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# Dynamics of Food Self-Sufficiency and Stunting: Evidence Jember Regency Indonesia

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## Abstract

The urgency of this research lies in the need for a deeper understanding of the factors that cause high stunting in areas that are nominally successful in food self-sufficiency. This study also seeks to fill the literature gap by directly linking food self-sufficiency policies and children's health conditions, especially in the context of stunting. Furthermore, this study reviews two main problem formulations, namely: 1) What are the dynamics of food self-sufficiency and stunting rates in Jember Regency? 2) How to optimize the stunting reduction policy strategy in Jember Regency? This research method uses qualitative with in-depth interview data collection techniques, this research analysis technique uses data triangulation. The implications of these findings emphasize the importance of adopting a more holistic and cross-sectoral policy approach. Efforts to reduce stunting in Jember must be integrated with food security policies that pay attention to nutritional quality, as well as effective health and education programs. Local governments need to strengthen coordination between sectors and involve communities in policy implementation to ensure that the benefits of food self-sufficiency can be felt by all levels of society, especially the most vulnerable.

**Keywords:**

food self-sufficiency; stunting; Indonesia

## Introduction

Stunting or stunted child growth has become an urgent global issue, especially in developing countries (Ali, 2021; Bhutta et al., 2020). According to the World Health Organization (WHO), about 22% of children under the age of five worldwide are stunted. This condition not only affects physical growth, but also cognitive development and long-term health of children. The main causes of stunting include lack of nutritional intake, poor sanitation, and early marriage practices (Akombi et al., 2017; Li et al., 2020). Although various global initiatives have been carried out to reduce stunting rates, the challenges faced are still enormous, especially in countries with low levels of food security.

In Indonesia, stunting has become one of the main focuses of national policy in recent years. The Government of Indonesia has issued various regulations and policies aimed at achieving food self-sufficiency and reducing stunting rates. One of the important legal foundations is Law Number 18 of 2012 concerning Food, which underlines the importance of food

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availability, affordability, and safety for all Indonesians. In addition, the National Program for the Acceleration of Stunting Reduction launched in 2017 aims to accelerate the reduction of stunting rates through a multisectoral approach that includes health, sanitation, education, and nutrition. Efforts to handle stunting in Indonesia are closely related to the Sustainable Development Goals (SDGs), especially the 2nd goal, namely "Ending Hunger, Achieving Food Security, and Improving Nutrition" (Panatariono & Puspitasari, 2022). In this context, stunting is an important indicator in assessing the success of the national food security and nutrition program. Food security, which is one of the main pillars in achieving goal 2 of the SDGs, plays an important role in ensuring the availability and access to adequate, nutritious, and safe food for all levels of society, especially children.

Stunting, if not immediately addressed seriously in the long term, is very dangerous to the sustainability of a nation, because if a generation experiences stunting a lot, in the future national productivity will be low. Children who are growing up at that time are likely to have limited educational and job opportunities (Pfeffer, 2018). Furthermore, this generation will live in a cycle of poverty due to their limited ability to meet their living needs. If this condition is not immediately addressed seriously, it is very likely that our nation in the future will bear a heavy economic burden because people who were stunted in childhood will tend to have low incomes as adults. The commitment to accelerate stunting reduction is carried out by the Indonesia government by issuing Presidential Regulation Number 72 of 2021 concerning the Acceleration of Stunting Reduction. This Presidential Regulation is the legal umbrella for the National Strategy for the Acceleration of Stunting Reduction which has been launched and implemented since 2018. This Presidential Regulation is also to strengthen the framework of interventions that must be carried out and institutions in the implementation of accelerating stunting reduction. The National Strategy for the Acceleration of Stunting Reduction is implemented to achieve the target of sustainable development goals by 2030.

However, stunting cases are still high, in 2022 the prevalence of stunting in Indonesia is 21.6%, down from 24.4% in 2021. Among the G20 countries, Indonesia's ranking is second only to India. For this reason, Indonesia is striving to reduce stunting by 14% by 2024. At the national level, stunting cases in East Java are still quite high. This is the commitment of the East Java Provincial Government and all city districts in East Java to reduce the stunting prevalence rate. The results of the Indonesia Nutrition Status Survey (SSGI) of the Ministry of Health show that the prevalence of stunting among toddlers in East Java reached 19.2% in 2022. This province was ranked 25th with the highest prevalence of stunting in Indonesia last year. East Java managed to cut the number of stunted children under five by 4.3 points from the previous year. In 2021, the

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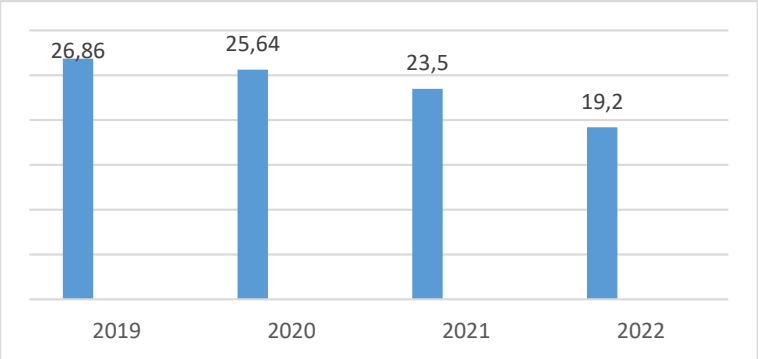
prevalence of stunting among children under five in this province was recorded at 23.5%. The following is the distribution of stunting prevalence in City Regencies in East Java. The following will be presented with data on stunting prevalence in East Java Province:

**Figure 1.**

**Development of Stunting Prevalence in East Java Province**




Based on Indonesia's Nutrition Status Survey data from the Ministry of Health, of the 33 districts/cities in East Java, Jember regency is in the highest order at 34.9% in 2022. While the second highest position is Bondowoso Regency with 32%. Jember Regency, East Java Province is one of the regions that received awards for its success in managing food self-sufficiency. However, this poses an interesting paradox because Jember Regency also recorded the highest stunting rate in East Java based on the 2022 Indonesia Nutrition Status Survey (SSGI), with a prevalence of 24.9%. This contradiction raises fundamental questions about the effectiveness of food self-sufficiency policies in reducing stunting rates, especially in areas that have good achievements in food security.

This study is important because it raises the contradiction that occurs in Jember Regency, where success in food self-sufficiency is not followed by a significant reduction in stunting rates. The urgency of this research lies in the need for a deeper understanding of the factors that cause high stunting in areas that are nominally successful in food self-sufficiency. This study also seeks to fill the literature gap by directly linking food self-sufficiency policies and children's health conditions, especially in the context of stunting. Furthermore, this study reviews two main problem formulations, namely: 1) What are the dynamics of food self-sufficiency and stunting rates in Jember Regency? 2) How to optimize the stunting reduction policy strategy in Jember Regency?

The remaining study sections in this article are as follows. The second part reviews the latest literature studies that are relevant to food self-sufficiency policies and stunting prevention.

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The third part presents the research methods used. Part four contains relevant discussions and discussions, and finally part five presents the main conclusions.

## Literature Review

The global debate on the synergy between food self-sufficiency programs and efforts to reduce stunting is becoming increasingly relevant in this modern era, where food security and children's health are the two top priorities for many countries (Jawaldeh et al., 2020). On the one hand, proponents of the synergy of food self-sufficiency programs and stunting reduction argue that increasing the availability and accessibility of quality food is a fundamental step to reduce stunting. They stated that successful food self-sufficiency can directly improve the nutritional status of the community, especially children, which in turn reduces the prevalence of stunting. For example, countries such as Brazil and Viet Nam that have achieved high levels of food self-sufficiency have also shown significant reductions in stunting rates through the integration of food and health programs.

Critics argue that food self-sufficiency is not always directly proportional to the decline in stunting rates. They highlight that success in food self-sufficiency is often only measured by the availability of food quantitatively, without paying attention to the quality and proper distribution of nutrition. Even in countries with food surpluses, stunting remains high due to uneven food distribution, insufficient micronutrient intake, and other non-food factors such as sanitation and maternal health (Hameed et al., 2023; Mkupete, 2022). Ethiopia, for example, despite significantly increasing its domestic food production, still faces major challenges in reducing stunting rates due to inadequate nutrition distribution and other social problems.

Policy experts also have diverse views on how global programs to reduce and prevent stunting should be designed and implemented. According to some experts, a more holistic approach is needed and not only focuses on food production, but also on the aspects of distribution, nutrition education, and sanitation (Gaihre et al., 2019; Rodrigues et al., 2020). Public policy experts emphasized that policies that only target increasing food production without integration with health and nutrition programs tend to fail to achieve the goal of reducing stunting across the board (Bach et al., 2020; Hambloch et al., 2023). On the other hand, focusing on diversifying local food and increasing people's purchasing power is the key to achieving success in stunting reduction programs. The government must encourage the production of nutrient-rich food at the local level, while increasing public access to these food resources. For example, the "Scaling Up Nutrition" initiative implemented in various countries shows positive

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results when food security programs are integrated with health and nutrition interventions (Sarma et al., 2021; Wesley et al., 2019).

As an example of successful policy implementation, the multisectoral approach implemented in several developing countries has shown that integrated efforts between the agriculture, health, and education sectors can significantly reduce stunting rates (Akseer et al., 2020; Kim et al., 2020). Initiatives such as "Zero Hunger" in Brazil and "National Nutrition Mission" in India underscore the importance of cross-sector collaboration in addressing this dual challenge. In both countries, policies that integrate food production, distribution, nutrition education, and health services have succeeded in reducing stunting rates, despite challenges in implementation. However, despite exemplary successes, experts also caution that there is no "one-size-fits-all" approach (Barker-Ruchti et al., 2018). Every country, or even every region, needs a strategy tailored to local conditions, including specific cultures, infrastructures, and health challenges.

Stunting in Indonesia is still a serious problem with varying prevalence across provinces. Despite the increase in food production, distribution issues, access to nutritious food, and non-food factors such as sanitation and health behaviors are still the main obstacles in efforts to reduce stunting rates. This phenomenon highlights the fact that food self-sufficiency, while important, does not always guarantee the improvement of children's nutritional status if it is not accompanied by policies that pay attention to food quality and equitable access.

Nutritionists and public health experts in Indonesia emphasized that the availability of large quantities of food does not always mean good nutritional quality (Colozza, 2021). For example, increasing rice production as a staple food is not necessarily followed by diversifying diets that can meet the needs of micronutrients such as vitamins and minerals, which are essential to prevent stunting. Stunting reduction requires a more comprehensive and coordinated approach, involving various sectors such as health, education, and the economy (Conway et al., 2020). The importance of evidence-based interventions that focus not only on improving food production, but also on improving health services, nutrition education, and improving sanitation. In a national effort to reduce stunting, programs such as the National Program for the Acceleration of Stunting Reduction (P3S) have been introduced, which integrate various efforts in the fields of health, sanitation, and nutrition education (Charnley, 2022). However, the main challenge remains, namely how to ensure that this program is implemented effectively in all regions, especially in areas with high prevalence of stunting and limited access to food.

At the national level, policymakers also need to consider aspects such as community economic empowerment and infrastructure improvement, especially in rural areas as part of a

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long-term strategy to achieve truly inclusive and effective food self-sufficiency in reducing stunting. In addition, collaboration between the government, the private sector, and civil society is key in ensuring the success of these programs.

**Public Policy Theory**

Public policy is a series of actions formulated and implemented by the government to achieve certain goals that are considered important to society (Knill & Tosun, 2020). This policy covers various fields, ranging from economic, social, health, to the environment, with the main goal of improving the welfare of the community as a whole. According to Kraft & Furlong (2020) public policy is the authoritative allocation of values by the government to the community. This opinion emphasizes that public policy is the result of decisions taken by government authorities and applied to regulate or influence people's behavior.

Berman & Fox (2023) his theory of "Incrementalism" states that public policy is often the result of a series of small or gradual changes, rather than large, revolutionary changes. This approach is relevant in the context of food and health policy, where the government tends to make adjustments and improvements gradually based on the evaluation of policies that are already running. This theory shows that in an effort to maintain food self-sufficiency and reduce stunting rates, the policies taken may not show great results immediately, but the accumulation of small policies that are carried out consistently can produce a significant impact. In addition, the "Multiple Streams Framework" theory put forward by states that public policy arises from three main streams that interact with each other: issues, policies, and politics. When these three streams meet, the opportunity for policy change becomes greater. In the context of stunting and food self-sufficiency, clear identification of problems (e.g. high stunting rates despite food self-sufficiency), the development of effective policy alternatives, and strong political support can create momentum to produce more focused and effective policies.

According to McConnell & ‘t Hart (2019) public policy is whatever the government chooses to do or not do. This opinion emphasizes that public policy includes not only the active actions of the government but also the decision not to act in certain situations. In the context of food self-sufficiency and stunting, the government's decision to focus resources on certain programs and not others can have a major impact on the results achieved.

Policy experts Christensen (2021) highlight the importance of understanding the policy process and the actors involved in policy formation. Therefore, for sustainable policies in maintaining food self-sufficiency and reducing stunting, it is important to involve all stakeholders in the policy formulation and implementation process. In the context of the Jember Regency case study, the application of public policy theory is very relevant to maintain food self-sufficiency

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while reducing the high stunting rate. The "Incrementalism" approach can be applied in the development of policies that support food self-sufficiency in Jember Regency, where the local government needs to continue to improve and adjust existing food programs based on periodic evaluations and feedback from the community. For example, adjustments in food distribution programs that focus more on balanced nutrition and not just on quantity.

Furthermore, using the "Multiple Streams Framework" the Jember Regency government can identify key moments when the problem of stunting and the need to maintain food self-sufficiency can be raised together in the policy agenda. For example, while the latest data shows high stunting rates, this could be a "window of opportunity" for governments to strengthen policies that integrate food self-sufficiency with better health and nutrition education programs. Collaboration between local governments, the health sector, local communities, and the private sector can ensure that the policies taken are comprehensive and sustainable (Guglielmin et al., 2018). For example, the private sector can be involved in nutrition education campaigns or in the development of highly nutritious local food products. Overall, the application of this public policy theory in Jember Regency will help ensure that efforts to maintain food self-sufficiency are not only focused on food production alone, but also on food quality and distribution that can directly contribute to reducing stunting in the area.

**Food Self-Sufficiency Paradigm**

Food self-sufficiency is one of the important concepts in development policies in many countries, including Indonesia. This paradigm is rooted in the need to ensure the availability of sufficient and affordable food for all levels of society, as well as reduce dependence on food imports. In the context of Indonesia, food self-sufficiency has been one of the main pillars of national policy since the New Order era, with the main focus on increasing the production of staple foods, especially rice. According to Brankov et al., (2021) food self-sufficiency not only includes the availability of food, but also public access to the food. The concept of an "entitlement approach" emphasizes that hunger is not only caused by lack of food, but also by failures in food distribution and accessibility. In the context of food self-sufficiency in Indonesia, this paradigm is relevant because even though food production is increasing, challenges in equitable distribution and access to nutritious food are still the main obstacles.

In Indonesia, the food self-sufficiency paradigm has evolved from a focus on quantity to a more holistic understanding that includes food quality and security. Initially, food self-sufficiency was more emphasized on increasing rice production as the main food ingredient. This is reflected in various national programs such as "Mass Guidance" and "Agricultural Intensification" introduced in the 1970s and 1980s. However, although these programs have succeeded in

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increasing rice production, their impact on nutritional quality and long-term food security is still debated. In the modern era, the food self-sufficiency paradigm in Indonesia has begun to recognize the importance of food diversification and strengthening local foods that are rich in nutrients. Policies such as "Food Diversification" and the "National Movement for Nutrition Improvement" reflect a shift in focus from simply meeting calorie needs to ensuring adequate nutritional intake for the community. However, in its implementation, challenges still arise related to how to ensure that increased food production is also accompanied by fair distribution and adequate access for all communities, especially in areas with high stunting rates such as Jember Regency.

Expert Godenau et al., (2020) emphasized that the success of food self-sufficiency should not only be measured from the physical availability of food, but also from its contribution to improving the nutritional status of the community. The importance of integration between food production and nutrition policy, where food self-sufficiency programs must be supported by policies that ensure that the food available is nutrient-rich and affordable to the wider community (Cervantes et al., 2022). In addition, the food self-sufficiency paradigm in Jember needs to be adjusted to local challenges such as food distribution and access problems, as well as non-food factors such as early marriage and poor sanitation, which also contribute to the high stunting rate. Aligning the food self-sufficiency paradigm with efforts to reduce stunting in Jember Regency, a more integrated and cross-sectoral approach is needed. This approach includes not only food production and distribution, but also nutrition education, improved access to health services, and improved sanitation infrastructure. Local governments need to formulate policies that ensure that increased food production is also followed by improvements in accessibility and nutritional quality, especially for vulnerable groups such as pregnant women and children. This more comprehensive food self-sufficiency paradigm must also be supported by educational programs that teach the importance of food diversification and nutritious food consumption, so that people are not only fixated on one type of staple food, but also consume food that can meet nutritional needs in a balanced manner.

**Stunting Prevention Periodically**

Periodic stunting prevention is a structured and sustainable approach in an effort to reduce the prevalence of stunting in the community (Pratama et al., 2024). Stunting, which is characterized by a child's stunted physical growth due to malnutrition in the long term, can have a significant impact on a child's cognitive development, health, and productivity in the future. Therefore, stunting prevention efforts must be carried out systematically and continuously, involving various interventions in critical periods in the child's life cycle. According to the

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Window of Opportunity theory developed by UNICEF, the most critical period in stunting prevention is the first 1,000 days of a child's life, which starts from pregnancy until the child reaches the age of two (Grey et al., 2023). During this period, proper nutrition and health interventions can prevent permanent damage to a child's growth and development. Therefore, stunting prevention must be regularly focused on providing optimal nutrition during pregnancy, exclusive breastfeeding, timely feeding of complementary breastfeeding, and regular monitoring of children's health and growth.

Several stunting prevention programs in various countries have shown success in reducing the prevalence of stunting through a structured periodic approach. The program focuses on nutritional interventions during the first 1,000 days of life, including iron and folic acid supplementation for pregnant women, as well as increased access to maternal and child health services. Within a decade, the prevalence of stunting in Peru was successfully reduced from 30% to about 13% (Huicho et al., 2020). The SUN Movement is a global initiative launched in 2010 and has been adopted by more than 60 countries, including Indonesia (Fracassi et al., 2020). The program emphasizes the importance of a multisectoral approach to addressing malnutrition, with a particular focus on stunting prevention during the first 1,000 days of life. SUN promotes nutrition, health, education, and sanitation interventions, and encourages collaboration between governments, communities, and the private sector. The success of this program can be seen in several countries that have adopted the SUN model, where there has been a significant decrease in stunting rates.

Stunting prevention should be periodically designed taking into account local challenges, such as malnutrition, early marriage, and poor sanitation (Sufri et al., 2023). Successful programs such as those mentioned above can be adapted and implemented with an approach adapted to the social, economic, and cultural conditions of the local community. Periodic interventions in Jember can start with increasing nutrition education for pregnant and lactating women, as well as providing wider access to maternal and child health services. Exclusive breastfeeding for the first six months and quality complementary feeding at later ages need to be encouraged through intensive health campaigns. In addition, monitoring of children's growth must be carried out regularly at posyandu and health centers, with quick reporting and follow-up if indications of stunting are found. Stunting prevention must also be integrated with programs that aim to improve the quality of clean water and sanitation, as well as reduce the prevalence of early marriage which contributes to high stunting rates. Through this comprehensive periodic approach, Jember Regency can strive to significantly reduce stunting rates while maintaining achievements in food self-sufficiency.

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## Methods

This study uses a qualitative approach to explore in depth the phenomena related to the dynamics of food self-sufficiency and stunting in Jember Regency. The qualitative approach was chosen because it allows researchers to understand the social, cultural, and economic contexts that affect both issues, as well as gain direct insights from the stakeholders involved (Putra, 2023). The data in this study was collected through in-depth interview techniques with several informants who had direct involvement with the phenomenon being studied. In-depth interviews were chosen because this method provides flexibility to researchers to explore the informant's experiences, views, and perceptions more comprehensively. The informants of this research are:

**Table 1.**

**Research Informant**

| No | Informant's Name | Agency |
|---|---|---|
| 1 | SPH | Head of DP3AK |
| 2 | MFB | Deputy Regent of Jember Regency |
| 3 | SW | Jember Regency Social Service |
| 4 | KA | Child Protection Division DP3AK Jember Regency |
| 5 | IGS | Head of Tegallinggah Village |
| 6 | DL | BKKBN |

The informants in this study were selected based on stakeholder analysis (Franco-Trigo et al., 2020). Stakeholder analysis is used to identify individuals or groups that have influence or are affected by the issue of food self-sufficiency and stunting in Jember Regency. The selection of these informants aims to ensure that diverse and relevant perspectives related to the phenomenon being studied can be represented comprehensively. The data obtained from in-depth interviews were analyzed using triangulation techniques. Triangulation is carried out by comparing information obtained from various informants and linking findings from interviews with secondary data, such as government reports, official statistics, and relevant literature. Through the triangulation technique, researchers can confirm the validity of the data and ensure that the resulting interpretation is an accurate reflection of the phenomenon being studied.

## Results and Discussion

### Interpretation of Food Self-Sufficiency Dynamics and Stunting Rate in Jember Regency

Stunting reduction and prevention in Jember Regency is a complex issue that requires a comprehensive and integrated public policy approach. Public policy is often understood through a systemic approach, where social problems such as stunting cannot be solved through a single policy, but requires synergy from various sectors (Kushitor et al., 2022). According to the theory of the "Multiple Streams Framework" effective policies arise when three main streams: 1)

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Problems; 2) Policy; and 3) politics. In the context of stunting in Jember Regency, this approach implies that in order to produce effective policies, the government must first identify the main problem (high stunting rates), design relevant policies (nutrition, sanitation, education intervention programs), and ensure strong political support for the implementation of these policies. In Jember Regency, synergy between the health, education, agriculture, and infrastructure sectors is the key to reducing stunting. For example, the agricultural sector plays a role in ensuring food self-sufficiency which focuses not only on quantity, but also on the nutritional quality of the food products produced. Meanwhile, the health sector is responsible for the implementation of nutrition programs aimed at pregnant women and children (Qiao et al., 2021). In addition, the education and infrastructure sectors must also support by providing access to good sanitation and adequate nutrition education facilities (Momberg et al., 2021).

The theory of "Incrementalism" argues that public policy tends to develop through small, gradual changes, rather than through large, revolutionary changes (Gersick, 2020). In the context of stunting reduction in Jember Regency, this approach is relevant because policy interventions aimed at reducing stunting rates must be carried out gradually and sustainably. For example, nutrition and sanitation education programs cannot be expected to result in drastic changes in a short period of time, but through consistent gradual interventions, cumulative impacts can result in significant reductions in stunting prevalence. In Jember Regency, the implementation of this phased policy can begin with a focus on areas with the highest stunting prevalence, followed by the development of sustainable intervention programs and the expansion of program coverage to all districts. Periodic evaluations and program adjustments based on the results of the evaluation are also important to ensure the effectiveness of the policies implemented.

Public policy approaches must also be tailored to the local context, given that each region has different characteristics, challenges, and resources (Tödtling & Trippl, 2018). Jember Regency, with its achievements in food self-sufficiency, has great potential to utilize local resources in efforts to reduce stunting. However, challenges such as uneven food distribution, limited access to health services, and the practice of early marriage require specific and contextual policies. Local governments can adopt a more participatory approach, involve the community in decision-making, and integrate food policy with health and sanitation policy. This can be done through community discussion forums, collaborations with non-governmental organizations, and strengthening the role of village governments in policy implementation.

An in-depth interview with SPH, which represents the Jember Regency Women's Empowerment, Child Protection, and Family Planning Office (DP3AK), revealed several important

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insights related to the implementation of food self-sufficiency policies in Jember Regency. The interview statement will be reviewed as follows:

> *"Jember Regency has succeeded in increasing food production, especially rice, until it reaches self-sufficiency. However, he also acknowledged that the main challenge faced today is how to ensure that the production results can be optimally utilized by all levels of society, especially in the context of reducing stunting rates." (Interview conducted on April 8, 2024 at 13.00 WIB)*

The results of a similar interview were stated by MFB as the Deputy Regent of Jember Regency as follows:

> *"Food self-sufficiency is a top priority for the Jember Regency government, considering that this area has huge agrarian potential. The food self-sufficiency policy in Jember has been focused on three main pillars: increasing production, equitable distribution, and improving food quality. Although Jember has achieved food self-sufficiency, there is still a gap that must be overcome in terms of food utilization to improve the nutritional status of the community." (Interview conducted on April 9, 2024 at 14.00 WIB)*

Based on the results of the interview, public officials stated that although they have reached a fairly established stage in food self-sufficiency, they have challenges in improving nutritional status. The same thing was stated by SW as a representative of the Jember Regency Social Service as follows:

> *"The results of the food self-sufficiency policy can be accessed by all levels of society, especially vulnerable and underprivileged groups. Fair and equitable distribution is a major challenge in the implementation of this policy. Therefore, the Social Service plays an important role in identifying community groups in need of assistance, as well as ensuring that they have adequate access to quality food." (The interview was conducted on May 27, 2024 at 14.00 WIB)*

Furthermore, the researcher will present a review related to the high stunting rate in Jember Regency. Based on the results of the interview conducted with KA as DP3AK of Jember Regency as follows:

> *"Stunting is not only a health problem, but also an issue related to social welfare, education, and women's empowerment. Therefore, stunting reduction efforts must involve a comprehensive and cross-sectoral approach. The importance of community support and strong collaboration between the government, non-governmental organizations, and the private sector in efforts to reduce stunting." (Interview conducted on May 30, 2024 at 13.00 WIB)*

Furthermore, the results of the interview conducted to IGS as the Head of Tegalinggah Village are as follows:

> *"The village government works with local farmer groups to ensure that the food available in the village is not only sufficient in quantity, but also of high quality in terms of nutrition. In addition, the village also encourages food diversification by developing local food crops that are rich in nutrients, such as vegetables and fruits. There are still challenges in the*

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*implementation of these policies, especially related to traditional practices that sometimes contradict health recommendations." (Interview conducted on May 31, 2024 at 12.00 WIB)*

Overall, the interpretation of the results of this interview shows that although Jember Regency has succeeded in achieving food self-sufficiency, major challenges still exist in terms of linking these successes to real improvements in public health, especially in reducing stunting rates. The gap between food production and its use to improve community nutrition shows the need for a more holistic and coordinated approach to policy implementation. Efforts to reduce stunting in Jember require stronger synergy between health programs, women's empowerment, and food distribution. In addition, interventions should focus more on periodic monitoring and evaluation to ensure that the policies implemented are truly effective and can answer existing challenges.

**Optimizing Stunting Reduction Policy Strategies in Jember Regency**

Jember Regency has received an award for its achievements in managing food security, which shows the success of this region in achieving food self-sufficiency, especially in the production of major food commodities such as rice (Ciceri & Allanore, 2019). However, this success poses a striking paradox, considering that Jember also recorded the highest stunting rate in East Java, with a prevalence of 24.9% based on the 2022 Indonesia Nutrition Status Survey (SSGI). This phenomenon raises fundamental questions about the effectiveness of food security policies in Jember in answering public health problems, especially related to the nutritional status of children. Theoretically, food self-sufficiency should contribute positively to improving the nutritional status of the community, because sufficient food availability is considered a prerequisite for good health (Organization, 2020). However, in reality, the success in achieving food self-sufficiency in Jember is not automatically directly proportional to the decrease in stunting rates.

There are several factors that can explain this anomaly. First, the focus of food security policies that focus too much on increasing the quantity of production without paying attention to the nutritional quality of the food produced. Abundant rice production, for example, is not always accompanied by food diversification that is important to meet the needs of micronutrients such as protein, vitamins, and minerals. In fact, this unbalanced nutritional intake is one of the main causes of stunting. Second, the uneven distribution and accessibility of food in various areas of Jember Regency also contributes to the high stunting rate. Although food production in Jember is high, challenges in distribution cause not all levels of society to be able to access nutritious food easily, especially in remote areas. This inequality of access worsens the nutritional condition of

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children in these areas, which is ultimately reflected in the high prevalence of stunting. Third, non-food factors such as poor sanitation, early marriage, and lack of nutrition education also play a significant role in increasing the risk of stunting, even though food is available in sufficient quantities. For example, early marriage in Jember is still quite common, which has an impact on pregnancy at a young age and the lack of readiness of mothers in providing good nutritional intake for their children. In addition, poor sanitation practices make children more susceptible to infections, which can inhibit nutrient absorption and worsen stunting conditions. Fourth, ineffective coordination between food security programs and public health programs also contributes to this anomaly. Sectoral policies without strong synergy can lead to gaps between food production goals and public health. Even though food production is increasing, if there are no integrated health programs, such as nutrition education or maternal and child health interventions, food security efforts will not have an optimal impact on reducing stunting.

This anomaly shows that success in one sector, such as food security, cannot be used as the only indicator of regional development success, especially if there are still fundamental problems such as stunting that have not been resolved. Therefore, policymakers in Jember Regency need to adopt a more holistic and integrated approach in dealing with this issue. This includes combining efforts to improve food security with programs focused on improving nutrition, education, and sanitation, as well as improving cross-sectoral coordination to ensure that all policies are mutually supportive and contribute directly to community well-being.

Optimizing stunting reduction strategies in Jember must begin with the adoption of a holistic approach involving various sectors, including health, education, agriculture, and infrastructure. According to Wiedemann & Ingold (2022) effective public policy must involve cross-sectoral coordination and the participation of all stakeholders. In the context of stunting, this means that nutrition improvement programs cannot run alone, but must be integrated with food, sanitation, education, and economic empowerment policies. This approach can start by strengthening the "First 1000 Days of Life" program which emphasizes the importance of nutritional interventions during pregnancy up to the age of two. This program must be expanded and combined with intensive nutrition education, increased access to health services, and improved sanitation. In addition, food diversification by promoting the consumption of nutritious local foods must also be encouraged to ensure adequate micronutrient intake for pregnant women and children.

Stunting reduction strategies must focus on improving the accessibility and utilization of nutritious food, not just on food availability. True food security is when every individual has access to high-quality food in a sustainable manner (Vågsholm et al., 2020). Therefore, the Jember

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Regency government needs to ensure that food self-sufficiency programs not only produce food in large quantities, but also in quality that can significantly improve the nutritional status of the community. Another opinion through the "Multiple Streams Framework" states that the success of public policy requires a meeting between clearly identified problems, appropriate solutions, and strong political support (Fowler, 2022).

Despite the negative implications, policies that prohibit early marriage or change certain social practices can face resistance from people who still hold on to old traditions or customs. Although policy strategies are well-designed, challenges in implementation on the ground, such as lack of human resources or inadequate infrastructure, can hinder the effectiveness of such policies. Increased social assistance and health intervention programs can create a community's dependence on government assistance, which can weaken local or non-governmental initiatives (Awortwi, 2018). Programs that are not accompanied by equal access throughout Jember Regency can lead to disparities, where hard-to-reach areas may still experience severe stunting problems.

## Conclusion

This study examines the dynamics of food self-sufficiency and the high rate of stunting in Jember Regency, with a focus on the effectiveness of public policies implemented. In general, this study found that although Jember Regency has achieved food self-sufficiency, this has not directly contributed to the reduction of stunting rates. This imbalance is caused by several factors, including uneven food distribution, inadequate nutritional quality, and non-food factors such as poor sanitation and early marriage. The implications of these findings emphasize the importance of adopting a more holistic and cross-sectoral policy approach. Efforts to reduce stunting in Jember must be integrated with food security policies that pay attention to nutritional quality, as well as effective health and education programs. Local governments need to strengthen coordination between sectors and involve communities in policy implementation to ensure that the benefits of food self-sufficiency can be felt by all levels of society, especially the most vulnerable. This study has several limitations, including limitations in the scope of the area that may not be fully representative for the entire Jember Regency, as well as limitations in the number of informants that can affect the generalization of research results. Further studies with a wider scope and more diverse methods are needed to deepen the understanding of the relationship between food self-sufficiency and stunting in various contexts.

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