Stunting In Madura, Indonesia  
(Factors and Causes)

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Abstract
Stunting is a nutritional disease which can be seen from the length or height of toddlers who are less than their age. This condition is measured by a child's height that is more than minus two standard deviations of the WHO child growth standard median. Indonesia still faces nutritional problems that have a serious impact on the quality of human resources (HR). One of the nutritional problems that has become a major concern at this time is the high number of stunted children. The purpose of this study was to find out the factors causing stunting in Madura. The method used in this research is qualitative. Observation data collection techniques and in-depth interviews. The informants of this research are mothers who have toddlers and health workers. Data collection techniques are observation and in-depth interviews. Research location on Madura Island. Research shows that there are several factors that cause stunting. Firstly because of low economic level (those who suffer from stunting include the lower middle class); Secondly, because of culture (stunting leads more to midgets or more to less height than his age. The cause of stunting is usually shorter, parents think that it is due to heredit); Thirdly, because of parent’s low education level; Four, lack of nutrition and low maternal knowledge about nutrition; Five, because of lack of attention (parents do not pay attention to their children because parents are too focused on working in the fields). Several solutions that can be done, among others: first, increasing mother’s knowledge about balanced nutrition, secondly balanced nutrition intervention for expectant mothers during pregnancy and childbirth.

Keywords: stunting, Madura, women

Date of Submission: 15-05-2022  
Date of Acceptance: 30-05-2022

I. Introduction
Stunting is a condition of failure to thrive in children under five years old (infants under five years) as a result of chronic nutritional deficiencies so that children are too short for their age (TNP2K, 2017) According to WHO, stunting is a condition indicated by chronic growth retardation caused by long-term malnutrition. According to the WHO Child Growth Standards, stunting is based on an index of body length for age (PB/U) or height for age (TB/U) with a limit (z-score) of less than -2 SD (WHO, 2010).

Stunting in children reflects the condition of failure to thrive in children under 5 years of age as a result of chronic malnutrition, so that children become too short for their age. Chronic malnutrition occurs from infancy in the womb until the age of two. Thus the period of the first 1000 days of life should receive special attention because it determines the level of physical growth, intelligence, and productivity of a person in the future. (TNP2K, 2017)

Stunting is a nutritional disease which can be seen from the length or height of toddlers who are less than their age. This condition is measured by a child's height that is more than minus two standard deviations of the WHO child growth standard median. The TB/U index describes the nutritional status of children under five in the past, while the BB/TB index describes the nutritional status of children under five in the present. Growth in height is relatively less sensitive to malnutrition in a short time. The effect on nutritional deficiencies will affect the toddler's height in a relatively long period of time. Children who suffer from stunting will be more susceptible to other diseases. Other impacts will affect the level of intelligence. Children who suffer from stunting also have the potential to give birth to short children.

Stunting is caused by many things (multi-dimensional factors). Some of the factors that cause stunting include:
1. Poor parenting practices. Some bad parenting practices include lack of knowledge about health and nutrition before and during pregnancy, sixty percent of children aged 0-6 months do not receive exclusive breastfeeding, 2 out of 3 children aged 0-24 months do not receive breast milk substitutes (MP-ASI)
2. Limited health services including services (ante natal care), post natal and quality early learning
3. Lack of access to nutritious food
4. Lack of access to clean water and sanitation

Stunting is caused by several interrelated factors, including nutritional factors found in food. The quality and quantity of nutritional intake in children's food needs attention because it is often low in nutrients needed to support growth. This shows that to support good nutritional intake, it is necessary to support the ability of mothers to provide good care for children in terms of feeding practices, personal/environmental hygiene practices and treatment seeking practices

Indonesia still faces nutritional problems that have a serious impact on the quality of human resources (HR). One of the nutritional problems that has become a major concern at this time is the high number of stunted children. The results of the 2013 Basic Health Research stated that the prevalence of stunting in Indonesia reached 37.2% (Ministry of Villages, Development of Disadvantaged Regions, and Transmigration, 2017). Monitoring of nutritional status in 2016 reached 27.5%, the WHO limit was less than 20%. This means that approximately 8.9 million Indonesian children experience suboptimal growth, or 1 in 3 Indonesian children are stunted. (Ministry of Villages, Development of Disadvantaged Regions, and Transmigration, 2017)

Indonesia still has to work hard to overcome stunting because in Indonesia stunting cases are very high. This is because the level of health is still lacking. This is exacerbated by the low nutrition of children and toddlers as well as the economy and education in Indonesia which is still very low.

The degree of public health is determined by many factors. One of them is determined by health services and the availability of health facilities and infrastructure. In addition, the influential factors are economic factors, education and social environment, heredity, and other factors. These factors affect the incidence of morbidity, mortality and nutritional status in the community. Morbidity, mortality and nutritional status figures can describe the state and situation of the health status of the Indonesian people.

The description of the development of public health status can be seen from the incidence of death (mortality) in the community from time to time and in certain places. In addition, the incidence of death can also be used as an indicator in assessing the success of health services and other health development programs.

In Madura, there are 4 districts, all of which are categorized as 100 priority districts/cities for stunting interventions. The four districts are Bangkalan, Sampang, Pamekasan and Sumenep. The prevalence of stunting in Bangkalan is 43.21%, Sampang is 41.46%, Pamekasan is 44.6%, and Sumenep Regency is 52.44%. (TNP2K, 2017)

Based on the data above, it is very important to extract data about the causes of stunting in Madura. Specifically, the problem formulation of this research is to explore how the knowledge, attitudes and behavior of mothers who have toddlers about stunting in Madura. In addition, it also explores the knowledge, attitudes and behavior of mothers about eating patterns and nutritional behavior of toddlers.

The Purpose of the Study are:
1. To explore what are the factors causing stunting in Madura
2. To explore the mother's knowledge, attitude and behavior about stunting
3. To find out how the mother's knowledge, attitudes and behavior regarding the diet and nutritional behavior of toddlers

II. Research Methods

This study uses a qualitative descriptive method. Qualitative methods relate to efforts to reveal a more in-depth explanation of a social phenomenon. The qualitative descriptive method is expected to be able to produce in-depth study results. In addition, it can also describe in more detail the speech, writing, and behavior that can be observed from an individual, certain group, community, or organization that is studied from a holistic and holistic point of view.

Beverly (2002), said that qualitative methods are used to answer questions such as why someone acts the way they do, what are their opinions, how do they behave, how someone can be influenced by social events. Questions such as the description above can be found or answered using qualitative methods, because qualitative emphasizes the depth of research findings through direct interviews.
Qualitative methods emphasize the reality that is formed through social processes, as well as the close relationship between the researcher and the object under study. Qualitative research refers to meanings, concepts, definitions, characteristics, metaphors, symbols and several other qualitative issues, (Richad, 2009).

This research with qualitative descriptive method aims to collect the latest information in more detail by describing existing social phenomena. In addition, to identify the formulation of the research problem by outlining the facts in the field about health communication as an alternative to preventing the stunting phenomenon in Sampang Madura Regency.

Observation is a data collection technique, where researchers observe directly to the object of research to see closely the activities carried out (Riduan, 2004). The observation method aims to find out in detail about the object of research, identify social phenomena, and measure appropriate tools used in research such as the method of disability. In this study, observations were made to mothers who have toddlers and health workers. Observations were carried out in order to obtain a more detailed description of social phenomena and conditions, as well as to identify and map suitable areas or villages to be the object or location of research.

In addition to observation, interviews were also conducted. The interview technique is one of the data collection techniques commonly used in the qualitative method approach, as presented. Gunawan (2014), said that interviews are the most frequently used form of data collection in qualitative research. Interview is a technique that is done by communicating between two people (researcher and object under study) with the aim of obtaining information through asking questions according to the research topic.

Robson (2002) said that the interview is a data collection method that involves the activity of a researcher’s questions to get answers or responses from informants or sources of information. The interview method is one of the methods with the intention of obtaining information such as perceptions, meanings about a value, interpretation of certain circumstances, and understanding a reality experienced by an informant.

In this study, the researcher assigned key informants to know in detail about the phenomenon of stunting in Madura. Some of the main informants are mothers who have toddlers/children at the age of 3-4 years, health workers, both midwives and village nurses. Next is the data processing process. The data processing of the interview recordings is divided into three stages, the first is a transcript of the interview data, the second is reduced and reported in detail, and the third is arranged in the form of narratives so as to form a series of meaningful information according to the research problem.

The informant in this study was the village midwife of Kalianget Timur, Dusun Padurekso. The next informant was Mrs. W, a housewife (38 years old) from Dusun Padurekso, East Kalianget Village, Sumenep. Mrs. Watik’s last education was junior high school. Mrs. Watik’s husband named Mr. B (40 years old) is an entrepreneur with a high school education.

The informant in Moromboh Village, Kwanyar District, is NA (34 years old) a midwife. According to NA, several toddlers suffer from stunting. Data per month of August recorded 24 people. According to NA, the cause of stunting in this village is due to economic factors and the lack of attention from parents to their children.

### III. Findings

#### 3.1 Stunting in Kalianget Island, Sumenep

Kalianget Village is one of the villages in Sumenep Regency, Madura. This village is located in the eastern part of the city of Sumenep and in this area stands the Head Office and the Kalianget Salt Factory owned by PT Garam. In addition, this district has a means of connecting sea transportation, namely Kalianget Port and Talango.

East Kalianget village itself is a very densely populated settlement. Even in one hamlet it can reach hundreds of heads of families. It is because of this density that this village is less developed. The result is a low level of health and also a low level of education. Many young people in this village are unemployed and some have migrated to big cities. Although it is known as the city of salt, not many people work in the pond.

This village also has quite a lot of health facilities, such as midwives, maternity hut in the village, and there is also a public hospital that many people know about the good treatment of their patients. But sadly, this hospital is used more by immigrants from other sub-districts than people in Kalianget themselves.

The work of the people of the East Kalianget village itself varies. Because of its position closer to the sea, this is what makes many family heads here who sail to become fishermen, salt farmers. In addition, there are also those who work as construction workers and there are also those who become farmers during the season for corn, rice, beans and so on. However, there are also many people who choose to migrate to Surabaya and Jakarta to find work. More than 50 percent of women only become housewives and choose not to work. Another reason these women do not work is because there are very few jobs in the village, and there are even women who have graduated from school and have to look for work in the city.
Public education in the village of Kalianget Timur is still quite low. This can be seen in terms of employment and the high unemployment rate in this village. On average, fathers aged 40 and over only quit school during junior high school and for youths aged 20 to 30 only up to high school. It is very rare for young people in this village to finish school at the S1 level because of the cost factor that parents complain about. This is also the reason the young people here choose to work abroad.

This low level of education makes parents here not too focused on health. Starting from toddlers to children sometimes not all of them get a nutritious intake. One of the traditional factors that parents do for their young children, for example is feeding unhealthy children such as drinking sugar water, eating instant food. This is because mothers do not know about health, child nutrition adequacy, and child growth delays such as stunting.

Overview of Toddler Stunting in Kalianget
Mrs. Wa has a toddler named Fina stunting who is 5 years old. Fina's weight is relatively low, which is only 13 kg at the age of 5 years. Toddler Fina has not yet received complete immunization. Fina's body condition is swollen all over.

Based on the results of interviews with village midwives in Kalianget Timur, it was said that many children and toddlers were stunted.

“There are many stunted toddlers in this village. Stunting leads more to midgets or more to less height than his age. The cause of stunting is usually shorter, parents think that it is due to heredity” (interview with the village midwife of Kalianget Timur Dusun Padurekso)

According to the explanation of the Midwife in East Kalianget, stunting is caused by lack of nutrition in pregnant women

"During pregnancy, the mother experiences malnutrition which results in the development of her baby being disturbed during the pregnancy. Lack of understanding of nutrition and foods that should not be consumed by pregnant women also affect the development of the fetus. Of the ten pregnant women I interviewed said they had consumed instant noodles while pregnant. Though this should be avoided by pregnant women. Other junk food is also strictly prohibited to be consumed to avoid unwanted things in its content.”

Knowledge, attitudes, behavior of mothers regarding the improvement of the nutritional status of children under five
Mrs. W explained that she gave exclusive breastfeeding to her child until the age of 1.2 years. However, when the baby was 8 months old, Mrs. Watik had started giving snacks such as rice porridge. The age of 11 months was fed ketupat with vegetable soup. Mrs. Watik also explained that her child was given bananas so that his digestion would run smoothly. Mrs. Watik said her child did not get routine immunizations. Mrs. Watik uses sugar water as a substitute for formula milk.

“When my son was a baby, I continued to breastfeed him for more than a year. After that I gave sugar water. Also eat a lot if there are vegetables. However, eat a little if you eat porridge. My child often eats bananas so that he defecates smoothly” (interview with Mrs. W)

Mrs. W explained that the type of food given to her baby already contained nutrients. However, at the age of 4, his son always eats instant food such as indomie, pop noodles and other snacks. She also said that he always obeys his child's wishes, does not care about nutrition and does not control food for his child's development

“When my son was 3 years old or 4 years old, he often asked for instant noodles. He really likes it when he eats instant noodles, he eats a lot, only a little left. My son rarely eats rice. My son often buys snacks that contain preservatives” (interview with Mrs. W)

Maternal behavior during pregnancy and postpartum
During her pregnancy, Mrs. W explained that she had never consumed pregnant women’s milk. She also still eats instant noodles.

“I eat anything, I don't choose, but I never eat pregnant women’s milk or drugs. If I don't have fish, I eat instant noodles. (interview with Mrs. W)

Mrs. W has given exclusive breastfeeding since her child was born. Mrs. W was assisted by her parents in preparing the baby's needs. Sometimes their parents also help to feed them. She doesn't pay much attention to
her child’s nutrition, the important thing is that there is food to eat. If the child is sick, only check with the midwife.

3.2 Stunting in Kwanyar District, Bangkalan
Morombuh Village is located in Kwanyar District, Bangkalan Regency. Morombuh Village has residents, the majority of whom have a low level of education (no school/graduated from elementary school). This village is located 14 KM from Bangkalan Regency. The daily livelihood of the people of Morombuh Village is as seasonal farmers. During the dry season there is no harvest. When the harvest season arrives, there are many crops such as peanuts and corn.

There are only two health workers in Morombuh Village, a village midwife and a nurse. Sanitation in this village is not good. Residents still have difficulty getting water. The piled up garbage is burned, because the residents do not have TPS facilities or temporary disposal sites. There are 24 stunting toddlers in Morombuh Village. The majority of people are less aware of living a healthy life.

The informant in Morombuh Village, Kwanyar District, is NA (34 years old) a midwife. According to NA, several toddlers suffer from stunting. Data per month of August recorded 24 people. According to Nia, the cause of stunting in this village is due to economic factors and the lack of attention from parents to their children.

The cause of stunting in this village is because parents do not pay attention to their children, parents are too focused on working in the fields. Children’s food and nutrition are ultimately neglected. In addition, economic factors are also one of the causes. (interview with NA)

In addition to economic factors, the factor of a non-nutritious diet (lack of protein and vegetables) is also one of the causes of stunting.

Broadly speaking, I can conclude that the food they eat is not balanced. Lack of fruits and protein. Because this village area is a mountain, so to get fish you have to go to the market first. (interview with Nia Aprilia)

Toddler’s suffering from stunting in this village come from the lower middle class. Their parents’ education was at most elementary or junior high school.

“Economically, those who suffer from stunting include the lower middle class. Only one or two people can afford it economically. The education of the majority of citizens is low, the highest graduates are elementary or junior high schools.” (interview with Nia Aprilia)

The characteristics of stunting toddlers in the village can be seen in terms of age. A child who is 4 years old but looks like a 3 year old.

“The characteristic of stunting toddlers in this village is that the growth of children is not in accordance with their age. For example, they are now 4 years old, but when examined do not meet the criteria for a 4 year old child and even look like a 3 year old child (smaller, thinner).” (interview with Nia Aprilia)

3.3 Stunting in Bettet Village, Pamekasan City District
Bettet Village, Pamekasan City District, is located in the western part of Pamekasan City. The area of Bettet Village is about 792.24 km2.

Bettet village is directly adjacent to Samiran village (west), Bugih village (east) Nyalabuh Laok village in (north), and West Teja village in (south) There are 2,774 people with 807 families. The majority of the population are farmers (90%), the remaining 10% work as traders in stalls. The education of its citizens is diverse. The majority (70%) of the people graduated from junior high school, 20% graduated from high school, the rest graduated from elementary school and undergraduate.

There is only one POSKESDES in Bettet Village. There is a posyandu in every hamlet. The existing health workers are village midwives. Sanitation in Bettet Village is fairly good. Because all residents are aware of the importance of sanitation. This is evidenced by the presence of a toilet seat in each bathroom of each citizen. The general health condition in Bettet Village is quite good. This is due to community participation in POSYANDU and the level of awareness about good health. However, stunting cases still exist in this village. The number of stunting sufferers is 18 cases.

According to one of the informants, Mrs. Yusita, there are many factors that cause children to suffer from stunting, such as economic status, maternal nutrition during pregnancy, infant pain, and most importantly, poor nutrition in children. Stunting cases often occur in children from families with low economics and the background knowledge of their parents is also small. Based on the results of an interview with Yusita Agustini,
Stunting In Madura, Indonesia (Factors and Causes)

S.S., stunting is also caused by babies who are born prematurely, which causes the development of babies to be unequal to their age.

Irregular eating patterns and low appetite are also one of the causes of stunting. Stunting is a disease related to nutrition. The main factor that determines nutrition is the economic factor. Furthermore, the education factor (knowledge) of parents on nutritious and good food also has an effect. According to one of the Betett village midwives, knowledge about stunting is influenced by economic and educational factors.

The characteristics of stunting cannot be seen at a glance. Because there is no significant difference between children who suffer from stunting and those who do not. According to Yusita's mother, it is necessary to carry out an in-depth examination of the local health facility.

"At a glance, you cannot find the characteristics of stunting children. But there are also observable features of stunting. The benchmark for determining stunting under five is when the toddler's weight is BGM status (below the red line) and the nutritional value is poor. If the weight status is below the red line, it can be ascertained that the child is stunted. But there are also, sometimes we can't identify children who are big but malnourished. This large body size is not due to the large volume of meat but swelling due to malnutrition. Stunting children tend to be passive. The ability to speak is slow, the ability to walk slowly, the child is fussy and lazy to do activities because the child has no energy. There are also active children who are stunted. Children who are hyper-active, have a lot of activities but their food intake is not balanced which causes their weight to decrease.” (interview with Mrs. YA)

The hallmark of stunting children is a child's low appetite. According to the midwife, many stunting children experience this. Children eat as usual, but the frequency of eating in a day is uncertain. There is no standard or definite eating schedule (children eat when children feel hungry). This is made worse by no coercion for children who do not want to eat. With regard to the nutritional value contained in the food is also not too much thought because it really follows the wishes of the child.

Factors that influence the occurrence of stunting in children under five are mother's education and family income. Other influencing factors are maternal knowledge about nutrition, exclusive breastfeeding, age of complementary feeding, iron adequacy level, history of infectious diseases and genetic factors from parents.

The role of the mother as the person closest to the child has a major influence, especially on the child care process. Unfortunately, many mothers in Betett Village do not understand stunting. One of the informants who was interviewed was Rohemah's mother, 40 years old who has a stunted child. Rohemah's mother said that it is normal for a child whose height does not match his age. Mrs. R believes that her son is short because of genes (heredity). When asked about the condition of the child, Mrs. Rohemah explained that her son was healthy, but that his appetite was a bit difficult. The child tends to vomit food and often refuses to eat. Children's activities are not too happy to interact with other people. Children also do not receive breast milk for an appropriate period of time and are immediately given complementary foods in the form of rice.

Another informant is Mrs. SM (23 years old). She graduated from the midwifery department named Mrs. S said that the child is less active and has difficulty eating, it's just a sign that the child is not healthy. According to Mrs. S’s explanation, it is not a sign of Stunting. The frequency of feeding to children also follows the child's appetite and there is no compulsion to encourage children to want to eat for the sake of fulfilling their nutrition. Mrs. Siti breastfed for 24 months and gave complementary foods to breast milk gradually. However, the risk of stunting still exists.

The two informants above come from different educational backgrounds. However, their understanding is almost the same. This is one of the factors that mothers in Betett Village lack complete information about stunting. This is exacerbated by the low curiosity of parents to find out about stunting. The reason is the low economic factors and educational background.

Economic factors make it difficult for mothers in Betett Village to buy communication tools for their information needs. Educational factors also prevent them from accessing information independently on the internet. Apart from that, age also affects them. The age that includes generation X and early Millennials makes them less understanding of technology.

Government alone is not enough to solve the stunting problem. Medical personnel whose homes are close to the community also need to take on a strong role. This was done by the village midwife Betett. Ibu Yusita said, “Usually in every village there is a ‘growth mat’ to assess children suffering from stunting. But I don't know in other villages there is or not. In Betett Village, there is a program called ‘Kampung KB’. One of the activities is to train village cadres on ‘growth mats’. In this growth mat there are certain measurements that can diagnose a child suffering from stunting or not. If it is measured that the child steps on the yellow or red line, the child is said to be stunted. In addition, another program is PMT (supplementary feeding) for children under and over 2 years old. Our program priority is children under 2 years old. Focus the program is to restore growth and development of their brains. While for children over 2 years old, we can only try to develop their bodies. From this PMT program, we also motivate parents to increase their knowledge about stunting. This is done so that
after leaving the PMT program, parents will also participate in maintaining the condition of their children.” (interview with Mrs. Yusita Agustini)

The Health Office needs to make efforts to increase knowledge about nutrition and the importance of balanced nutrition for toddlers with the target of pregnant women. The form of activity is through routine socialization carried out with midwives. This effort is expected to be able to maintain optimal nutrition in toddlers from before birth to the next life so that they do not experience malnutrition.

The program that is run certainly does not escape several obstacles. Some of these obstacles include the lack of participation of mothers to routinely check the condition of their children. As a result, health workers find it difficult to monitor children's growth and development. This minimal participation is influenced by several factors. The main thing is the mother's fear of the diagnosis. Mothers tend to deny the facts about the condition of children who are suffering from stunting. There are those who feel ashamed to see the development of children who are slower than children of their age.

Efforts taken by health workers have varied. First, look for other terms besides stunting that can be accepted by mothers and reduce fear of the child's condition. Second, persuasive communication is also carried out to encourage mothers' willingness to attend health services regularly to check the condition of their children. Third, providing basic necessities as a gift for mothers to come to the posyandu. (interview with Ibu Agustini)

There are mothers who are not willing to attend the posyandu, even though we have explained. So it all depends on the expertise of the health workers in persuading mothers so that their children continue to take treatment and attend the posyandu. So we never use the term stunting to reduce parents' fear. There are also parents who are embarrassed because their child is not developing at the same level as other children. The point is that the obstacle is the participation of parents to follow the counseling and treatment. Therefore, to increase participation, we usually give gifts by providing assistance such as money and basic necessities. (interview with Mrs. Y)

IV. Conclusion

Research shows that there are several factors that cause stunting. Firstly because of low economic level (those who suffer from stunting include the lower middle class); Secondly, because of culture (stunting leads more to midgets or more to less height than his age. The cause of stunting is usually shorter, parents think that it is due to heredit); Thirdly, because of parent’s low education level; Four, lack of nutrition and low maternal knowledge about nutrition; Five, because of lack of attention (parents do not pay attention to their children because parents are too focused on working in the fields., Several solutions that can be done, among others: first, increasing mother's knowledge about balanced nutrition, secondly balanced nutrition intervention for expectant mothers during pregnancy and childbirth.

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