

Factors That Influence The Occurrence Of Stunting In Toddlers In Jamang Village, Maduran District, Lamongan

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ABSTRACT

Introduction : Stunting is a major obstacle to the growth and development of children under 5 years of age, leading to an increased risk of morbidity and mortality, reduced physical capacity, impaired development, and impaired motor function. If left untreated, it can lead to decreased brain development, impaired intelligence, impaired physical growth, and health problems such as the risk of diabetes, obesity, heart disease, cancer, stroke, and disability in old age. The aim of this study was to identify factors influencing stunting in toddlers. **Method:** This study employed a quantitative descriptive method. The sample consisted of 35 mothers of stunted toddlers. The sampling technique used was total sampling. Data were collected from May 22nd to 25th at the Jamang Village Toddler Health Post (Posyandu) using a questionnaire. **Results and Analysis:** The results of this study found that the direct factor causing stunting in toddlers in Jamang Hamlet was that most of the toddlers had experienced moderate or severe infections. Meanwhile, the indirect factor causing stunting was maternal occupation. In fact, stunting was more common in toddlers whose mothers were housewives. **Conclusion :** Mothers of toddlers are expected to consistently monitor and pay attention to their children's health to ensure their growth and development are not disrupted. Increase awareness through health cadres or healthcare workers by providing health education through various media such as leaflets, posters, and videos. This education includes explanations on how to address stunting in toddlers..

Keywords: Toddlers, Factors, Stunting

INTRODUCTION

Stunting is a major obstacle in the growth and development of children under 5 years of age, causing an increased risk of morbidity and mortality, decreased physical capacity, impaired development and motor function. Factors such as a history of exclusive breastfeeding, a history of low birth weight (LBW), a history of complete basic immunization, a history of moderate/severe infections, and parental characteristics (maternal education, maternal occupation, family economy) as well as the lack of role of cadres in educating about the importance of complete immunization and diet contribute to stunting. (Khasanah et al., 2022) The growth and development of children under 5 years of age is crucial, especially in the first three years, as it is crucial for their future. Stunting is a condition in which children are not tall enough for their age or have a z-score of less than -2 SD as a result of chronic malnutrition or repeated infections. (Dewi et al., 2023) If left

unaddressed, this factor will impact the quality of human resources, productivity, and national competitiveness. The impacts of stunting can be both short-term and long-term, including impaired brain development, impaired intelligence, impaired physical growth, and health problems such as the risk of diabetes, obesity, heart disease, cancer, stroke, and disability in old age. (Ministry of Village Development, Disadvantaged Regions and Transmigration, 2017)

According to a 2018 WHO report, Indonesia ranked third in the Southeast Asian Region with the highest stunting prevalence after Timor Leste and India, at 36.4%. The stunting incidence in Indonesia in 2019 was 27.67%, decreased in 2020 to 26.92%, and fell again in 2021 to 24.4%. The number of stunting cases in East Java was ranked 20th in 2019, reaching 26.86%, decreased in 2020 to 25.64%, and decreased again in 2021 to 23.5%. (Ministry of

Health of the Republic of Indonesia, 2018) In 2022, the stunting prevalence rate in Lamongan, based on the Indonesian Nutritional Status Survey (SSGI), was 27.5. This figure is considered high, as in February 2022, the stunting prevalence in Lamongan Regency was 5.38 percent, or 3,885 toddlers, according to data from toddler nutrition reporting per integrated health post (Posyandu) in Lamongan Regency. Stunting remains a particular concern in the Maduran Community Health Center nutrition program in the Maduran sub-district. From January to May 2024, 35 out of 106 toddlers aged 0-59 months were still found to have stunted growth in Jamang Hamlet, Maduran Sub-district, Lamongan.

Many factors contribute to stunting, including poor maternal nutritional status during pregnancy, short stature, and suboptimal child feeding practices. Other factors include maternal infections, teenage pregnancy, short birth spacing, family economic conditions, and limited access to health and sanitation services. (Ministry of Health of the Republic of Indonesia, 2022) Maternal nutrition before and during pregnancy is a crucial factor influencing fetal growth. Malnutrition can lead to low birth weight (LBW) and growth retardation. Furthermore, early initiation of breastfeeding and immunization are also crucial, as exclusive breastfeeding and inadequate immunization can increase the risk of stunting in children. Therefore, several factors contributing to stunting include low birth weight (LBW), non-exclusive breastfeeding, maternal nutritional status, maternal education level, and early initiation of breastfeeding practices, which influence exclusive breastfeeding in infants. (Komalasari et al., 2020).

hip program for extreme poverty alleviation, the home care service (HCS). (Lamongan Regency Government, 2022). To determine or differentiate between stunted toddlers and toddlers with short stature, the method is by providing substitute food (PMT) for 6 months. If during the 6 months there is no change in BMI, then the toddler is not experiencing stunting but is caused by genetic factors.

The Indonesian government has used Posyandu (Integrated Health Posts) as an effort to reduce stunting rates, but this has been suboptimal because it hasn't involved all aspects of society. Cadres and traditional birth attendants are a crucial part of the community and are strategically important to involve because they are closely connected to mothers and the community. (Martha et al., 2020). In addition, the Indonesian government has also implemented a stunting prevention program in the 2015-2019 period. With the aim of reducing the prevalence of stunting so that Indonesian children can grow and develop optimally, have emotional, social, and physical abilities ready to compete at the global level. The main priority is to increase the coverage and quality of nutritional services in households during the first 1,000 days of life, including pregnant women and children aged 0-2 years. The role of health workers in stunting prevention efforts involves a counseling approach to parents in providing supplementary food (PMT) for toddlers through the integrated health post (Posyandu) program. (Tulak et al., 2022). The Lamongan Regency Government continues to strive to create an ecosystem that supports stunting prevention towards a Lamongan with zero stunting. This effort is carried out through programs such as stunting awareness, environmental awareness, the National Population and Family Planning Agency (BKKBN), mother and child awareness, and clean and healthy living awareness in collaboration with the Health Office. In addition, Lamongan also initiated the Happy Friday program to anticipate stunting in expectant mothers, especially young women who are free from worms. All elements of society also care about their surroundings through the flags

RESEARCH METHODS

This study is a descriptive study with quantitative methods, as it describes a situation or phenomenon as it is (Sudaryono, 2016). The researcher wanted to determine the incidence of stunting in toddlers in the Maduran Lamongan Community Health Center Work Area, namely in Jamang Hamlet, Maduran Lamongan District. The sample in this study were mothers who had stunted toddlers aged 6 months - 5 years in Jamang Hamlet, Maduran Lamongan District, with a total of 35 stunted toddlers in September 2023 (Data from Jamang Hamlet, September 2023).

RESULTS AND DISCUSSION

1. General Data

Table 1 Frequency Distribution of General Data on Mothers with Stunting Toddlers Regarding Factors Influencing Stunting in Toddlers in Jamang Hamlet, Maduran District, Lamongan in May 2024

No.	Category	Category	Frequency	%
1.	Age	17 - 25	8	23
		26 - 35	23	66
		36 - 39	4	11
		Amount	35	100
2.	Resources	Mass Media	7	20
		Health workers	10	28
		Cadre	15	43
		Neighbor	3	9
		Amount	35	100

Research results showed that almost half (43%) of the mothers had a high school education. Most mothers (52%) worked as housewives or were

unemployed. Meanwhile, almost half (37%) of the families earned IDR 1-2 million per month.

2. Special Data

1. Indirect Factors Causing Stunting

Table 1. Indirect Factors Influencing the Occurrence of Stunting in Toddlers in Jamang Jamang Hamlet, Maduran District, Lamongan in May 2024.

No.	Factor	Category	F	%
1	Parental Characteristics (Mother's Last Education)	No school	0	0
		Elementary School / Equivalent	4	11
		Junior High School / Equivalent	10	29
		SENIOR HIGH SCHOOL	15	43
		College	6	17
		Amount	35	100
2	Parental Characteristics (Mother's Occupation)	IRT (Housewife)	18	52
		Private	8	23
		Laborer	4	11
		Civil Servants/TNI/POLRI	5	14
		Amount	35	100
3	Characteristics of Parents (Family Economy)	< 1 Million / month	12	34
		1 million - 2 million / month	13	37
		> 2 Million / month	10	29
		Amount	35	100

Research results showed that almost half (43%) of the mothers had a high school education. Most mothers (52%) worked as housewives or

were unemployed. Meanwhile, almost half (37%) of the families earned IDR 1-2 million per month.

2. Direct Factors Causing Stunting

Table 2. Direct Factors Influencing the Occurrence of Stunting in Toddlers in Jamang Hamlet, Maduran District, Lamongan in May 2024

No.	Factor	Category	F	%
1	Parental Characteristics (Mother's Last Education)	No school	0	0
		Elementary School / Equivalent	4	11
		Junior High School / Equivalent	10	29
		SENIOR HIGH SCHOOL	15	43
		College	6	17
Amount			35	100
2	Parental Characteristics (Mother's Occupation)	IRT (Housewife)	18	52
		Private	8	23
		Laborer	4	11
		Civil Servants/TNI/POLRI	5	14
Amount			35	100
3	Characteristics of Parents (Family Economy)	< 1 Million / month	12	34
		1 million - 2 million / month	13	37
		> 2 Million / month	10	29
Amount			35	100

The results of the study showed that, with a history of exclusive breastfeeding, most (57%) toddlers received exclusive breastfeeding from 0-6 months without being given additional food or drink. With a history of low birth weight, most (71%) toddlers had a normal birth weight (not low birth weight). Almost all (80%) toddlers had a history of complete basic immunization. Meanwhile, the history of infection for most (51%) toddlers was moderate or severe.

DISCUSSION

Indirect Factors Causing Stunting

1. Parental Characteristics (Mother's Last Education)

Based on the research results, it was found that almost half (43%) of the mothers' highest education was high school education and a small proportion (11%) had elementary school education / equivalent.

According to (Nainggolan & Sitompul 2019). The higher a person's education, the more knowledge they will acquire. A low level of education will hinder access to information, leading to a lack of optimal knowledge about good nutrition sources for the family and meeting nutritional needs, especially for children. Parents, especially mothers, with higher education can provide better child care than parents with less education.

The results of this study align with research conducted by Rina, Wa Ode, & Jafriati (2022) entitled "Analysis of Risk Factors for Stunting in

Toddlers (6-24 Months) in the Mowila Community Health Center Work Area." The study found that the highest educational attainment (49%) was high school graduates, with almost half having a high school education. This study found that nearly half of the mothers had a high school education. Education can influence how a person receives or receives information, as it is influenced by curiosity. Therefore, families, especially mothers, should frequently seek out the latest information on child health to broaden their knowledge and develop positive parenting practices. Furthermore, children can maintain their nutritional status and prevent malnutrition by attending outreach sessions on factors influencing stunting at integrated health posts (Posyandu) or community health centers (Puskesmas) as a preventative measure.

2. Parental Characteristics (Mother's Occupation)

Based on the research results, it was found that the majority of mothers (52%) work as housewives / do not work and a small number (11%) of mothers work as laborers.

Parents' occupations, especially mothers', can impact parenting patterns because mothers are always present in the care process, as well as in the growth and development of their children. If mothers work and children are often left with babysitters or other family members, this can lead to a lack of time for the mother to care for the child, poor parenting practices, and inadequate nutrition. Parents with high incomes can impact the family's financial situation, which can lead to providing good food for the family. (Ibrahim & Faramita, 2022).

The results of this study align with research conducted by Rina, Wa Ode, & Jafriati (2022) entitled "Analysis of Risk Factors for Stunting in Toddlers (6-24 Months) in the Mowila Community Health Center Work Area." The study found that almost all (86%) of the parents worked as housewives.

This study found that most mothers are unemployed or solely housewives. Ideally, housewives should have more freedom in caring for their children. However, due to low education, mothers sometimes lack effective parenting practices, even as housewives. Therefore, parents should seek out more information about children's health by attending health education sessions on age-appropriate nutritional needs and attending integrated health posts (Posyandu) for toddlers.

3. Characteristics of Parents (Family Economy)

Based on the research results, it was found that almost half (37%) of the family economy earns 1 – 2 million/month and a small portion (29%) earns > 2 million/month.

Families with sufficient income can provide good food for their families, thus ensuring the nutritional needs of both children and the family (Ibrahim & Faramita, 2017). Low income is considered to have a significant impact on the likelihood of children being thin and stunted. Families with low incomes lack the family's purchasing power for nutritious food, which can lead to malnutrition. (Tanzil & Hafriani, 2021).

The results of this study align with research conducted by Rina, Wa Ode, & Jafriati (2022) entitled "Analysis of Risk Factors for Stunting in Toddlers (6-24 Months) in the Mowila Community Health Center Work Area." The study found that the majority of families (71%) earned IDR 1-2 million per month.

This study indicates that nearly half of families earn 1-2 million rupiah per month. The family's income comes from the husband, who is the only one employed, mostly as a construction worker. Most families' income is insufficient to meet their basic needs. Furthermore, in children with stunting, the family's economic situation significantly influences the ability to meet the nutritional needs of toddlers, which can be achieved through adjusting to the price or budget available. Therefore, families should manage their finances as best as possible to ensure adequate nutrition for their children. Furthermore, the government has provided assistance and social security for low-income families.

Direct Factors Causing Stunting

1. History of Exclusive Breastfeeding

Based on the research results, it was shown

that, the history of exclusive breastfeeding showed that most (57%) toddlers received exclusive breastfeeding from 0-6 months without being given additional food/drinks and almost half (43%) toddlers did not receive exclusive breastfeeding in the first 6 months.

Breast milk (ASI) is the milk produced by mothers and contains many nutrients supported by the nutritional content of breast milk, including macronutrients in the form of water, protein, fat, carbohydrates, and carnitine. Micronutrients in the form of vitamins K, D, E, A, and water-soluble vitamins. Breast milk also contains minerals and bioactive components in the form of living cells, antibodies, cytokines, growth factors, oligosaccharides, and hormones. Breast milk also contains various specific enzymes that function as absorbents which are completely dependent on the baby's intestines. (Fera et al., 2023). The risk of stunting in toddlers who are not exclusively breastfed is higher than in toddlers who are exclusively breastfed. Lack of exclusive breastfeeding for 6 months without additional food or drink can increase the risk of stunting in early life. Babies who are not exclusively breastfed are at greater risk of diarrhea than babies who are exclusively breastfed. Providing exclusive breastfeeding can help babies improve their immune system, thus preventing babies from experiencing the risk of health problems such as digestive infections and upper respiratory tract infections. (Ni'mah & Nadhiroh, 2022).

The results of this study align with research conducted by Atika Kurnia Sari & Rani Fitriani in 2022, entitled "The Relationship between Exclusive Breastfeeding and Stunting in Toddlers." The results showed that the majority (57%) of toddlers with a history of exclusive breastfeeding received exclusive breastfeeding, while almost 43% of toddlers were not.

In this study, almost half of children who do not receive exclusive breastfeeding are caused by the absence of breast milk or flat/non-protruding nipples and working mothers. Working mothers in this condition should be able to routinely pump breast milk stored in breast milk bags so that when the mother works outside, the mother already has a stock of breast milk at home. In addition, for mothers who have flat/non-protruding nipples and breast milk not coming out can do breast care at home routinely twice a week and to facilitate breast milk production can consume katuk leaves or can do massage on the vertebrae or the term oxytocin massage.

2. History of LBW

Based on the research results, it was shown

that the majority (71%) of toddlers had normal birth weight (2500 – 4000 grams) and almost half (29%) of toddlers were born prematurely with low birth weight (<2500 grams).

Low birth weight (LBW) babies often have difficulty breastfeeding and getting enough milk due to poor sucking ability or other health issues. Lack of breast milk can increase the risk of stunting in LBW babies. Furthermore, their immature immune systems make them susceptible to infections that can interfere with nutrient absorption and increase metabolic demands. Infections such as diarrhea and respiratory infections can also cause loss of essential nutrients through vomiting or diarrhea. After six months of age, LBW babies require nutrient-rich complementary foods (MP-ASI) to meet their higher nutritional needs. If MP-ASI is inadequate in quantity and quality, LBW babies can experience nutritional deficiencies that are essential for their growth. A history of LBW can impact physical development, stunted growth, and mental development, which can be affected later in life. LBW occurs due to several factors, including maternal, fetal, and placental factors. Children with a history of LBW are at risk for growth and development, especially stunting, because they are unable to compete with children born with normal weight and who receive adequate nutrition during the first 1,000 days of life. (Jumhati & Novianti, 2018). In addition, a body length that is far below the average birth length is caused by growth retardation during pregnancy, thus indicating a lack of nutritional status and health of the mother during pregnancy, which causes the child to be born with a shorter length. (Ni'mah & Nadhiroh, 2022).

The results of this study align with research conducted by Hendra Mukhlis & Rahmita Yanti (2020) entitled "Factors Associated with Stunting in Toddlers Aged 24-59 Months." The study found that the majority of infants had normal/adequate birth weight (71.4%).

In this study, mothers with stunted toddlers mostly gave birth at full term (40 weeks). Almost all (92%) had birth lengths >48 cm, and a small proportion (8%) had birth lengths <48 cm. Therefore, mothers should regularly undergo antenatal care (ANC) checkups during pregnancy to determine their weight during pregnancy and to monitor their weight.

Measuring the uterine fundal height (FH) is used to predict fetal weight. Furthermore, prenatal checkups (ANC) aim to detect pregnancy-related problems early to prevent more serious consequences after the baby is born. These ANCs are performed to help mothers understand proper nutrition during pregnancy.

3. Complete Basic Immunization History

Based on the research results, it was shown that, with a history of complete basic immunization, almost all (80%) toddlers received complete basic immunization and a small proportion (20%) received incomplete immunization.

Immunization is crucial for the body because it provides immunity by administering weakened germs. Immunization also helps prevent infection from several diseases. Failure to receive complete and timely immunizations can increase the risk of various diseases, including hepatitis, tuberculosis, tetanus, diphtheria, and measles. Children are also more susceptible to other health problems due to malnutrition, as malnourished children are at risk of infection due to a weakened immune system. (Hidayah et al., 2023).

The results of this study are in line with research conducted by Hendra Mukhlis & Rahmita Yanti (2020) entitled Factors Associated with the Incidence of Stunting in Toddlers Aged 24 – 59 Months.

The results of the study indicate that almost all (76.2%) of those with a history of complete basic immunization have received complete basic immunizations. In this study, there were 7 toddlers aged 1-2 years who had not received complete basic immunizations, namely measles immunization due to illness. Therefore, mothers must understand their children's uncompleted immunizations and consult with the doctor/midwife/nurse who will administer the immunization. Furthermore, any uncompleted immunizations can be administered when the child attends the next toddler posyandu (integrated health post) for children. Providing these immunizations is very important for children as an early prevention measure. attacked by disease.

4. Infection History

Based on the research results, it was shown that the history of infection showed that most (51%) toddlers had experienced moderate/severe infections and almost half (49%) toddlers had experienced mild infections.

Poor environmental sanitation can lead to various diseases such as diarrhea, fever, chickenpox, and measles. If a child suffers from an infection, especially in the digestive tract, nutrient absorption is disrupted, leading to malnutrition. Furthermore, children who frequently suffer from respiratory infections (ARI) (coughs, colds, and sore throats) can also experience stunted growth and development due to malnutrition. Malnutrition in children can easily lead to impaired growth and development. This occurs because infectious

diseases disrupt a child's growth and nutritional status by reducing food intake, disrupting nutrient absorption, and can lead to direct nutrient loss.(Sumartini, 2022).

The results of this study are in line with research conducted by Hasanah N, Martono Tri U, & Esti Y, (2019) entitled The Relationship between Illness History and the Incidence of Stunting in Toddlers.

The results of the study showed that the history of infection for the majority (40%) was mild illness/infection. In this study, almost all children had experienced mild and moderate/severe infections with a frequency of illness >8 times a year and a duration of illness >14 days. Therefore, mothers must always pay attention to their children's condition to prevent it from getting worse when sick. Families must also pay attention to environmental sanitation to avoid infection, for example, always eradicating mosquito larvae and families can pay attention to dietary patterns that affect or cause sore throats, such as unhygienic snacks or those containing preservatives and clothing dyes. In addition, if a child is sick, immediately give medication / immediately examine the health service.

CONCLUSION

Based on research and discussion regarding the factors that influence the occurrence of stunting in toddlers in Jamang Hamlet, Maduran District, Lamongan, which have been described in chapter 4, the following conclusions can be drawn:

1. Almost half of mothers of toddlers who experience stunting have a high school education.
2. Most mothers of toddlers who experience stunting do not work or are housewives.
3. Almost half of the parents of toddlers who experience stunting earn 1 – 2 million/month.
4. Most toddlers who experience stunting receive exclusive breastfeeding.
5. Most toddlers who experience stunting do not have a history of low birth weight (LBW).
6. Almost all toddlers who experience stunting receive complete basic immunizations.
7. Most toddlers who experience stunting have experienced moderate/severe infections.

SUGGESTION

It is hoped that Posyandu cadres can provide health education on the factors causing stunting in toddlers through media such as leaflets, posters, or videos to increase the knowledge of mothers of toddlers.

Mothers of toddlers are expected to pay more attention to their children's health by maintaining sanitation, hygiene, and diet, as well as regularly attending health counseling and visiting Posyandus, thus helping to prevent stunting .

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