddlers. The scope of environmental health includes the disposal of human waste (feces), the provision of clean water, the disposal of garbage, the disposal of dirty water (wastewater), and hygiene behavior. Poor environmental and hygiene conditions allow infectious diseases such as diarrhea and respiratory tract infections to cause stunting, Access to sanitation is said to be feasible if it meets health requirements, including equipped with a gooseneck type latrine facility with septic tank used (Apriluana & fikawati, 2018).

## **METHOD**

This research is a quantitative, descriptive survey with a cross sectional approach, which was carried out from September 2022 to February 2023 in five areas of the Kendal district stunting locus health center, including Pegandon, Cepiring, Kangkung, Ringinarum, and South Kaliwungu. The population was 680 stunted toddlers and the number of samples taken was 251 toddlers, the sampling technique used was purposive sampling. The measuring instrument uses questionnaires containing questions about demographic data, parental income and home sanitation conditions.

## RESULTS AND DISCUSSION

Table 1.  
Central Tendency of Respondent Characteristics Based on Age of Mother and Age of Stunting Toddler (n = 251)

| Age              | Mean  | Mode | Min-Max |
|------------------|-------|------|---------|
| Toddler Mother   | 30,76 | 33   | 22-40   |
| Toddler Stunting | 1,980 | 1    | 1-3     |

Table 2.  
Frequency Distribution of Respondent Characteristics Based on Toddler Gender, Education and Employment of Parents of Stunting Toddlers (n=251)

| Variable            | f   | %    |
|---------------------|-----|------|
| Gender of Toddler   |     |      |
| Female              | 119 | 47,4 |
| Male                | 132 | 52,6 |
| Mother's Education  |     |      |
| No school           | 9   | 3,6  |
| Primary             | 30  | 12,0 |
| Junior              | 80  | 31,9 |
| High                | 110 | 43,8 |
| Diploma 3           | 5   | 2,0  |
| Bachelor            | 12  | 4,8  |
| Master              | 5   | 2,0  |
| Father's Education  |     |      |
| No School           | 20  | 8,0  |
| Primary             | 30  | 12,0 |
| Junior              | 115 | 45,8 |
| High                | 80  | 31,9 |
| Diploma 3           | 3   | 1,2  |
| Bachelor            | 2   | 8    |
| Master              | 1   | 4    |
| Mom's Job           |     |      |
| Not working         | 88  | 35,1 |
| Entrepreneur        | 50  | 19,9 |
| Farmer              | 53  | 21,1 |
| Civil servant state | 5   | 2,0  |
| BUMN                | 15  | 6,0  |
| Factory worker      | 20  | 8,0  |
| Other               | 20  | 8,0  |
| Father's Job        |     |      |
| Not working         | 68  | 27,1 |
| Enterpreneur        | 50  | 19,9 |
| Farmer              | 73  | 29,1 |
| Civil servant state | 5   | 2,0  |
| BUMN                | 10  | 4,0  |
| Factory worker      | 20  | 8,0  |
| Other               | 25  | 10,0 |

Table 3.

Frequency Distribution of Respondent Characteristics Based on Stunting Classification (n=251)

| Classification Stunting | f   | %    |
|-------------------------|-----|------|
| Short                   | 119 | 47,4 |
| Very short              | 132 | 52,6 |

## Economic Status

Table 4.

Frequency Distribution of Family Economic Status Stunting Toddlers (n=251)

| Economic Status  | f   | %    |
|------------------|-----|------|
| Family income    |     |      |
| Under UMK Kendal | 171 | 68.1 |
| Above UMK Kendal | 80  | 31.9 |

Table 5.

Cross-tabulation of family economic status with Stunting Classification (n=251)

| Economic Status  | Classification stunting |      |            |      |
|------------------|-------------------------|------|------------|------|
|                  | Short                   |      | Very short |      |
|                  | f                       | %    | f          | %    |
| Under UMK Kendal | 83                      | 48,5 | 88         | 51,5 |
| Above UMK Kendal | 55                      | 68,8 | 25         | 31,3 |

## Environmental Sanitation

Table 6.

Frequency Distribution of Environmental Sanitation (n=251)

| Environmental Sanitation | f   | %    |
|--------------------------|-----|------|
| Good                     | 102 | 40.6 |
| Medium                   | 112 | 44.6 |
| Less good                | 37  | 14.7 |

Table 7.

Cross-Tabulation of Environmental Sanitation with Stunting Classification (n=251)

| Environmental Sanitation | Klasifikasi stunting |      |            |      |
|--------------------------|----------------------|------|------------|------|
|                          | Short                |      | Very short |      |
|                          | f                    | %    | f          | %    |
| Good                     | 42                   | 50   | 42         | 50   |
| Medium                   | 82                   | 56,2 | 64         | 43,8 |
| Less Good                | 14                   | 66,7 | 7          | 33,3 |

## Characteristics of Respondents

The results showed that the age of parents of stunting toddlers was mostly 33 years old, the youngest age was 22 years and the oldest age was 40 years. At the age of about 30 years, parents understand more about caring for babies properly, managing finances, maintaining cleanliness around the residence and are ready to live as housewives and parents. An age that is too young is usually not ready for pregnancy and does not know how to properly care for and care for the child.

Another supporting theory, Friedman (2015), says that parents who age too easily or too old lack knowledge and understanding of potential problems and that risk threatening health in toddlers. Because parents are not ready to take care of properly and can meet their needs well. It can be concluded that parental age is one of the factors in the occurrence of stunting in toddlers.

The results showed that the age of stunting toddlers was mostly aged 1 year to 3 years. Toddler age is a time to achieve significant growth. One of the factors that determine a person's nutritional needs is age. The higher the age, the higher a person's ability to carry out activities so that it requires greater energy (Yulia & Dona, 2020). The supporting theory of the WHO Ministry of Health of the Republic of Indonesia (2018) can be seen from the recommended nutritional adequacy rate (RDA) to meet nutritional needs that can be differentiated in age, gender, productivity and capacity to do something in optimal work. The results of this study showed that the majority were male. Because men are more susceptible to stunting than women, this is due to biological factors and intake consumed. This is in line with research conducted by (Ramil, 2019), girls have a lower risk of stunting than boys, because girls tend to be less likely to be stunted than men, In addition, girls can survive in greater numbers than the development of boys. Cohort theory in Ethiopia shows that infants with male sex have twice the risk of becoming stunted than female babies (Maryati, 2017). This research is in line with Yulia and Dona's (2020) research, which states that the results of the analysis of the characteristics of stunting toddlers are men by 60.5%.

Based on the results of the latest education research of the majority of mothers in high school while the majority of junior high school fathers' education, one of the indirect causes of the problem of stunting is the level of education of parents with higher education tend to have better knowledge and ability to educate and implement knowledge than parents with low education (Juliabdi, 2014). Another supporting theory from Pejaten (2019), says mothers who are poorly educated are usually difficult to accept new things, so they are very concerned about improving the health of their families. Mothers with low education have difficulty understanding nutritional knowledge that is important for toddler development. So even though they are given a preference in the form of counseling about education, usually these mothers still do not follow the advice given by cadres, as well as health workers. Fathers' education level greatly influences in work, and will ultimately affect family income, fathers with higher education tend to have jobs with better income (Hapsari & Windi, 2018). This research is in line with Hindrawati and Rusdiarti's (2018) research, Low education level will affect a person understanding the nutritional knowledge they get so that they will experience stunting, while low education level will affect employment and income in parents. The study concluded that there is a significant relationship between parental education level and the incidence of stunting in toddlers. Based on parental education is the most dominant factor related to the incidence of stunting in toddlers.

The results showed that the majority of parents do not work only to take care of children and become housewives, there are 29.1% of some parents who work as farmers. Work greatly affects economic ability in a person's life, in work contains two aspects, the fulfillment of life needs and physical satisfaction (Friedman, 2015). Work has an important role in supporting the lives of a person and his family. By having a steady job, one can meet basic needs. (Yuliana, 2019). Therefore, having a decent and stable job is very important to improve the economic welfare of the family.

Stunting toddlers in 5 areas of Kendal district health centers are mostly in the very short category although the number is not too far but very short more than the short category. From these results, researchers assume that the incidence of stunting in toddlers aged 1 to 3 years occurs because the age of 1 to 3 years is younger in the identification of growth and development, compared to toddlers over the age of 5 years. Research by Ngaisyah RD, (2015) said that stunting toddlers will appear after toddlers are 2 years old, because it is caused by intelligence levels, limited brain cells, susceptibility to disease and decreased productivity. Rahayu's research (2018) says that stunting can occur since the baby is in the womb and in the early days after birth, but only appears after the child is 2 years old. So it can be concluded that the age of 1 to 3 years is easier in the development of growth and development than toddlers over 5 years. Because the development of toddler growth and development is influenced by many factors.

Toddlers who are male are more categorized as stunting than female toddlers. The growth period of men and women is basically not much different, only a slight difference in experiencing growth that does not deviate the median standard growth of children. Cohort theory in Ethiopia says that toddlers with male sex have twice the risk of becoming stunted than female toddlers. Ramil's research (2019), shows that girls have a lower risk of stunting than boys. So it can be concluded that girls tend to be less likely to be stunted than boys, besides that girls can survive in greater numbers than the development of boys.

The classification of stunting is a nutritional status study based on indicators of body length compared to age (PB/U) or height compared to age (TB/U) where the results of anthropometric measurements show Z-Score  $< -2$  SD so that  $-3$  SD (short) and  $-3$  SD (very short) (Ministry of Health RI, 2012). In the long term, it is a posture that is not optimal in adulthood while in the short term it increases the incidence of morbidity and mortality (WHO in the Ministry of Health RI, 2018). One of the factors classified as stunting is the low income of parents, in this study there are very short toddlers whose parents' income is below the Kendal UMK. Because financial inadequacy causes a lack of family ability to meet the family's nutritional intake according to the needs they need. Low income will affect the quality and amount of food consumed by the family, the food obtained will usually be reduced varied, and in small quantities, especially in foods that function for children's growth, such as protein, vitamin and mineral needs (Diana, Susanti, Santoso, 2020).

### **Economic Status**

The results of this study show that the majority of parents' income is under Kendal UMK. With an average income of one million seven hundred per month. so it can be said that the income of parents of stunting toddlers earns below the Kendal UMK. Because some parents of toddlers do not work only as housewives and fathers work as farmers and srabutan, who do not have a fixed income so that they can cause the ability to meet children's nutritional needs to be reduced and will cause stunting events in toddlers, because they cannot meet good food for child development. Conclusion When family income increases, the provision of side dishes will increase in quality, while low income causes low purchasing power so that they are unable to buy food in the required amount. The results said the economic status was sufficient that the tendency of stunting in toddlers was more in families with low economic status. Malnutrition, especially stunting, is more influenced by socioeconomic dimensions, besides that household economic status is seen to have a significant impact on the probability of children being short and very short (Yimer, 2020). The results of the

study stated that the high incidence of stunting is found in low household income, low income will hinder buying the needs of nutritious nutritional ingredients. Another supporting theory is Faradina (2018), which says that increasing income increases the opportunity to buy food with good quantity and quality. This research is in line with Simbolon's research (2017), that the higher the income level, the better the nutritional status of children in toddlers. Low-income people usually spend a large portion of their income on food. Income also determines the type of food consumed. In low-income villages, the majority of food expenditure is used to buy cereals, while in villages with high per capita income, expenditure to buy protein foods increases (Annisa, 2012). Household economic status is considered to have a significant impact on the likelihood of children being short. WHO recommends stunting as a measure of low socioeconomic levels (Zere and McIntyre, 2013). This research is in line with Sulistyoningih's research (2021), saying that family income increases, the provision of side dishes will increase in quality. So it can be concluded that income under UMK Kendal is one of the factors that cause stunting in toddlers aged 1 to 3 years.

### **Environmental Sanitation**

The majority of environmental sanitation is in the medium category as much as 44.6%, because the surrounding residence already includes cleanliness such as the provision of clean water, the existence of ISPAL household wastewater disposal facilities, cleanliness of latrines, garbage disposal, air ventilation in the house, permanent house buildings, and clean house floors. Based on research data, it was found that the pattern of using clean water by the majority of residents is good, but there are still residents who have dirty water facilities, especially in the rainy season so that the water will look dirty yellowish. Water before consumption should be cooked first to meet healthy drinking water standards, a small number of respondents whose source of drinking water is from gallons there are those who cook it first before consumption and there are also those who directly consume it without having to be cooked first. The theory supporting Soerachmad's research (2019) is that water that has been treated or cooked first into drinking water that is used and consumed regularly every day, must be stored in a closed container to avoid disease problems. In line with Lestari and Siwiendrayanti's (2021) research, household drinking water treatment, one of which is by boiling until cooked, has been efficient in killing microorbiology.

The results of this study show that where stunted toddlers live already have household wastewater disposal facilities, but there are some who do not have wastewater disposal facilities. Wastewater disposal facilities owned in the form of sewers or pipes used to carry wastewater from bathrooms, places to wash dishes and clothes and other household wastewater, according to the source of origin, wastewater has a composition that varies greatly from each place and at any time. Supporting theory from Mariana's research (2021), a liquid waste management in households is a liquid waste management activity derived from the rest of washing, bathroom and kitchen activities that meet environmental health quality standards and health requirements that are able to break the chain of disease transmission. This research is in line with Sukmawati's research (2021), good waste management is needed through wastewater disposal channels that are distributed to the main reservoir in a closed state so that it will reduce pollution from odors and chemicals and pathogens contained therein. Home environmental sanitation about garbage disposal, showing that garbage disposal is disposed of in the final / public trash can. Overall, stunted toddlers live in closed houses and a small part is open. Some have their garbage burned and dumped around the yard where they live. Therefore, efforts are needed to increase public awareness in disposing of garbage in its place and increase cooperation with hygiene parties to maintain the cleanliness of the surrounding

environment in order to reduce the risk of stunting in toddlers. The supporting theory of the Ministry of Health of the Republic of Indonesia (2013), in the garbage collection in the house is closed, if more than 3 days it will invite disease vectors if the garbage is not disposed of. To avoid disease and a dirty environment, garbage disposal should continue to be considered. Based on the results around the clean residence without any puddles, manun there is a house that still looks like there is a puddle. Puddles of water that come from rainwater during the rainy season, water that comes from wastewater streams that do not have sewers, around residences where there are still puddles will cause nests of disease and for nests of mosquito disease vectors and others (Andriany, 2021).

The residence of stunting toddlers already has healthy latrine requirements, including a distance of 10-15 meters from the source of drinking water routinely cleaned, enough lighting, available water and cleaning tools, but there are some houses that have latrines that are not clean and healthy where most respondents rarely clean their latrines sometimes 1 time 2 times a week or even 1 time a month. Therefore, efforts need to be made to increase access and understanding of parents to the importance of having healthy latrines and maintaining the cleanliness of these latrines regularly. In addition, it is also necessary to increase understanding of good sanitation to prevent disease and improve the health of stunting toddlers. The supporting theory of Dodos et al (2017), explains that the sanitary hygiene of latrines is a concern in handling stunting in children starting from the cleanliness of latrines that meet health requirements, the disposal of feces of children under five in latrines and paying attention to the cleanliness of latrines while still paying attention to specific hygiene interventions.

Most of the house buildings are made of bricks, the bricks are clean, dry and strong, and there are still houses that are not made of bricks. The use of walls in addition to supports is also to protect from heat, rain and preferably for the walls of the house made of bricks. The majority of air vents are good but there are still bad ones that do not have good air ventilation that does not meet health requirements can facilitate and allow disease transitions and affect the health of its residents, adequate lighting for lighting rooms in the house is a human health need. Lighting from sunlight coming in through the window. Sunlight from ventilation is useful for lighting, it can also reduce air humidity, eradicate mosquitoes, kill disease-causing germs, lighting from lamps, or others useful for lighting a room (Suyono, 2019). The majority of houses with clean and permanent floors, there are some houses that still have dirt floors, the humidity will be higher than those that are plastered or ceramized (Abidin, 2021).

The results of research by some parents of stunting toddlers already have healthy home components such as clean ceilings, permanent walls, waterproof, floors in plaster or ceramics, windows opened every morning, ventilation holes in the house >10% of the floor area, kitchen smoke holes >10% of the kitchen floor area (smoke comes out perfectly), bright lighting and no glare. It also has qualified sanitation facilities such as clean water facilities, gooseneck latrines, septic tanks, wastewater disposal facilities that flow into sewers and watertight and closed garbage disposal. And there are 20% of houses that do not have healthy environmental sanitation compounds, which will adversely affect physical, mental and social welfare (Adriany, 2021). The theory put forward by Notoadmodjo (2019), which states that environmental sanitation is the health status of an environment that includes sewage disposal, clean water supply. Poor environmental sanitation can cause various health problems or diseases related to environmental health.

## CONCLUSION

The age characteristics of the respondents were 33 years old, the mother had a high school education, a father had a junior high school education, the mother's occupation was not working and the work of a farmer's father. The characteristics of stunting toddlers are the majority with the age of 1 year, male and very short category. The economic status of parents of stunting toddlers is mostly in the category below Kendal UMK and home environment sanitation in the medium category.

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