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Integrated handling to overcome stunting in rural areas in East Java, Indonesia

Penanganan terintegrasi untuk mengatasi stunting di perdesaan Jawa Timur, Indonesia

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Abstract

Stunting is one of the pressing health issues that requires serious attention and immediate intervention. This study aimed to assess the causes of stunting, the challenges faced by communities in ensuring nutrition for children, the management of stunting, and the efforts needed to optimize stunting intervention in rural areas. This study employed a qualitative approach with a total of 30 families having stunted children as informants. The study reveals that preventive measures against stunting should commence early, even during pregnancy. Apart from nutritional deficiencies, equally important contributing factors are inadequate maternal knowledge, recurrent or chronic infections, poor sanitation, and limited healthcare access. One pivotal step in preventing stunting is empowering and centralizing the role of mothers, who should be committed actors in the stunting prevention process. In a child's growth and development, exclusive breastfeeding along with appropriate complementary feeding demands attention. Understanding child growth stages is crucial for parents to prevent stunting. Although most parents are aware of the significance of meeting their child's nutritional needs, economic constraints and lack of awareness still hinder some parents from giving extra attention to this matter.

Keywords: stunting; child health; child nutrition; parental awareness; integrated handling

Abstrak

Stunting merupakan salah satu masalah kesehatan mendesak yang memerlukan perhatian serius dan intervensi segera. Penelitian ini bertujuan untuk mengkaji penyebab stunting, tantangan yang dihadapi masyarakat dalam menjamin gizi anak, penanganan stunting, dan upaya yang diperlukan untuk mengoptimalkan intervensi stunting di perdesaan. Penelitian ini menggunakan pendekatan kualitatif dengan jumlah informan sebanyak 30 keluarga yang memiliki anak stunting. Studi ini mengungkapkan bahwa tindakan pencegahan terhadap stunting harus dimulai sejak dini, bahkan selama kehamilan. Selain kekurangan nutrisi, faktor yang juga berkontribusi penting adalah pengetahuan ibu yang tidak memadai, infeksi yang berulang atau kronis, sanitasi yang buruk, dan terbatasnya akses layanan kesehatan. Salah satu langkah penting dalam mencegah stunting adalah memberdayakan dan memusatkan peran ibu, yang harus menjadi aktor yang berkomitmen dalam proses pencegahan stunting. Dalam tumbuh kembang anak, pemberian ASI eksklusif serta pemberian makanan pendamping ASI yang tepat perlu mendapat perhatian. Memahami tahapan pertumbuhan anak sangat penting bagi orang tua untuk mencegah stunting. Meskipun sebagian besar orang tua sudah menyadari pentingnya memenuhi kebutuhan gizi anak, namun kendala ekonomi dan kurangnya kesadaran masih menghalangi sebagian orang tua untuk memberikan perhatian ekstra terhadap hal tersebut.

Kata Kunci: *stunting; kesehatan anak; gizi anak; kesadaran orang tua; penanganan terpadu*

Introduction

Stunting is one of the pressing health issues that demands serious attention and prompt intervention (Marlina et al. 2021, Verma & Prasad 2021, Ilmani & Fikawati 2023). Stunting, characterized by short stature in children, is an implication of failure to thrive occurring in children under five years old (toddlers) due to chronic malnutrition and recurrent infections, especially during the First 1,000 Days of Life, spanning from conception to 23 months of age (Trihono 2015, Flood et al. 2018, Molitoris 2018, Putri & Rong 2021, Hoffman 2022). In Indonesia, the prevalence of stunting remains relatively high. The results from the SSGI in 2021 indicate that the national prevalence of stunting is still above 20%.

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Meanwhile, in the East Java Province, the prevalence of stunting still exceeds the threshold set by the WHO (20 percent). According to the national nutritional status survey in 2021, the prevalence of stunting in Indonesia has decreased compared to 2019, from 27.7 percent in 2019 to 24.4 percent in 2021. This declining trend has prompted the government to seriously address stunting and set a target to reduce the prevalence of stunting to 14 percent by 2024 (BKPK Kementerian Kesehatan Republik Indonesia 2022).

In the East Java Province, in recent years, the prevalence of stunting has also shown a decreasing trend. While the stunting rate was 26.86 percent in 2019, it decreased to 23.5 percent in 2021. Achieving the national target of 14 percent by 2024 is undoubtedly a challenging task for the East Java Province. Besides the stunting rate that is still above 20 percent, the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) in East Java are also relatively high. The MMR in 2019 was recorded at 529 and increased to 565 cases in 2020, and the IMR shows a relatively high figure of 3,611 cases (Yolandha 2023). Similar to other regions in Indonesia, the East Java Province is facing a difficult situation due to the COVID-19 pandemic, which has resulted in unemployment, poverty, and subsequent effects on limited household food security, nutrition, and child feeding practices, posing a threat of stunting among toddlers (Noventi 2020, Haris et al. 2023, Iriany et al. 2023, Sadler et al. 2023).

The issue of stunting is a serious concern, not only in the realm of health but also closely related to the availability of high-quality human resources (Apriluana & Fikawati 2018, Cahyati & Yuniastuti 2019, Abbas et al. 2021, Piniliw et al. 2021). If cases of stunting and chronic malnutrition affect many toddlers, it is feared that this could have implications for the quality of human resources (HR) in the East Java Province, potentially hindering both physical and non-physical development processes in the future (Takukder et al. 2018, Ponum et al. 2020, Wulandary & Sudiarti 2021). Chronic malnutrition in early life can have long-lasting detrimental effects, including lower educational attainment, poorer cognitive skills, lower income, and a higher likelihood of living in poverty (Hoddinott 2013, Bella et al. 2019, Abbas et al. 2021, Oramana et al. 2023).

In the social reality observed thus far, the availability of high-quality human resources (HR) is, among other things, characterized by excellent health conditions, physical and mental strength, and high intelligence (Mentari & Hermansyah 2019, Anshori et al. 2020, Wicaksono & Harsanti 2020, Ayelign & Zerfu 2021). This implies that individuals must possess good health as an essential prerequisite for achieving success in development (Voth-Gaeddert et al. 2018, Gustina et al. 2020, Krisnana et al. 2020, Laksono et al. 2022). To realize and meet the prerequisites for the availability of high-quality HR, one of the early efforts that must be made is ensuring the availability of nutritious food and adequate nutrition, thereby improving nutritional status according to established health standards and norms (Wiliyanarti et al. 2022). Uce (2015) have argued that children in the golden age represent the most crucial period for growth and development in early life. One of the health aspects that should be prioritized to ensure optimal physical and psychological growth in children is meeting their nutritional needs with a balanced and nutritious diet in accordance with health regulations and norms (Aditianti et al. 2020, Elni & Julianti 2021, Berhanu et al. 2022).

UNICEF (2013) reveals that inadequate nutrition and insufficient food intake can lead to malnutrition problems. The prevalence of these issues can be determined by various factors such as food availability and consumption, past infectious diseases experienced by a child, child-rearing practices, socioeconomic and cultural conditions, as well as political policies related to nutrition and health. According to the Ministry of Health (Kemenkes 2016), stunting can result from poor feeding practices, maternal malnutrition, and inadequate sanitation. Furthermore, Trihono (2015) states that the inadequate handling and damage caused by stunting can lead to irreversible consequences, and children may have minimal opportunities, or even none at all, for meaningful accomplishments if they do not experience both physical and psychological growth.

Cahyono (2016) found that stunting occurring in the environment of toddlers has created unfavorable conditions for the health of future generations. Bukusuba et al. (2017) also discovered a nearly identical reality in which stunting or growth faltering is related to educational, social, and economic conditions. Akram et al. (2018) also found that factors contributing to stunting include low maternal education, children suffering from diarrhea, early breastfeeding (due to early marriage), and complex healthcare administration. This study also found that the prevalence of stunting cases in rural areas is much higher compared to urban areas. Ningsih & Demartoo (2021) indicate that impoverished villages often face difficulties in meeting various health standards, such as lacking wells and access to clean water, inadequate sanitation facilities (bathing, washing, toilet), and relying solely on river water for bathing, washing, and defecation. Therefore, toddlers in such communities are highly susceptible to stunting.

This study was primarily conducted to examine the root causes of stunting in rural areas and the efforts to address it in East Java. The study aimed to assess the knowledge and causes of stunting, the challenges faced by communities in providing nutrition for children, the management of stunting, and the necessary efforts to optimize stunting intervention in rural areas. This study was carried out as an effort to protect and address cases of stunting so that the development of children is not hindered by insufficient child nutrition.

Research Method

This study was conducted in several rural areas in the East Java Province, taking into account the socio-cultural characteristics of the East Java community, known for its diverse cultural backgrounds, including Javanese Mataraman, Pendalungan, Arek, and Madurese cultures. The study was conducted in six regions: Surabaya City, Malang City, Bangkalan Regency, Bondowoso Regency, Trenggalek Regency, and Tuban Regency. The selection of study locations was also based on the prevalence rate of stunting cases in selected areas, which indicates a relatively high rate.

This study was a combination of literature review, field research, and secondary data analysis. Data related to the health situation, particularly regarding stunting issues in East Java, were collected and analyzed. Secondary data were collected from relevant institutions such as the Provincial Health Office, BKKBN (National Population and Family Planning Board), provincial planning agencies, Statistics Indonesia (BPS), and related government departments or agencies. In-depth interviews were conducted with families with stunted children, supported by various stakeholders relevant to stunting issues, including healthcare professionals, health and nutrition cadres, environmental cadres, community leaders, and others. Primary data needed for this study were collected through direct interviews with 30 informants, with five informants from each region.

To formulate recommendations and policies or intervention programs for integrated stunting management in rural East Java, this study conducted Focus Group Discussions (FGD) involving various stakeholders, including academics, relevant government agencies such as the Department of Health and the National Population and Family Planning Board (BKKN), the Regional Planning Agency (Bappeda), and other related agencies and stakeholders. All the data collected, after undergoing editing, processing, and classification, were then analyzed and interpreted. The process of drawing conclusions was carried out by presenting a set of recommendations and concrete steps or intervention programs for integrated stunting management in rural areas in the East Java Province.

Results and Discussion

This study has identified factors related to the increase and decrease of stunting cases within rural regions. Stunting is not just a health issue but is closely intertwined with the economic, social, and cultural conditions of the community (Beal et al. 2018, Molitoris 2018, Hailegebriel 2020), requires a comprehensive understanding of the problem in rural areas. Therefore, several components that need attention to comprehensively address stunting issues in rural areas include (1) the knowledge and

meaning of stunting within the community; (2) the underlying causes of stunting; (3) various issues and challenges related to stunting in rural areas; (4) the obstacles faced by communities in meeting the nutritional needs of children and addressing stunting in rural areas; (5) the efforts needed to optimize stunting management in rural areas in East Java.

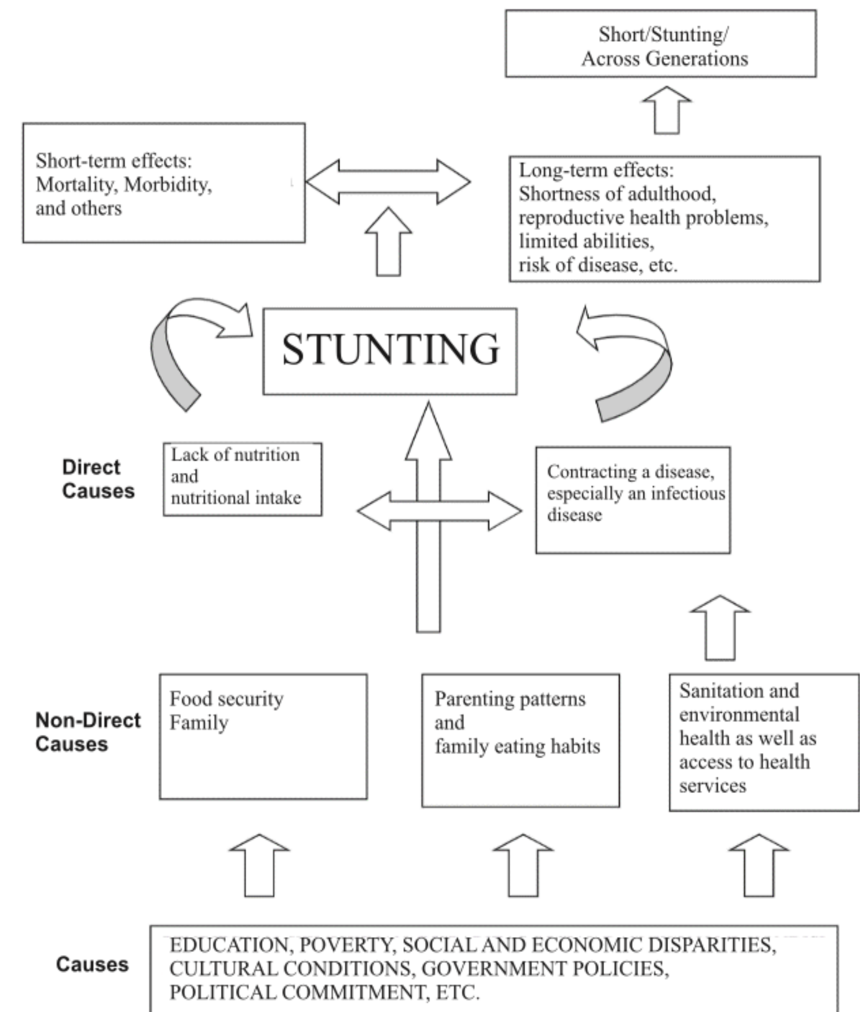

Figure 1.
Improving child nutrition, the achievable imperative for global progress
Source: UNICEF (2013b)

Figure 1 presents a schematic diagram constructed based on theoretical crystallization and a review of various existing literature to facilitate an understanding of stunting cases and their causative factors. Furthermore, this section discusses the qualitative data analysis obtained from in-depth interviews with several community figures, including health cadres, Posyandu (integrated service post) cadres, local healthcare workers, village officials, and other community leaders.

Knowledge and meaning of stunting in the rural community environment

The rural population's knowledge about stunting tends to be lower compared to urban communities (Akram et al. 2018, Wiliyanarti et al. 2022). Rural communities often perceive that toddlers experiencing stunting are only affected by hereditary factors that result in short stature, and they attribute it primarily to malnutrition (Armayanti & Putu 2022). The limited understanding regarding toddlers with stunting conditions was confirmed by several informants in various regions such as Tuban Regency, Bondowoso Regency, Bangkalan Regency, and Trenggalek Regency.

> "Here, some children are stunted, but I'm not sure about the exact number, Ms. Most of them are girls, and their families typically have a lower to middle socioeconomic background. Also, people here are still unfamiliar with stunting, and they usually associate it with malnutrition." (Informant ETI).

In line with the interview excerpt above, when interpreting stunting, the majority of rural communities in Bondowoso Regency consider stunting as a deviation in the child's growth process caused by hereditary factors (Siswati 2018). They perceive stunting as merely children with small physical stature. Rural communities only become aware that a child might be experiencing stunting after measurements are taken at the Posyandu (Wira 2022). The rural community's knowledge regarding stunting is then divided into two groups. Firstly, the community believes that stunting is caused by genetic factors, observing that children with small stature often have parents with similar physical traits (Cahyati & Yuniastuti 2019, Marlina et al. 2021, Piniliw et al. 2021, Haris et al. 2023).

> "Most of them don't really understand what stunting is. We've been explaining what stunting is for a while now, through various educational sessions. But perhaps they perceive it as 'Oh, it's because they have a small build,' so that's how it's seen around here." (Informant UWA).

Secondly, the community acknowledges that stunting is also caused by malnutrition (Flood et al. 2018, Hailegebriel 2020). Furthermore, nutritional deficiencies in a child's dietary intake result from the family's economic difficulties in meeting the nutritional needs of their children (Widiyanto et al. 2019, Wiliyanarti et al. 2022). The normalization of the condition of children with stunting occurs due to the community's lack of awareness regarding the risks faced by children with stunting (Wulandari et al. 2019). Moreover, some members of the community who interpret stunting as a result of malnutrition tend to view children with stunting as a disgrace to the family (Widyaningsih & Anantanyu 2018, Basri et al. 2021). Consequently, some families feel offended and deny if their child is considered to be experiencing stunting, as expressed by the following informant.

> "The community interprets stunting as a result of malnutrition. The children are short. That's how the people here interpret it, Ms., Sir. But actually, many of them don't accept it when their child is called stunted because they are relatively well-off and believe they can provide for their child's needs. But whether they truly understand their child's needs, I don't think so." (Informant ANA).

Some informants explained that the term 'stunting' in their area is even considered sensitive. Therefore, Posyandu cadres (integrated health service posts) feel the need to use different, 'gentler' terms to explain to the parents of stunted children. For rural communities with a middle to upper socioeconomic status, a stunting diagnosis attached to their child is seen as an insult to their ability to provide adequate nutrition for their child (Hidayat 2023). This is because they believe they have fulfilled their child's needs adequately. However, many still think that expensive food is nutritious, even though the nutritional value of food is not determined by its price. Additionally, improper food processing also affects the nutritional intake of children.

> "In my opinion, most people here still don't fully understand the issue of stunting, Sir. It's not that they don't know anything; it's just that they don't know how to prevent it. And, I'm sorry, Sir, but on average, the families in this village need economic assistance, so addressing their nutritional needs is still crucial. That's why the role of Posyandu remains essential. We help pregnant women and young mothers with toddlers, and we conduct educational sessions." (Informant VIV).

Based on the interview excerpt above, health center and posyandu officers, as the front line in addressing stunting issues in rural communities, attempt to choose alternative terminology to avoid the negative stigma associated with the term 'stunting.' Some posyandu groups use the term #still having a height or weight debt' to refer to children who are experiencing stunting. These children are encouraged to take vitamins or are directed to consume more nutritious foods.

Causes of stunting in rural areas

The causes of stunting can be categorized into two types: direct factors and indirect factors (Sarma et al. 2017). One direct factor that leads to stunting in children is the health and nutritional status during pregnancy (Haq & Abbas 2022). This factor is influenced by the persistently high rates of early marriage in rural communities (Mustajab & Indriani 2023). According to several informants, early marriages are still prevalent in their areas. Many teenagers under the age of twenty get married and have children. This leads to a lack of physical readiness in young mothers to sustain pregnancy and provide proper nutrition for the fetus (Hanifah & Stefani 2022), as mentioned by the following informant.

> "Here, there are many early marriages. On average, they get married before the age of 20, and that's clearly one of the causes of stunting. When the mother is still in her growth phase and becomes pregnant, the nutrition is usually divided between the needs of the child and the mother's own growth. In the end, it's usually the child who loses out." (Informant ANA).

During the teenage years, a mother's body still requires a significant amount of nutrition for her own growth. However, the nutrition obtained by the pregnant mother must be shared with the developing fetus, which also requires nutrients for its development in the womb (Permatasari et al. 2023). This situation can have an impact on the growth of the fetus during pregnancy and after birth, leading to stunting. In addition to direct factors, indirect factors that cause stunting in rural communities are related to several aspects, including First, socioeconomic status, where generally, children who experience stunting come from families with lower to middle socioeconomic status. Additionally, a relatively low level of education can also affect awareness of proper nutrition for toddlers. However, there are also children from families with good socioeconomic status who experience stunting, although their numbers tend to be lower (Apriluana & Fikawati 2018, Hidayati & Citra 2022, Sholikhah & Dewi 2022).

Second, a lack of knowledge about stunting and beliefs in myths and taboos for pregnant women (Laksono et al. 2022). Insufficient knowledge regarding the nutritional needs of pregnant women and toddlers perpetuates beliefs in myths and taboos that can be harmful to pregnant women and toddlers (Husnaniyah et al. 2020, Haris et al. 2023). In some areas of Tuban and Trenggalek Regencies, for example, many myths and taboos related to pregnant women are still believed by the community. Based on the accounts of several informants, some parents could actually easily meet their child's nutritional needs, but lack of knowledge results in incorrect food preparation and dietary intake for children. Third, inappropriate parenting practices and neglect of children's nutritional needs. One informant mentioned that, when a child is fussy, parents often easily provide the child's preferred food without considering its nutritional content. This is consistent with what the informant mentioned in the following quote.

> "In my experience, the overall human resource here, sorry to say, is still low. Here, if you talk about economic deficiency, it's not the case because people here are milk producers. But they don't know how to prepare food properly, or what nutritious food is like, and they spoil their children too much." (Informant ANA).

Many rural communities still do not fully comply with healthcare recommendations regarding the nutrition of toddlers (Sjarif et al. 2019, Tanaka et al. 2019). This is evident in several community behaviors, such as not practicing exclusive breastfeeding. Parents who do not exclusively breastfeed their infants are also influenced by pressure from other family members. In some cases, suggestions and recommendations from grandparents in child-rearing restrict parents' decisions to provide exclusive breastfeeding to their children.

> "Exclusive breastfeeding is not one hundred percent here. As I mentioned earlier, the decision-makers are usually the elder family members. Breastfeeding mothers need maximum family support. There are mothers who want exclusive breastfeeding. However, their grandparents question it, 'Why not give other things?' or 'When the child cries, it doesn't necessarily mean they want to breastfeed; they might not be hungry.' The problem lies there." (Informant UWA).

Another example of parents neglecting nutritional needs is related to the provision of nutritional supplements. Some posyandu (integrated health post) provide medications and nutritional supplements (Taburia) to parents. Although most follow the recommendations to administer these medications, when a child refuses to take them, some parents simply let it go. Although knowledge about stunting has improved, parents may still sometimes lack awareness of providing complete nutritional needs for their children. Another example is the issue of supplementary feeding aid (PMT) not being given to children who require nutritional supplementation. Claiming that their child prefers snacks commonly consumed over PMT aid, which contains better nutritional content, some parents provide nutritious food assistance to other family members or consume it together.

Fourth, the birth spacing and the number of children. This factor is also related to a lack of knowledge about maternal and child health (Wiliyanarti et al. 2022). A birth interval that is too close to the previous birth can affect the mother's health during pregnancy, including the optimal nutritional intake for pregnant women. Furthermore, a short birth spacing and the number of children will influence the distribution of attention for each child, potentially contributing to suboptimal growth and development of children. Fifth, sanitation and environmental cleanliness issues. In some rural areas, sanitation and environmental cleanliness problems have not been effectively addressed. The provision of proper sanitation facilities in some areas is still relatively low. As a temporary measure, local residents construct clean and proper toilets, especially for parents who have stunted and economically disadvantaged children.

Identification of stunting issues in rural areas

Based on the level of knowledge and understanding among the rural population, the issues and problems of stunting can be categorized into four main aspects: social, cultural, economic, and environmental (Nahar & Pillai 2019). From a social perspective, families with stunted children still worry about the judgment and assessment of others regarding their ability to care for and provide nutritional needs for their children (Silva et al. 2023). The consequence of this concern is reduced participation of posyandu attendees with stunted children. They prefer to avoid posyandu meetings, which subsequently hinders the handling of stunting in children.

From a cultural perspective, lack of knowledge and awareness about the limited importance of health as well as the persistence of certain beliefs in pregnancy myths remain critical issues in rural communities (Wiliyanarti et al. 2022). Among various issues or challenges faced by rural communities related to stunting, increasing community understanding of child nutrition and the community's openness to receiving information related to stunting become fundamental issues that greatly influence the resolution of other issues. Based on the explanations of several informants, belief in myths and taboos in their areas has decreased. This is due to the increasingly vigorous education provided by healthcare workers in promoting nutritious food for pregnant women. Education about the importance of nutrition is delivered through posyandu and maternal classes, as explained by the following informant.

> "Yes, like shrimp, it has good nutritional content, but some people used to believe that they shouldn't eat shrimp. But since we have maternal classes, it has started to decrease. Here, decision-makers are usually the elders. So, even if a young pregnant woman wants something, if her parents, who are the decision-makers, prohibit it, she has no choice but to follow. It's like that here." (Informant UWA).

Cultural aspects can also influence parents' caregiving patterns for children, particularly concerning dietary habits, rest patterns, and meeting other children's needs (Takukder et al. 2018, Marlina 2021). The socialization and educational efforts conducted by posyandu and health centers are among the measures to address the cultural aspects of stunting management. However, rural communities tend to respond to stunting socialization or education with indifference. Some informants mentioned that some participants in these educational sessions are in a hurry to leave for various reasons. Moreover, some community members do accept the input provided by health volunteers, but they tend to neglect the urgency of stunting management, as explained by the following informant.

> "Actually, the response is quite neutral, but we still do it. Their enthusiasm is not that high, just normal. Earlier, I explained that people here tend to follow what they're told. But there are still one or two who don't really believe or follow it completely." (Informant ANA).

From an economic perspective, it's undeniable that low family income can lead to insufficient child nutrition (Siswati et al. 2022). Additionally, this economic aspect is also related to the environmental aspect, where families with low income may struggle to provide proper and clean sanitation and clean MCK facilities (Haq & Abbas 2022, Permatasari et al. 2023). For instance, in Trenggalek Regency, some families still use well water for drinking. Furthermore, low economic conditions can also make it difficult for people to access healthcare facilities that are quite far away due to a lack of vehicle ownership.

Challenges faced by rural communities in meeting child nutrition needs and addressing stunting

The challenges faced by rural communities in addressing stunting are related to several internal and external factors (Rajan & Morgan 2018, Roostriyani & Sugiantini 2022). Internal factors that hinder nutrition fulfillment and stunting management for children include the following. First, participation in posyandu activities remains low. This results in poor monitoring of children with stunting by the posyandu. Some parents only come to the posyandu when vitamin A is distributed and when they notice signs of stunting in their children.

> "Mothers rarely come to posyandu. So not everyone is reached. We don't know if they are newcomers or not. Only when there happens to be vitamin A distribution, they suddenly come, bringing their potentially stunted children. After that, they disappear, they don't come again." (Informant KHO).

In line with the statement above, other informants mentioned that some parents do not regularly attend posyandus because they feel their child is protected from all diseases after being immunized. Second, children with stunting are considered a source of shame by their parents. Some parents still hide the condition of their children who show signs of stunting. This is also the reason why many mothers with stunted children are reluctant to return to posyandus because they feel ashamed in front of other community members and healthcare workers, as explained by the following informant: "Yes, perhaps the reason people are reluctant to come to posyandu is because firstly, stunting is still considered a disgrace by the community, so that's why the posyandu conducts home visits to see the condition of residents." (Informant VIV).

To raise awareness among communities regarding balanced child nutrition, healthcare professionals and posyandu cadres have initiated various efforts, including counseling, home visits, and providing supplementary nutrition. The aim is to facilitate families who do not come to posyandus to consult on child development and to observe the daily lifestyle patterns of families that can impact child growth and development. Moreover, strategies to attract community participation in posyandu activities vary by region. These include organizing savings groups, door prizes, and direct cash assistance (BLT) to encourage parents and children to attend posyandus regularly. However, there have been instances where the implementation targets did not meet expectations, with only mothers attending the posyandu while leaving their children behind. Therefore, when a child is identified as stunted, posyandu cadres and healthcare centers conduct home visits, as explained by several informants.

> "The steps to attract participants have been different for each posyandu. In Paskel, for example, they held savings groups. The idea was to make them feel obligated to come every month. However, during the actual implementation, only the mothers attended, and the babies were not brought along. Then, in Kemuning, they organized door prizes, and many people attended, showing a lot of interest. There were door prizes and BLT incentives. If there's a child with stunting, they visit them. And if there are children with malnutrition or poor nutrition, they usually get visited as well." (Informant KHO).

> "Initially, in posyandu, everything is under control, every month. Starting from measuring the child's weight and height. At first, they avoided going to posyandu because they were embarrassed, and their child's weight and height weren't increasing, so they didn't want to come. Bu Bidan (midwife), Bu Asih, and the cadres are like the Power Rangers, they are quick. For example, if someone doesn't come, they will go pick them up." (Informant ETI).

In addition to internal factors, challenges related to external factors in optimizing stunting management in rural areas include; first, the assistance provided is not entirely precise and effective. Some impoverished families receiving aid for stunting management feel that they have not received maximal assistance. For instance, health centers have provided assistance in the form of groceries to support the nutritional quality of toddlers. However, in many cases, families have more than one toddler, while the assistance provided is counted for only one child. Furthermore, some parents tend to hope for and rely on government aid because they are unable to afford their child's nutrition.

> "Now, with the increasing focus on stunting, there are programs from both the health center and the village. Usually, there is additional funding for stunted children, although it's not 100%. There is funding to minimize stunting. However, when food or vitamins are given, the mothers are asked, 'Who will eat this?' The child refuses, and in the end, the mother eats it. This is despite efforts by the village government and the health center to maximize assistance to prevent many children from experiencing stunting. There is a program every year. But because, on average, when asked, they have difficulty eating, the portions they eat are not appropriate for their age group." (Informant NIK).

In addition to government assistance being inadequately targeted, the utilization of aid by households with stunted children has also not been conducted appropriately (Sekarani et al. 2023). Furthermore, when aid in the form of vitamins and nutritious food is provided, it is often not consumed by the affected child. Instead of persuading their child to consume it, some parents consume this nutritional intake for themselves or for other family members.

Second, the distance to healthcare facilities is quite far. Nevertheless, in certain regions, access to healthcare services, clean water, and sanitation is relatively good. Local communities have easy access to healthcare services. The villages also have proper sanitation and an ample supply of clean water for the local population. This includes access to clean water through the local water utility (PDAM) or village water sources. Some regions have more than one community health center (puskesmas) in each subdistrict.

> "In every subdistrict, there are two community health centers (puskesmas). Judging by the midwife allocation, I think, on average, every village has one. So, I think there are already quite accessible healthcare services. There are services available for referrals. Posyandu is also widespread. The issue is really the lack of awareness among the community members to go to posyandu, it's a lack of understanding, Ms. As for sanitation, that falls under the scope of the Public Works Department (PUPR), so we cooperate to accelerate stunting intervention across sectors. Collaboration." (Informant LAT).

Based on the interview excerpts above, the availability of community healthcare services such as posyandu, community health centers (puskesmas), village midwives, and adequate sanitation is the result of the roles and cooperation of various institutions. However, in some other areas, the distance from the village to the nearest community health center can be quite far. This is especially true in regions characterized by mountainous terrain, considerable distances between villages separated by hills, and inadequate road conditions. In such areas, the distance from residents' homes to posyandu and community health centers can be quite considerable, as it often involves traversing several hills. Additionally, some community members lack personal transportation means to reach the nearest community health center.

Third, there is a limitation in budget allocation (Suryana & Azis 2023). According to some informants, the budget for stunting intervention remains limited. Some community health centers or posyandu do not have a specific budget for stunting intervention because they also allocate funds for other issues such

as nutrition and the treatment of other child-related illnesses. Some areas have a specific budget from the village allocated for stunting intervention, particularly in regions classified as stunting hotspots. Some informants attempted to request budget allocations for stunting intervention and the procurement of supplementary food (PMT). However, they did not receive these funds due to the COVID-19 pandemic.

Efforts required for optimizing stunting intervention in rural areas

Efforts needed to optimize stunting intervention in rural areas must take into account the issues and challenges associated with stunting that have been identified in these regions. The key initiatives required to optimize stunting intervention in rural areas include, first, socialization regarding stunting, including prevention and treatment. The content of socialization efforts should encompass the understanding of stunting, from its definition to preventive measures. The target audience should include adolescents, young couples, pregnant women, and families with toddlers. Health workers and local village officials can periodically conduct these awareness campaigns, for example, once a month at posyandus and puskesmas. Furthermore, it is essential to enhance the community's understanding of childcare practices. In this regard, local healthcare providers such as village midwives play a crucial role. However, the family and parents also have a significant influence, as they are the closest and most directly involved in monitoring the dietary and health patterns of toddlers.

Second, the distribution of nutritious food aid and targeted child healthcare facilities. Just like in urban areas, economic factors are also a significant contributor to stunting in rural areas, as some families are unable to provide optimal nutrition for their toddlers. Efforts to optimize stunting intervention should include providing nutritious food aid and targeted child healthcare facilities. Assistance such as vitamins, medication, and supplementary food (Taburia) has already been provided to support stunting prevention in children. However, the utilization of this aid needs to be practiced correctly to ensure that the nutritional content is not wasted. The provision of aid should also be accompanied by regular monitoring and supervision, especially concerning its utilization and distribution within the child's family.

Third, training and optimization of support facilities for health cadres and posyandu cadres. For adopting healthy lifestyles, rural communities often rely on guidance from midwives and health cadres who handle maternal and child healthcare assistance and conduct health-related awareness campaigns in the community. Several informants emphasized the significant influence of village midwives and posyandu cadres in rural communities regarding stunting intervention. Therefore, training for these cadres should be focused on effective methods and practices for socialization and education related to stunting, improving their knowledge of stunting prevention and management, and training on providing quality healthcare services. Training is also necessary for the regeneration of new cadres to ensure they are prepared and knowledgeable about stunting prevention and management.

Fourth, the allocation of funds for special stunting programs and activities. Currently, the allocation of funds in some areas comes from the collaboration between village governments and integrated health posts to provide aid and conduct specific stunting awareness programs. However, in several rural areas, the allocation of funds is still relatively limited, and the utilization of the stunting intervention budget has not been maximized. By having a dedicated budget allocation for stunting intervention in rural areas, programs and activities for stunting prevention and treatment can be more effectively executed without being hindered by financial constraints, lack of healthcare equipment, or other resources.

Fifth, establishing multiple healthcare posts at locations more easily accessible to the residents is essential. This is crucial to ensure that these posts can facilitate residents living in areas with specific geographical conditions, especially those far from the nearest community health centers. In several villages, at least one posyandu is required. Additionally, posyandu activities need to be carried out actively. They should not only provide healthcare services at the posts but also provide support by conducting home visits to households with toddlers. Sixth, ensuring proper sanitation and Water, Sanitation, and Hygiene (WASH)

facilities are available in every household. The local village government needs to ensure the availability of clean and adequate WASH facilities for each family, especially those with stunted toddlers. Although most rural communities have adequate WASH facilities, there are still a few households in rural areas that practice open defecation in rivers or their backyards, which also affects the health conditions of the residents.

Seventh, garnering support and involvement from local community leaders in various stunting intervention activities and programs. In general, community leaders who play a significant role in influencing healthy behaviors to prevent stunting are healthcare workers, such as village midwives. However, the process of raising awareness among the community to prioritize healthy behaviors is not separate from the collaboration between healthcare workers and the village government. In this regard, village heads, community leaders, neighborhood heads (RT and RW), and the Village Consultative Body (BPD) also have a role in influencing the healthy lifestyles of their constituents. Synergy and collaboration between village officials, community leaders, village midwives, and posyandu cadres are highly necessary. With the involvement of all community components, the efforts to address stunting can be more effective.

In rural communities, respected community leaders often hold high positions in the local area. These community leaders include subdistrict heads (camat), village heads, and local midwives. In several regions, many respected community leaders actively participate in efforts to reduce stunting in their areas. They often attend and provide motivation to parents of stunted children. However, the support of local community leaders in stunting intervention still needs further optimization, as there are still rural areas where stunting interventions are not maximally supported by existing community leaders.

Conclusion

Based on the findings and discussions presented in this study, several important points need to be considered. Firstly, it is crucial to recognize that efforts to prevent stunting must begin early, even during pregnancy. Secondly, from a medical perspective, besides nutritional deficiencies, other significant factors contributing to stunting include inadequate maternal knowledge, recurrent or chronic infections, poor sanitation, and limited access to healthcare services. Thirdly, a key step in preventing stunting is to empower and position mothers as central actors committed to the prevention process. Fourthly, in the child’s growth and development process, one important aspect for parents, especially mothers, to understand is how to complement exclusive breastfeeding with healthy complementary feeding. Fifthly, continuous monitoring of a child’s growth and development is a crucial stage that parents need to be aware of to prevent stunting. Sixthly, while most parents understand the importance of meeting their child’s nutritional needs, in daily life, due to economic constraints and lack of awareness, some parents still do not pay sufficient attention to this issue.

This study recommends several solutions that can serve as the basis for consideration in preventing and reducing the prevalence of stunting in children, including (1) Stunting intervention should commence as early as possible because prevention is far more important than treatment after a child has already suffered from stunting. Therefore, interventions to reduce stunting prevalence should be conducted during the first 1,000 Days of Life (the first two years of a child’s life). (2) Regular consultations regarding the importance of maintaining proper nutrition during pregnancy, monitoring the growth and development of toddlers, providing supplementary feeding for toddlers, early childhood development stimulation, practicing clean and healthy living habits, avoiding exposure to cigarette smoke, and allocating time for regular physical activity. (3) It would be beneficial for the government to help provide targeted support for stunted children to mitigate their higher risk of poor educational achievements, chronic diseases, infections, and other adverse biological conditions. (4) The effort to popularize posyandus should continue, establishing strong connections with pregnant women and other mothers to encourage regular visits for fetal and child health check-ups. (5) In addition to intensive socialization efforts, it is essential to build the correct narrative about parental responsibilities and the right approach to meeting a child’s nutritional needs. One potential approach to achieve this is through a socio-cultural and culturally-based cultural approach within the community.

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