

## Original Article

# Identification of Determinants Causes of Stunting from Family Factors in Banteran Village Sumbang District Central Java 2023

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## Abstract

**Background:** Stunted is a condition when children under the age of five do not experience body development due to chronic malnutrition since pregnancy. There are factors that can cause stunting, and risk factors for stunting differ in each region. This research aims to determine family factors related to the incidence of child stunting in Banteran Village, Sumbang District, Central Java. **Methods:** This research is descriptive. Primary data was obtained through interviews with 10 families with stunted children through questionnaires and KIA books, while secondary data was obtained from village midwives. **Results:** Based on determinants factors the mothers was found with low education level (<Junior High School), height: <150 cm, occupation status not working and the number of family members was more than four people. Based on the determinant factors the fathers were working with low income, and low education level (<junior high school). Based on the characteristics of the toddler, majority were male, with low category, and has a history of diarrhea. There are determinant factors for clean and healthy living behavior that influence the occurrence of stunting in the family. **Conclusion:** There are family factors that can influence the occurrence of stunting in children.

**Keywords:** Stunted; factors; family; Banteran Village

## Introduction

Community Health Center is a facility established by the government in the field of public health services at the sub-district level in Indonesia. Sumbang I Health Center is located at Jl. Raya Batu Raden Tim., Kec. Sumbang, Banyumas Regency, Central Java, Indonesia is a place where health services provided to the community are more emphasized on promotive and preventive services either through Individual Health Efforts (IHE) or Essential and Development Community Health Efforts (EDCHE) (Kepala Puskesmas Sumbang I, 2023). There is a major health problem in toddlers aged less than five years are stunting, with a total of 122 stunting toddlers in the Sumbang sub-district. Based on Riskesdas data (2019), the prevalence of stunting among toddlers is 37.2%, which means there has been an increase compared to 2010 (35.6%) and 2007 (36.8%). The prevalence of stunting in babies aged 0-6 months is 27.6%. Based on a preliminary survey conducted by the author on 9 October - 9 November 2023 in Banteran Village, especially in RW 01, out of 62 toddlers there were 11 stunted toddlers. The prevalence of stunting becomes a health problem if the prevalence reaches 20% (Nugraheni et al., 2020). In commemorating its 100th year in 2045, Indonesia has a dream or aims of creating a golden generation. Quality human resources are

human resources who are healthy, intelligent, creative, and competitive. In realizing this dream, the main key lies in preparing a quality next generation for the nation. One of the challenges of human development which still occurs frequently in Indonesia is stunting.

Stunting is a condition when toddlers under the age of five do not experience body development due to chronic malnutrition since pregnancy (Kemenkes RI, 2018). Based on several researchers, there are factors that can cause stunting, including diet (food consumption in the form of low protein intake and low energy intake), gender, exclusive breastfeeding, birth spacing, parents' height, number of family members, income, education, hygiene, health status such as ARI and diarrhea with the incidence of stunting in toddlers (UNICEF, 2015; Apriluana dan Fikawati, 2018; Komalasari, Supriati, Sanjaya, dan Ifayanti, 2020). Based on the introduction above, the risk factors for stunting differ in each region. The incidence of stunting will continue to increase if the risk factors previously explained are not taken into account and there has been no further study of other factors that cause stunting, because researchers are interested in researching "Identification of Determinants of Causes of Stunting from Family Factors in Banteran Village, Sumbang District Central Java in 2023"

## Materials And Method

The research method in this case study uses descriptive, the researcher describes the determinants of family factors that cause stunting in toddlers. Data collection was carried out over 3 days, primary data was obtained through interviews with 10 families with stunted toddlers through questionnaires and Child Identity

Book or in Indonesia called KIA books, while secondary data was obtained from village midwives.

## Results

From a total of 10 families consisting of fathers, mothers, and stunted toddlers, factors were identified as causes of stunted toddlers.

**Table 1: Percentage Results Based on Determinant Family Factors of Father Respondents**

Variables	Frequency	Presentation (%)
<b>Age (years)</b>		
<20	0	0
20-35	3	30
>35	7	70
<b>Level of education</b>		
≤ junior high school	8	80
≥ high school	2	20
<b>Height</b>		
≤ 160 cm	0	0
≥ 160 cm	10	100
<b>Occupation Status</b>		
Work	10	100
Doesn't work		
<b>Economic level</b>		
Above regional minimum wage (≥ 1,958,000)	0	0
Below regional minimum wage (≤ 1,958,000)	10	100
<b>Smoking Behavior</b>		
Yes	9	90
No	1	10

**Table 2: Percentage Results Based on Determinant Family Factors of Mother Respondents**

Variables	Frequency	Presentation (%)
<b>Age (years)</b>		
<20	0	0
20-35	7	70
>35	3	30
<b>Level of education</b>		
≤ junior high school	100	100
≥ high school	0	0
<b>Height</b>		
≤ 150 cm	7	70
≥ 150 cm	3	30
<b>Occupation Status During Pregnancy</b>		
Work	9	90
Doesn't work	1	10
<b>Current Occupation Status</b>		
Work	1	10
Doesn't work	9	90
<b>Number of Child</b>		
>2	6	60
≤2	4	40

**Table 3: Percentage Results Based on Toddler Characteristics**

Variables	Frequency	Presentation (%)
<b>Age (months)</b>	38.3	
<b>Gender</b>		
Woman		3 (30%)
Man		7 (70%)
<b>Height based on age</b>		
Very short		3 (30%)
Short		7 (70%)
<b>History of Exclusive Breastfeeding</b>		
Yes		
No		7 (70%)

		3 (30%)
<b>History of Complementary Foods for Breast Milk</b>		0
Age < 6 month		10 (100%)
Age ≥ 6 month		
<b>History of Diarrhea</b>		10 (100%)
Once		0
Never		
<b>History of ISPA</b>		0
Once		10 (100%)
Never		

**Table 4: Percentage Results Based on Determinant Family CHLB Factors**

Variables	Frequency	Presentation (%)
<b>Regular Weighing of Toddlers (11 times a year)</b>		
Yes		
No	7	70
	3	30
<b>Use Clean Water</b>		
Yes	10	100
No	0	0
<b>Wash Hands with Soap</b>		
Yes	1	10
No	9	90
<b>Use Healthy Latrines</b>		
Yes	8	80
No	2	20
<b>Eradication of Mosquito Nests</b>		
Yes		100
No	10	0
	0	
<b>Consume vegetables and fruit every day</b>		
Yes		100
No	10	0
	0	

## Discussion

### A. Determinant Factors for Parents with Stunting Toddlers

Based on table 4.1 and Table 4.2, shows that the majority of mothers are 20-35 years old (70%) while fathers are more than 35 years old (70%). These results show there is no relationship between the age of parents and stunting. According to Lestari and Kartika (2023), the adult age of both father and mother will influence their ability to perceive and absorb knowledge about stunting. As parents get older, they more knowledge and experience they gain in caring for toddlers. The author believes that although age does not influence the occurrence of stunting, there is one factor that plays an important role, namely the level of education.

This is proven in Table 4.1 and Table 4.2 which shows that the majority of mothers (100%) and fathers (80%) have an education level of less than junior high school. More educated parents are more likely to understand healthy lifestyles and know how to keep their bodies fit. This can be explained by the parents' attitude towards implementing a healthy lifestyle which includes eating nutritious food (Jatmikowati, et al., 2021). In preparing a variety of foods, both mothers and fathers can search for knowledge regarding protein feeding by reading books or using technology such as smartphones (Witanto, 2018). Technology is currently developing rapidly, so parents can search for nutritious food menus, which is not only easy to do but increases knowledge and insight so that it can reduce the risk of stunting in toddlers. Parental height is closely related to being stunted (Zubaidi, 2021). Table 4.1 and Table 4.2 show that the majority of mothers' heights are below 150 cm (70%) while the fathers' heights are above 160 cm (100%). This finding is supported by the opinion of Nursyamsiyah, Sobrie, and Sakti (2021), that mothers with a height <150 cm have a 7.7 times risk of having stunted toddlers. Toddlers born to mothers with low weight and height tend to experience

intrauterine growth restriction (IUGR) and small for gestational age (SGA), this can potentially continue and cause growth disorders and stunting at the toddler age (Dorsey, 2017). It is recommended that mothers carry out pregnancy checks every month at local health services such as community health centers, hospitals, or other health services so that if something undesirable occurs, treatment can be done as early as possible

Table 4.1 and Table 4.2 show that most mothers do not work and fathers' income is below the minimum wage. Families with low incomes tend to buy more types of food that contain more carbohydrates than protein foods because this type of food is cheaper and in large quantities (Trisnawati, Pontang, and Mulyasari, 2016). In eradicating poverty, cooperation can be carried out between the government, especially social services, to create employment opportunities such as entrepreneurship. Social services can provide training to lower middle-class communities, especially in the form of providing tips for empowering productive economic businesses in any field as an effort to eradicate poverty (Pulungan, Saryani, and Abdelina, 2022).

Table 4.1 and Table 4.2 show that the majority of families have more than two toddlers (60%). This indicates the number of family members is more than 4 (including father and mother). According to Sari and Oktacia (2018), their research shows that stunting family members tend to have large family members, namely more than four people. Research by Illahi (2017) shows that the number of family members and the number of toddlers in the family influence the incidence of stunting due to the level of food consumption, namely the amount and distribution of food in the household.

### B. Characteristics of Stunted Toddlers

Table 4.3 shows that the majority of toddlers are male (70%). According to Yuningsih and Perbawati (2022), stunting is more likely to be found in boys compared to girls due to the provision of different types of food and nutrition. Table 4.3 shows that the

majority of toddlers have a history of being given exclusive breast milk for 0-6 months. Based on research by Efendi et al., (2021), exclusive breastfeeding can prevent stunting. However, other factors can influence the occurrence of stunting, such as clean-living habits, physical activity, balancing energy and nutrient intake in the body, and monitoring children's growth and development regularly.

The author believes if exclusive breastfeeding is carried out but does not prioritize personal hygiene before, during, and after it will increase the incidence of stunting. Similar to giving complementary foods for breast milk, in Table 4.3 the majority of toddlers are given complementary foods for breast milk when they are more than six months old (100%). If MPASI is given too early it will cause a high incidence of infections in babies such as diarrhea and respiratory tract infections due to the imperfection of the digestive system (Kadafi et al., 2023). The results of this study show that there is no factor in giving early complementary foods for breast milk to stunted children in Banteran Village.

Based on Table 4.3, the majority of toddlers have experienced diarrhea (100%). Diarrhea is an infectious disease that is often experienced by toddlers and can be caused by the toddler's immature digestion. According to Safitri, Lail, and Indrayani (2021), infectious diseases can reduce the ability to absorb nutrients in the body, thereby increasing the incidence of illness or frequency of illness in toddlers which can reduce appetite, food consumption patterns, and the amount of nutrient consumption needed by the body, so that affect the nutritional status of toddlers. Toddlers are susceptible to infectious diseases, infectious diseases are caused by microorganisms such as viruses, bacteria, parasites, or fungi which can be transferred to other people if not prevented by adopting a clean and healthy lifestyle.

#### **C.Determinants of Clean and Healthy Living Behavior Factors**

Based on Table 4.4, there are seven indicators of Clean and Healthy Living Behavior in the household structure studied by this researcher. The first indicator is the regular weighing of toddlers. Based on the results, the frequency of weighing toddlers at integrated Service Post (Posyandu), the active category is 70% and the inactive category is 3%. Lestari and Sari (2023), weighing toddlers every month has the benefit of monitoring body weight and height to determine the nutritional status of toddlers so that they can detect the health status of toddlers early and provide further intervention. In this study, the reason some toddlers did not regularly attend posyandu was because at the posyandu the toddlers were sick.

The second indicator is based on clean water usage behavior. According to the results of research and observations, the water used by families is gallon water, PAM, and boiled wells. The third indicator of hand washing behavior with clean water and soap is (90%). Families of toddlers do not always wash their hands with soap before feeding the toddler, after defecating, and after urinating for various reasons such as forgetting and assuming that the clothes they are wearing are clean. According to Sinatrya and Muniroh (2019), the habit of washing hands with soap and running water is a protective factor to avoid bacteria that can cause infection.

The fourth indicator is the use of healthy latrines (80%). The results of observations from researchers are that families who have latrines are unhealthy because these latrines do not have septic tanks and ventilation, so the latrine environment feels damp which can cause the growth of bacteria. The fifth indicator is mosquito eradication (100%). The results of research on families show that every month mosquito eradication is carried out from village to village. The sixth indicator shows that the proportion of research results is 100% of families under five who consume vegetables and fruit every day. Food has a wide variety so it is very good for family survival. The seventh indicator of smoking behavior is 90%. This environmental factor plays a role in the occurrence of stunting because toddlers who live with exposure to pollution from cigarette smoke containing carbon monoxide and benzene as well as various other active ingredients cause a decrease in the number of red blood cells and damage bone marrow cells, making them susceptible to anemia (Ruaida, 2018).

## **Conclusion**

Based on the research results, it can be concluded that there are factors that cause stunting in families in Banteran Village, Sumbang District, Central Java. Based on the characteristics of the mothers, it was found that the majority's education level was <Junior High School, height <150 cm, not working and the number of family members was more than four people. Based on the characteristics of the father, it was found that he was employed, his income was below the minimum wage, and his education level was <junior high school. Based on the characteristics of toddlers, the majority are male, their height is in the short category, and they have a history of diarrhea. Apart from the characteristics of mothers, fathers, and toddlers, there are factors of clean and healthy living behavior that influence the occurrence of stunting in the family.

## **Acknowledgement**

1. For mothers, it is hoped that this research can provide insight into their daily lives so that they can increase the nutritional intake of toddlers and maintain family hygiene.
2. For fathers, it is hoped that this research can serve as a reference for maintaining a healthy lifestyle by reducing smoking. The father's role in the family is not only as head of the family but also as husband so he is expected to support and participate in caring for and looking after his toddler.
3. For local health services, it is hoped that this research can become a reference for implementing education regarding stunting and clean and healthy living behavior.

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