

## ANALYSIS OF FACTORS CAUSING STUNTING BASED ON THE URGENCY, SERIOUSNESS, GROWTH (USG) METHOD IN MRANGGEN VILLAGE POLOKARTO SUKOHARJO

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### ABSTRACT

**Introduction:** Stunting is when a child has a shorter body size than average children his age and delays thinking. The input data results for December 2022 show that the highest stunting cases in Mranggen Village were 97 cases of stunting (TB/U), 80 cases of underweight (BB/U) and wasting (BB/TB). as many as 37 cases. This study aimed to determine the factors causing stunting in Mranggen Village, Polokarto District, Sukoharjo Regency. **Methods:** The research design used in this study is analytic descriptive. The implementation of this research was carried out from February to March 2023. The population in this study was 112 mothers with toddlers aged 8-65 months. The variables observed included the characteristics of the respondents (gender of the toddler, mother's job, father's job, family income, age of the toddler's mother, last education of the toddler's mother) and parenting practices (parenting patterns, history of exclusive breastfeeding, mother's knowledge regarding nutrition). Data collection technique using total sampling. The data used are primary data and secondary data. Preliminary data were obtained from research instruments, namely questionnaires, while secondary data was obtained from puskesmas data and local health profile data. The analysis carried out in this study was univariate analysis and the USG method. **Results:** The results showed that the distribution of parenting practices had good value (78.6%), good health services (82.14%) and good access to nutritious food (92.86%). Meanwhile, access to clean water was considered sufficient (32.3%). Based on the clean water access indicator, the biggest contributing factor is poor environmental health (86.6%). At the same time, the analysis results of the USG method obtained the main problem caused by unfavorable environmental health. **Conclusion:** This study concludes that the factor causing stunting in the village of Mranggen, Polokarto sub-district, Sukoharjo Regency is the environmental health factor. Suggestions, it is better for the people of Mranggen village to get used to doing PHBS properly and disposing of trash in its place.

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## INTRODUCTION

The presence of high-quality human resources can measure the success of a nation. These resources are individuals who are physically strong, mentally resilient, intelligent, creative, and in excellent health. Nutrition is a critical factor that can determine the quality of human resources. Nutrition is a critical factor that can determine the quality of human resources. If a nutritional disorder occurs during early life, it may negatively affect the quality of life in the future (Kelurahan et al., n.d.). Childhood malnutrition is often caused by a lack of essential vitamins and minerals, which can lead to deficiencies in both macronutrients and micronutrients. Numerous studies have been conducted in recent years to investigate the effects of inadequate nutrition on health. The findings have shown that poor nutrition increases the risk of infectious diseases and premature death, which can negatively impact physical and cognitive development. Stunting is a growth disorder that results from poor nutrition and is characterized by a significant decrease in growth rate (Apriluana & Fikawati, 2018).

Stunting is a condition where a child has a body size shorter than typical children his age and delays thinking. This also fails to grow physically and in the child's brain due to malnutrition for a long time. Stunting is associated with an increased risk of morbidity and mortality, decreased physical capacity, and impaired development and functioning of children's motor and mental conditions. The Government has made efforts through the Integrated Health Center (Posyandu). Still, they are less than optimal because they involve only some aspects of society, and midwives are an essential part of society who are strategic enough to be involved in this activity because they are very close to mothers and the community (Nugroho et al., 2021).

Based on 2016 WHO data, in Southeast Asia, the prevalence of stunting in toddlers reached 33.8%. In 2011, Indonesia was ranked fifth out of 81 countries with the most significant number of stunted children in the world, reaching 7,547,000 children. Indonesia is reported to have a more significant number of stunted children than several African countries, such as Ethiopia, the Democratic Republic of Congo, Kenya, Uganda, and Sudan. During 2007-2011, Indonesia was reported to have children with medium weight, low weight, and overweight, reaching 13%, 18%, and 14%, respectively. Based on 2016 WHO data, in Southeast Asia, the prevalence of stunting in toddlers reached 33.8%. In 2011, Indonesia was ranked fifth out of 81 countries with the most significant number of stunted children in the world, reaching 7,547,000 children. Indonesia is reported to have a more significant number of stunted children than several African countries, such as Ethiopia, the Democratic Republic of Congo, Kenya, Uganda, and Sudan. During 2007-2011, Indonesia was reported to have children with medium weight, low weight, and overweight, reaching 13%, 18%, and 14%, respectively. The prevalence of stunted toddlers in Indonesia has still fluctuated from 2007-2017. The prevalence of stunted toddlers in Indonesia in 2007 was 36.8%; in 2010, it was 35.6%; in 2013, it was 37.2%; and in 2017 it was 29.6%. 2.5 According to WHO, stunting toddlers is a public health problem if the prevalence is 20% or more. Therefore, the percentage of stunted toddlers in Indonesia is still high and is a health problem that must be addressed. Compared to several neighboring countries, the prevalence of stunting under five in Indonesia is also the highest compared to Myanmar (35%), Vietnam (23%), Malaysia (17%), Thailand (16%), and Singapore (4%) (Apriluana & Fikawati, 2018).

Exclusive breastfeeding in Indonesia is still far from expectations. Nationally, the coverage of babies receiving exclusive breastfeeding in 2017 was 61.33%. However, this figure has not yet reached the exclusive breastfeeding coverage target set by the Government, namely 80%. The benefits of exclusive breast milk for babies include complete nutrition, increased body strength, increased mental and emotional intelligence, mature

spirituality followed by good social development, easy to digest and absorb, a composition of fat, carbohydrates, calories, protein, vitamins, and protection. Infectious diseases and allergy protection because breast milk contains antibodies, stimulates intelligence and nerves, and improves optimal health and intelligence (Sampe et al., 2020).

According to the United Nations International Children's Emergency Fund (UNICEF), in 2013, one in three children under five experienced stunting. Based on UNICEF (2013) data, the incidence of stunting in Indonesia is estimated to occur in 7.8 million children under five. This makes Indonesia one of the top five (five) countries with the highest prevalence of stunted toddlers in the world (Astika et al., 2020).

Based on data from the Ministry of Health announcing the results of the Indonesian Nutrition Survey (SSGI) at the BKKBN National Working Meeting, the prevalence of stunting in Indonesia fell from 24.4% in 2021 to 21.6% in 2022. This reduction in stunting occurred during the pandemic, not during the pandemic, in ordinary times. Minister of Health Budi Gunadi Sadikin hopes that in typical times this year, the decline in stunting cases will be even sharper so that the target of reducing stunting to 14% in 2024 can be achieved (Rokom, 2023).

Based on data from the Sukoharjo District Health Service from the results of the Growth Measurement Dissemination in November 2022, it is known that the Sukoharjo area, especially Polokarto District, Polokarto Village, is the area with the highest stunting. The three health centers with the highest stunting cases are Polokarto Community Health Center (13.6%), Mojolaban Community Health Center (12.5%), and Nguter Community Health Center (11.1%) (Dinkes Sukoharjo, 2022). Based on data from the Polokarto Community Health Center e-PPGBM application (2023), the results of the updated input data in December 2022 show that the highest cases of stunting were in Mranggen Village with 97 cases of stunting (TB/U), underweight (BB/U) with 80 cases and wasting (BB/TB) as many as 37 cases (Puskesmas Polokarto, 2022).

Poor parenting, especially when feeding children, causes stunting. If the mother does not provide adequate and suitable nutritional intake, especially breast milk, from birth until six months, the baby will lack nutrition. Mothers who lack nutrition as teenagers, even when they are married and pregnant, will have a significant influence on the growth of their child's body and brain (Hizriyani & Aji, 2021). Toddlers are the most susceptible age group to suffer from nutritional deficiencies and diseases. One of the significant issues faced by the world, particularly in underprivileged and developing countries, is stunting. Stunting is a significant concern for the welfare and competitiveness of the Indonesian people and nation. It indicates the success of people's education, income, and overall welfare (Pangesti & Saputri, 2022).

Malnutrition in children has acute and chronic impacts. Children who experience acute malnutrition will appear physically weak. This condition is more risky if nutritional problems have started to occur in the womb. National data in Indonesia proves that the high stunting rate goes hand in hand with the incidence of malnutrition. Toddlers are the most susceptible age group to suffer from nutritional deficiencies and diseases. One of the significant issues faced by the world, particularly in underprivileged and developing countries, is stunting. Stunting is a significant concern for the welfare and competitiveness of the Indonesian people and nation. It indicates the success of people's education, income, and overall welfare (Dasman, 2019).

Based on the problems above, it is very important to analyze the causes of stunting cases using the ultrasound method in Mranggen Village, Polokarto District, Sukoharjo Regency. The aim is to find out what factors are priority problems in stunting incidents in Mranggen Village, Polokarto District, Sukoharjo Regency, using the USG method.

## LITERATURE REVIEW

The Indonesian Government has expressed great concern over the issue of stunting, which refers to the problem of short children caused by malnutrition. Stunting is determined by assessing children's nutritional status based on the PB/U or TB/U index and determining if the results are below the -2 SD to -3 SD threshold (Z-Score) in anthropometric standards. It is considered a severe public health issue that puts children at a higher risk of illness, death, and impaired motor and mental growth. This happens when growth is not balanced with catch-up growth, leading to a decrease in growth (Rahmadhita, 2020).

Stunting is a linear growth disorder caused by chronic malnutrition. The malnutrition of under-five children is the leading cause of under-five deaths, with cases of 2.2 million toddlers worldwide. According to Apriluana and Fikawati (2018) the literature review research aimed to analyze the effects of determinant risk factors on the incidence of stunting in toddlers. The research was conducted using the PRISMA method, with results showing that nutritional status factors with birth weight < 2,500 grams significantly influenced the incidence of stunting in children and had a risk of experiencing stunting of 3.82 times. Faktor pendidikan ibu rendah memiliki pengaruh secara bermakna terhadap kejadian stunting pada anak dan memiliki risiko mengalami stunting sebanyak 1,67 kali. Faktor pendapatan rumah tangga yang rendah diidentifikasi sebagai predictor signifikan untuk stunting pada balita sebesar 2,1 kali. The factor of low maternal education has a significant influence on the incidence of stunting in children and has a risk of experiencing stunting of 1.67 times. The factor of low household income was identified as a significant predictor for stunting in children under five at 2.1 times. Poor sanitation factors have a significant influence on the incidence of stunting in toddlers and have a risk of experiencing stunting of up to 5.0 times. So, it can be concluded that low birth weight (LBW), mother's education level, household income, and lack of home sanitation hygiene pose a greater risk for the incidence of stunting in toddlers. (Apriluana & Fikawati, 2018)

Fatimah's research (2021) states a significant relationship exists between maternal education and the nutritional status of children under five years old, BB/U, TB/U, and BB/TB during the COVID-19 pandemic. There is a significant relationship between economic ability and the nutritional status of BB/U, TB/U, and BB/TB children under five during the COVID-19 pandemic. There is a significant relationship between the environment and the nutritional status of BB/U, TB/U, and BB/TB children under five during the COVID-19 pandemic. There is a significant correlation between complete primary immunization and the nutritional status of BB/U, TB/U, and BB/TB children under five during the COVID-19 pandemic. Monitoring the growth of children under five over the last six months during the COVID-19 pandemic shows a significant correlation with the nutritional status of children under five, BB/U, TB/U, and BB/TB (Fahimah, 2021).

Food is a source of nutrients that can prevent stunting in children. One way to overcome stunting in toddlers is by transforming existing processed products into highly nutritious foods that attract children's attention. Another way is to conduct health education sessions for mothers of toddlers, using presentations, videos, and Q&A sessions. Health education about providing nutritious food supplements made from Moringa leaves can be an alternative for posyandu cadres to prevent stunting (Pangesti & Saputri, 2022).

## METHOD

This type of research is quantitative descriptive with a case study approach. This research was carried out in February-March 2023. The population in this study was mothers

(with toddlers aged 8-65 months) totaling 112 respondents. The data collection technique uses total sampling. The variables observed included the characteristics of the respondents (gender of the toddler, mother's job, father's job, family income, age of the toddler's mother, last education of the toddler's mother) and parenting practices (parenting patterns, history of exclusive breastfeeding, mother's knowledge regarding nutrition). The data used is primary data and secondary data. Primary data was obtained from research instruments, namely questionnaires, while secondary data was obtained from community health center data and local health profile data. Data analysis used univariate analysis and ultrasound method analysis. The question in this research is what factors are the priority problems in the incidence of stunting in Mranggen Village, Polokarto District, Sukoharjo Regency based on the USG method?

## RESULTS AND DISCUSSION

The gender of the toddlers is mostly male, with 58 (51,8%) toddlers. The most common age of toddlers is from 37-65 months, with 60 (53.6%) toddlers. The most common occupation of mothers of toddlers is as a housewife, 73 (65.2%). The most common occupation of fathers of toddlers is as a laborer 44 (39,3%). The maximum income of both parents of toddlers is around <2,000,000, namely 65 (58.0%). The age of both parents of toddlers is at most >30 years, namely 69 (61.6%). The highest level of education of parents of toddlers is high school education at 49 (43.8%) (Table 1).

**Table 1. Respondent Characteristics (N= 112)**

Respondent Characteristics		Amount (n)	Percentage (%)
Gender	Male	<b>58</b>	<b>51,8</b>
	Female	54	48,2
Age	0-36 Month	52	46.4
	37-65 Month	<b>60</b>	<b>53.6</b>
Mother's Job	Housewife	<b>73</b>	<b>65,2</b>
	Self-Employee	21	17,9
	Laborers	2	1,8
	Employee	7	6,3
	Teacher	6	2,7
	Midwife, Nurse	3	5,4
Father's Job	Employees	28	25
	Laborers	<b>44</b>	<b>39,3</b>
	Self-employed	35	31,3
	Farmer	1	0,9
	Driver	2	1,8
	Teacher	1	0,9
	Mantri	1	0,9
	TNI	28	25
Family Income	< 2.000.000	<b>65</b>	<b>58</b>
	> 2.000.000	47	42
Mother's Age	< 30 Years	43	38.4
	> 30 Years	<b>69</b>	<b>61.6</b>

Respondent Characteristics		Amount (n)	Percentage (%)
Mother's Education	Elementary School (ES)	13	11.6
	Junior High School (JHG)	38	33.9
	Senior High School (SHS)	<b>49</b>	<b>43.8</b>
	Diploma /Bachelor Degree /Master Degree	12	10.7

The factors that cause stunting are divided into direct and indirect factors. Direct factors include mothers experiencing nutritional deficiencies, prenatal pregnancy, suboptimal feeding, not exclusive breastfeeding, and infections. Meanwhile, the indirect factors are health services, education, socio-cultural, and environmental sanitation. (WHO, 2016).

Based on the results of Verawati Simamora's 2019 research, there are many factors that cause stunting in children. Factors that cause stunting can be direct or indirect factors. The direct causes of stunting are nutritional intake and the presence of infectious diseases, while the indirect causes are education, status, family economy, maternal nutritional status during pregnancy, water, and environmental sanitation, and LBW knowledge of the mother and family. Based on the results of Septamarini's research in the Journal of Nutrition College in 2019, mothers with low knowledge had a 10.2 times greater risk of children experiencing stunting compared to mothers with sufficient knowledge. Knowledge is the result of "knowing," and this occurs after people sense a particular object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. (Rahmadani, 2021)

Mothers play an important role in supporting efforts to overcome nutritional problems, especially in terms of family nutritional intake, starting from food preparation and selecting food ingredients to food menus. Mothers who have good nutritional status will give birth to well-nourished children. The family's ability to meet food needs, both in quantity and nutritional quality, greatly influences the nutritional status of children. Families with a relatively fixed income have a lower prevalence of underweight and a lower prevalence of stunting compared to families with an unstable income (Anindita, 2018).

Research in Semarang by Margawati and Astuti (2018) proves that the majority of mothers have low knowledge and wrong perceptions about stunting. Parents'/mothers' lack of understanding regarding stunting is clearly related to the mother's efforts to deal with stunting. The task of parents, especially mothers, is really needed when providing food to help monitor growth and development, so understanding nutrition is needed to be able to provide adequate food. Initially, the child's life and fitness cannot be separated from the mother's fitness, which is linked to the mother's nutritional knowledge (Paramita et al., 2021).

Judging from the income of both parents of toddlers, based on the analysis results, it tends to be less than the minimum wage. According to Andi Husnul Fahimah (2022), in his research, there is a significant relationship between economic ability and the nutritional status of TB/U toddlers. Based on the researchers' observations, this can happen because the nutrition of children under five can still be fulfilled by consuming food around their homes, which is grown by many people, most of whom work as farmers. Parents must pay more attention to the food intake of children under five during the COVID-19 pandemic to prevent nutritional problems in children under five.

It is known that the average (Mean) height of toddlers is 83.4, the average (median) height of toddlers is 83, while Std. The deviation in toddler height is 9,05. The average

(Mean) weight of toddlers is 10,23, and the average value (Median) of the weight of toddlers is 10,05, while Std. Deviation in toddler weight is 2,18 (Table 2).

**Table 2 Distribution of Mean, Median, Standard Deviation for Height and Weight**

Variables	Value		
	Mean	Median	Standard Deviation
Height	83.4	83	9.05
Weight	10.23	10.05	2.18

It is known that the distribution of parenting practices is dominantly GOOD from Parenting Practices (78,6%), History of Exclusive Breastfeeding (85.71%), Parenting Patterns (86,61%), and Mother's Knowledge Regarding Nutrition (89,28%) on Table 3. The results show that the majority of mothers provide exclusive breastfeeding to their children well. According to Makoka & Masibo (2015), maternal education has a significant relationship with the incidence of stunting. Another factor associated with the incidence of stunting is a history of CED during pregnancy in Gunung Kidul. Poor parenting patterns are also associated with the incidence of stunting, including poor parenting patterns in providing complementary foods for breast milk that risk making children become stunted. Different results were given (Masrul, 2019), which found that parenting patterns and nutritional intake for children in Pasaman Regency were not related to the incidence of stunting. The uncertainty of this influence means that interventions to prevent and handle stunting problems are not targeted, so they do not have a significant impact in reducing stunting. Therefore, further research is needed to assess the influence of parenting styles (Indah Nurdin et al., 2019)

**Table 3. Distribution of Parenting Practices (N= 112)**

Variables	Indicator	Amount (n)	Percentage (%)
Parenting Practices	Good	88	78.6
	Enough	18	15.25
	Not Good	6	5.08
History of Exclusive Breastfeeding	Good	96	85.71
	Enough	0	0
	Not Good	16	13.56
Parenting	Good	97	86.61
	Enough	0	0
	Not Good	15	12.71
Mother's Knowledge Regarding Nutrition	Good	100	89.28
	Enough	0	0
	Not Good	12	10.17

Table 3 shows that the majority of mothers' parenting patterns for their children are carried out well. Parenting style is the most influential risk factor, where a mother's poor parenting style is 3.9 times more likely for her child to experience stunting when compared to mothers who have good parenting patterns. One of the most important needs for children is physical physical needs (parenting style). The parenting style provided can take the form of adequate food and nutrition and basic health care provided to children (Indah Nurdin et al., 2019).

Table 3 also illustrates the results that the majority of mothers have good knowledge regarding nutrition in children. The position of parents in Islam regarding education is very important. Because nature of parents have the task of educating and instilling Islamic values and monotheism in the souls of their children, as in the hadith of Rasulullah SAW said: َ

**عَلِّمُوا أَوْلَادَكُمْ وَأَهْلَكُمْ الْخَيْرَ وَأَيُّبُوهُمْ (رواه عبدالرزاق و سعد بن منصور)**

*Meaning:* "Teach kindness to your children and your family and educate them" (HR Abdur Razaq and Said bin Mansur).

The Hadith above shows that Islam pays great attention to the education of children in the family. We certainly agree that there is nothing more dangerous to society than the destruction of children as our replacement generation and future leaders with an education that guarantees security and happiness for Muslims. The embryo of a child's education begins in the household under the protection of his parents. (Fahimah, 2021).

**Table 4 Distribution of Health Services and Acces to Nutrition Food (N= 112)**

Variable	Indicator	Amount (n)	Percentage (%)
Health services	<b>Good</b>	<b>92</b>	<b>82.14</b>
	Enough	14	11.86
	Not good	6	5.08
Access to Nutritious Food	<b>Good</b>	<b>110</b>	<b>93</b>
	Enough	2	1.70
	Not Good	6	5.08

Based on Table 4, it is known that the distribution of health services is good (82,14%), adequate (11.86%), and poor (5.08%). According to research results from Andi Husnul Fahimah (2022), the use of health facilities and the nutritional status of toddlers based on BB/U, TB/U, and BB/TB shows a significant relationship. One of the efforts that has been made to reduce the stunting rate is by strengthening the capacity of cadres at the community level in carrying out outreach efforts regarding the prevention of stunting in the elderly (Mashar et al., 2021).

The distribution of access to nutritious food is Good (92,86%), Fair (1.70%), and Poor (5.08%). Distribution of access to nutritious food has an impact on health and nutritional status. Good environmental conditions impact environmental burdens, which include direct and indirect health hazards such as a lack of healthy food. According to Hilmer et al. (2012), people with low economic conditions can have low access to nutritious food. (Hilmers et al., 2012).

Based on Table 5, the distribution of Environmental Health is not good (86,60%). Meanwhile, access to clean water, sanitation facilities, sources of drinking water, and hand-washing habits are dominantly good. Based on Table 6, the distribution of access to clean water shows that children's environmental health has poor indicators (60,71%) compared to others.

According to Fahimah's research (2022), there is a significant relationship between the physiological needs of healthy homes and the nutritional status of BB/U toddlers. This means that if the home environment is unhealthy, it can impact the nutritional status of toddlers. In Table 6, it can also be seen that mothers/parents of toddlers pay less attention to the health conditions of the surrounding environment. This is one of the factors causing



stunting in children. Good and clean environmental health can protect children from stunting.

**Table 5. Distribution of Clean Water Access (N= 112)**

Variable	Indicator	Amount (n)	Percentage (%)
<b>Access to Clean Water</b>	<b>Good</b>	<b>68</b>	<b>60.71</b>
	Enough	38	32.20
	Not good	6	5.08
a. Sanitation Facilities	<b>Good</b>	<b>106</b>	<b>94.64</b>
	Not good	6	5.08
b. Source of Drinking Water	<b>Good</b>	<b>93</b>	<b>83,4</b>
	Not good	19	16
c. Hand Washing Habit	<b>Good</b>	<b>88</b>	<b>78.57</b>
	Not good	15	12.71
d. Environmental Health	Good	15	12.71
	<b>Not good</b>	<b>97</b>	<b>86.60</b>

The direct factors that cause stunting are the nutrition the mother gets during pregnancy, diseases caused by infections, and the nutrition the child gets. Factors that can indirectly influence the incidence of stunting are environmental sanitation and hygiene conditions. This includes drinking water sources, physical quality of drinking water, toilet ownership, and personal hygiene, such as hand washing habits. Poor environmental sanitation and hygiene conditions can trigger the emergence of various types of diseases in children whose frequent illnesses can also reduce good nutritional intake. This causes children to lose more and more nutrients needed for growth (Khoirunnisa & Sukesni, 2022).

**Table 6. Urgency, Seriousness, Growth (USG) Results**

Problem	USG			Total
	U	S	G	
Parenting Practices	1	2	2	5
Exclusive Breast Milk History	2	2	2	6
Parenting	2	2	2	6
Mother's knowledge about nutrition	3	2	3	8
Health services	2	2	2	6
Access nutritious food	1	2	1	4
Access to Clean Water	3	3	3	9
Sanitation Facilities	3	3	3	9
Source of Drinking Water	3	3	4	10
Hand Washing Habit	3	2	3	8
<b>Environmental Health</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>14</b>

The results of the highest ultrasound assessment on environmental health problems are not accurate (Table 6). A look at the epidemiological triangle shows that there is a link between the environment, humans, and disease-causing agents. Environmental conditions can influence human behavior, and human behavior influences environmental conditions; when the environment provides an opportunity for disease-causing agents to meet with humans, illness occurs. Poor environmental conditions can increase the possibility of encounters between disease-causing agents and humans, resulting in more and more cases

of illness. Regarding environmental health factors, clean water sources are the most important thing for survival. So, for daily living needs, you must use protected water sources such as deep, shallow wells and springs. Poor personal hygiene practices can result in children experiencing diarrhea more easily.

**Table 7 Problem Priority**

Problem	USG Result
Environmental Health	14
Source of Drinking Water	10
Access to Clean Water	9
Sanitation Facilities	9
Mother's knowledge about nutrition	8
Hand washing habit	8

Based on Table 7, the problem priority results obtained using the USG method show that the priority problem is the Environmental Health problem and followed by the Drinking Water Source problem. The environment that influences nutritional status can be seen from the differences in location (ecosystem environment) where families living and developing in urban and rural areas will produce different behavior and care. Situations like this can have an impact and spread the problem of malnutrition (Zairinayati and Purnama, 2019). We should protect the surrounding environment so that it does not cause damage that will be detrimental to health. Because in reality it is humans who cause damage to nature itself. We can also see this in the words of Allah SWT Q.S Ar-Rum/30: 41 which reads:

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِيقَهُمْ  
بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ يَرْجِعُونَ

Meaning: There has been visible damage on land and at sea caused by the actions of human hands; Allah wants them to feel some of the (consequences of) their actions so that they return (to the right path).

The characteristics of the quality of the environment are the conditions or elements of the environment that interact with each other (interactive), have mutual dependence (interdependency), a harmonious relationship between environmental components (harmony), the ability to survive in diversity (diversity), all elements or environmental components carry out tasks according to their respective functions (utility), there is a flow of information (information) from environmental conditions for science, and efforts must be made to ensure that these conditions can continue continuously (sustainability) ( Rizal, 2017).

The contribution that can be made from the results of this research is that it can provide information to the community, especially village midwives, posyandu cadres, posyandu heads, and village heads regarding the results of the ultrasound method analysis regarding the factors causing stunting in Mranggen Village that have been found. Apart from that, the results of this research, if prevention and control efforts are not immediately implemented, will in the future have an impact on hampering children's growth and development. The potential that can be carried out by future researchers is related to the relationship between knowledge and environmental health and the provision of supplements on the influence of changes in height, weight, and nutritional status. The

limitations of this research are the data collection process because of the parents' work and the distance between the respondents' homes.

## CONCLUSION

Stunting is a condition where a child has a body size that is shorter than normal children of his age and has delays in thinking. Based on the results of research that has been carried out regarding the analysis of factors causing stunting based on the Urgency, Seriousness, Growth (USG) method in Mranggen Village, Polokarto Sukoharjo, it can be concluded that the priority factor causing stunting is environmental health factors. Efforts that must be made by the community are to get used to doing PHBS properly and throwing away rubbish in the right place, because an unfavorable environment can influence the occurrence of stunting in children. Apart from environmental health factors, parenting patterns and nutritional intake can influence the occurrence of stunting. Efforts to prevent and reduce stunting rates are by improving child rearing patterns and providing good nutritional intake to children and the community is expected to be active and have high initiative in helping prevent stunting.

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