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Stunting in Focus: Unraveling the Trends and Prevalence Among Children in Maluku Utara Province (2019-2023)

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ABSTRACT

Maluku Utara, an Indonesian province with captivating natural landscapes, cultural richness, and abundant resources, faces a pressing issue of stunting among children. Stunting, a chronic condition affecting growth and development, poses a significant public health challenge. This study examines stunting trends in Maluku Utara from 2019 to 2023, emphasizing its consequences on physical and cognitive development. Despite national targets to reduce stunting, Maluku Utara encounters unique challenges. This research aims to uncover the specific context by analyzing trends, identifying high-prevalence regions, and exploring contributing factors. The study's significance lies in informing targeted interventions and policies tailored to Maluku Utara's conditions, aiding progress toward national reduction goals. Utilizing quantitative methods, the research relies on secondary data from the Ministry of Health of the Republic of Indonesia, applying descriptive statistical analysis. The four-year data reveals fluctuations in stunting prevalence, with a resurgence in 2023, particularly in Halmahera Utara District. District-level analysis exposes disparities, emphasizing the need for continuous and focused efforts, especially in high-prevalence areas. This research addresses knowledge gaps, providing insights into stunting dynamics, and facilitating culturally sensitive interventions. By understanding trends and underlying factors, stakeholders can formulate effective strategies to combat stunting in Maluku Utara, contributing to broader national efforts for a healthier and more prosperous future for the region's children.

Keywords: maluku utara; stunting trends; child development; public health interventions.

INTRODUCTION

Maluku Utara, as one of the provinces located in eastern Indonesia, boasts breathtaking natural landscapes, a rich cultural heritage, and abundant natural resources. However, behind this beauty lies a disconcerting reality – a serious issue of stunting. This is considered a chronic condition as stunting significantly impacts the growth and development of children, posing a significant public health challenge (Branca & Ferrari, 2002; De Onis & Branca, 2016; Onyango, 2013; Young & Martorell, 2013). This study delves into the intricacies of stunting in Maluku Utara, revealing trends and prevalence in children from 2019 to 2023. The urgency to address this issue stems from the fact that stunting, characterized by height not corresponding to one's age, not only impedes physical growth but also hinders cognitive development, future income potential, and overall well-being. In children, stunting can lead to learning difficulties, increased vulnerability to diseases, and

decreased productivity later in life (Branca & Ferrari, 2002; Caulfield et al., 2006; De Onis & Branca, 2016; Dewey & Begum, 2011; Prendergast & Humphrey, 2014).

Recognizing the severity of this problem, the Indonesian government has set ambitious targets to reduce the stunting rate to 14% by 2024 (Syafrawati et al., 2023). However, Maluku Utara faces unique challenges in achieving this goal. To uncover this landscape, this research aims to elucidate the specific context of stunting in Maluku Utara. We will analyze trends over the past four years, identify regions with the highest prevalence, and explore potential contributing factors. The significance of this study lies in its potential to provide input for targeted interventions and policies tailored to the unique conditions in Maluku Utara, facilitating progress toward the national stunting reduction target. The diverse nature of stunting requires comprehensive investigation, considering not only its direct health impacts but also its wide-ranging socio-economic effects.

By understanding trends and prevalence in Maluku Utara, we can identify geographical points that require focused attention. Furthermore, exploring underlying factors contributing to stunting will provide valuable insights into the root of the problem, paving the way for effective and sustainable intervention strategies. The unique challenges in Maluku Utara in combating stunting necessitate a different approach beyond national general policies. This research will contribute to filling existing knowledge gaps regarding the dynamics of stunting in specific regions, facilitating the development of culturally sensitive and targeted interventions. Through a thorough analysis of trends and prevalence, we aim to provide a comprehensive overview to aid policymakers, health professionals, and local communities in formulating strategies to address this pressing issue.

In essence, this research serves as a beacon, explaining the complexity of stunting in Maluku Utara and guiding the way toward appropriate solutions. As we explore various factors contributing to stunting, our findings will not only enrich academic discourse but also empower stakeholders to make informed decisions for the well-being of children in the region. In doing so, we hope to make a meaningful contribution to broader national efforts to alleviate the burden of stunting and ensure a healthier and more prosperous future for children in Maluku Utara.

LITERATURE REVIEW

According to Demsa Simbolon (2019) , stunting is a condition that occurs in children due to inadequate nutritional intake during their growth and development period, especially during critical phases. One of the indicators used to measure the prevalence of stunting is the height of a child, which is lower than the standard for their age (Amran, 2023; Gross et al., 1996; Perumal et al., 2018; Taqwin et al., 2020; Tariku et al., 2018; Wang et al., 2009). The concept of stunting prevalence encompasses how often this condition occurs in a specific population or community (Bhutta et al., 2020; Prendergast & Humphrey, 2014; Yalew et al., 2014). Beyond reflecting public health issues, stunting prevalence also serves as an indicator of the well-being and food security of a nation. Factors that can contribute to stunting

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prevalence are diverse, ranging from limited access to nutritious food, infections, to inappropriate feeding practices. Globally, stunting is often associated with low socio-economic conditions (Kamal, 2011; Menon et al., 2000). Children living in impoverished or remote areas tend to have a higher risk of experiencing stunting due to limited access to health and nutrition resources. The impact of stunting prevalence is not only physical but can also affect the cognitive development and learning abilities of children, which, in turn, can influence a nation's productivity and sustainability (De Onis & Branca, 2016; Leroy & Frongillo, 2019; Organization, 2018).

The importance of addressing stunting prevalence encourages governments and international organizations to play an active role in tackling this issue. Programs involving supplementary feeding, nutrition education, and improving access to healthcare services are strategic steps in reducing stunting rates in various countries (Bhutta et al., 2020; Bloem et al., 2013; Organization, 2018). Additionally, creating holistic solutions requires an improvement in the economic status of communities and the distribution of resources as part of a stunting prevention strategy (Bhutta et al., 2020; Organization, 2014, 2018). Collaboration between countries and international organizations is key to creating sustainable solutions to address this issue.

The role of technology and education is crucial in combating stunting prevalence. Technological innovations can enhance efficiency and accuracy in monitoring and evaluating nutrition programs (Illner et al., 2012; Kelly et al., 2021). Mobile applications and online platforms can be utilized to provide nutritional information to the public, assisting pregnant mothers and parents in planning healthy diets. Education also plays a vital role in changing attitudes and behaviors related to nutrition, making communities more aware of the importance of nutrition in child growth (Contento, 2007; Contento et al., 1992; Engle et al., 2000; Lytle, 1994; Organization, 2003). Despite numerous efforts, there are still challenges to be overcome in addressing stunting prevalence. These challenges include limited access to resources, conflicts, and climate change that can impact food availability. Therefore, strong collaboration is needed among governments, non-governmental organizations, the private sector, and civil society to create holistic and sustainable solutions (Harangozó & Zilahy, 2015; Murray et al., 2010; Waddell, 2017). The hope is that with continuous efforts, stunting prevalence can be significantly reduced, providing a better life for future generations.

METHOD

This research adopts a quantitative method as its primary approach. According to Sangadji (2023), quantitative method is a research approach that relies on the use of numbers to collect, analyze, and interpret data. The advantage of this method lies in its ability to provide numerically measurable data, enabling researchers to develop more detailed and objective analyses (S. Sangadji et al., 2022). The main focus of this research is secondary data obtained from the Ministry of Health of the Republic of Indonesia, covering information from the last four years. The use of secondary data provides advantages in terms of time and resource efficiency while ensuring the accuracy and credibility of the information obtained. The Ministry of Health of the

Republic of Indonesia is considered a highly relevant and reliable source for understanding the context of stunting prevalence within the country.

The data analysis process involves the application of descriptive statistical analysis techniques. This approach provides a foundation for understanding the trends in stunting prevalence from 2019 to 2023. Descriptive statistical analysis allows for an in-depth investigation of common characteristics of the data, such as averages, medians, and standard deviations. Thus, this research not only describes stunting prevalence in general but also presents a profound understanding of the variation and distribution of the data. Through the use of quantitative methods, this research provides a solid foundation for developing a deep understanding of public health issues. The secondary data obtained from the Ministry of Health of the Republic of Indonesia allows researchers to detail the trends in stunting prevalence over the past four years. By employing a descriptive statistical analysis approach, this research not only presents raw numbers but also describes the context and distribution of the data, paving the way for a more holistic understanding.

RESULTS AND DISCUSSION

One of the main benefits of knowing the prevalence trends of stunting is the ability to identify regions with high stunting rates. This information serves as a foundation for the government and health organizations to prioritize resource allocation and stunting intervention programs. By understanding the most affected areas, prevention and intervention efforts can be focused to yield more significant impacts. A high prevalence of stunting in a particular region indicates the urgency to set intervention priorities. Understanding the distribution of stunting can assist the government in designing targeted policies and intervention programs. By targeting areas that require special attention, stunting mitigation efforts can be implemented effectively, resulting in a tangible reduction in stunting rates.

Additionally, monitoring the progress of stunting intervention programs is crucial to ensure that the efforts yield the desired outcomes. By knowing the trends in stunting prevalence, we can objectively assess the effectiveness of implemented programs. Are these programs successfully reducing stunting rates, or is there a need for adjustments and improvements? Information on stunting prevalence trends can also serve as a basis for developing more effective intervention strategies. Understanding the factors contributing to high stunting rates, such as nutritional aspects, sanitation, and healthcare accessibility, can guide the development of more holistic and integrated strategies. Based on the results of the descriptive statistical analysis conducted, the prevalence trends of stunting in Maluku Utara province are as follows.

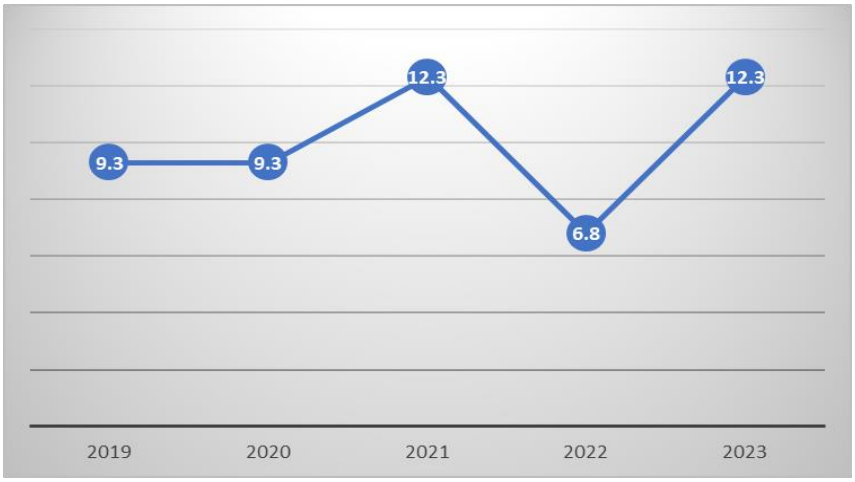

Figure 1. The prevalence trend of stunting in the Maluku Utara Province (2019-2023)
Source. Processed from secondary data of the Indonesian Ministry of Health (2023).

The prevalence data of stunting in the Maluku Utara Province indicate significant fluctuations over the past five years. In 2019 and 2020, the stunting prevalence rate remained relatively stable at 9.3 percent. However, there was a noticeable spike in 2021, with the prevalence increasing to 12.3 percent. This trend then experienced a sharp decline in 2022, with the prevalence rate reaching 6.8 percent, indicating the potential success of intervention efforts. Nevertheless, in 2023, there was a resurgence, with the stunting prevalence rate rising again to 12.3 percent, highlighting the need for sustained efforts in addressing malnutrition issues in this region. The analysis of this data can provide a foundation for relevant parties to design more effective and sustainable intervention programs to tackle the stunting problem in the Maluku Utara Province.

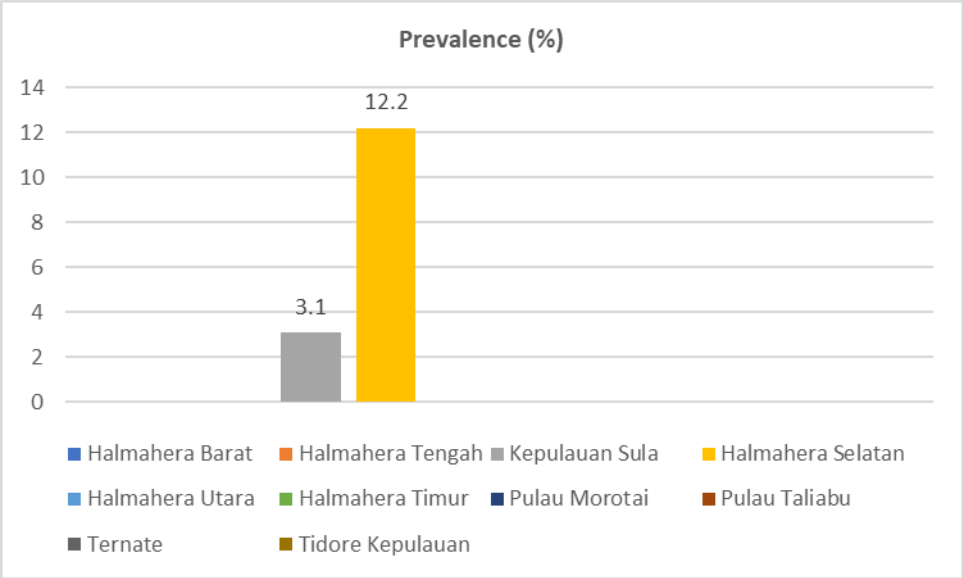

Figure 2 shows the prevalence of stunting in each district/city in the Maluku Utara Province (2019)
Source: Processed from secondary data of the Indonesian Ministry of Health (2023).

Based on the data on the prevalence of stunting in each district/city in the Maluku Utara Province, there is a significant variation in the incidence of stunting. Halmahera Selatan Regency recorded the highest prevalence at 12.2%, indicating a serious issue related to malnutrition among children in that area. On the other hand, Sula Regency has a relatively low prevalence rate of 3.1%, suggesting better nutritional conditions for children. Other districts/cities such as Halmahera Barat, Halmahera Utara, Halmahera Timur, Morotai, Taliabu, Ternate, and Tidore do not have available data on the prevalence of stunting. Further analysis is needed to understand the factors causing stunting and to design appropriate intervention strategies to improve the nutritional status of children in each region.

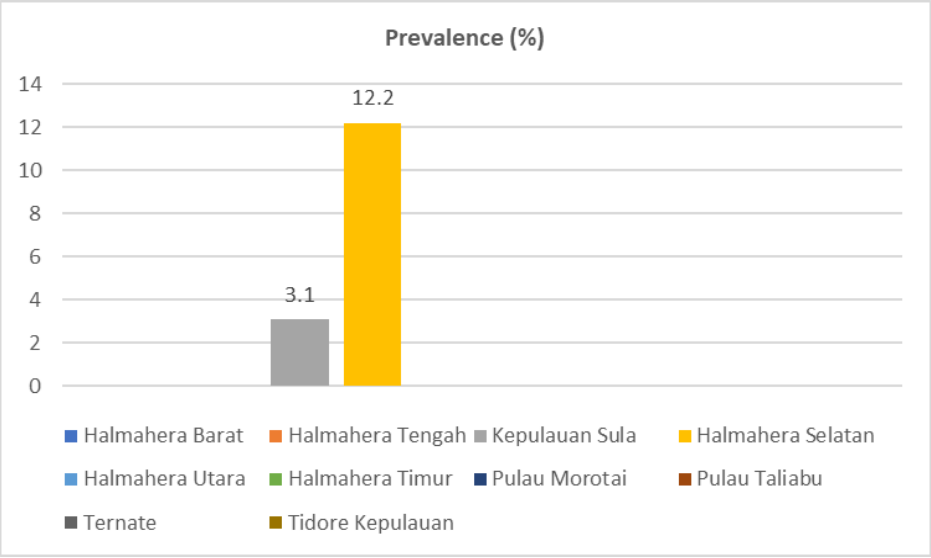

Figure 3. Prevalence of stunting in each regency/city in the Maluku Utara Province (2020)

Source. Processed from secondary data of the Indonesian Ministry of Health (2023)

Based on the data on the prevalence of stunting in 2020 in the Maluku Utara Province, there is significant variation among regencies/cities. Regencies of Halmahera Barat, Halmahera Tengah, Halmahera Utara, Halmahera Timur, Morotai, and Taliabu do not have available data. On the other hand, the Sula recorded a stunting prevalence of 3.1%, indicating a low incidence rate. However, Halmahera Selatan reflects a more serious situation with a prevalence of 12.2%, indicating a high level of stunting in that region. Ternate and Tidore do not have listed data. These differences can depict disparities in well-being and access to nutrition among regencies/cities in the Maluku Utara Province, requiring special attention efforts to address stunting issues, especially in areas with high prevalence.

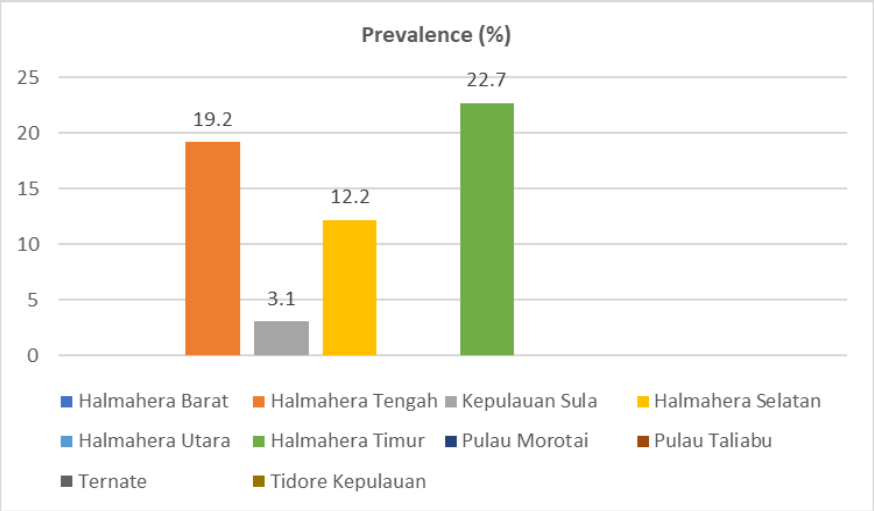

Figure 4 illustrates the prevalence of stunting in each regency/city in the Maluku Utara province (2021)

Source: Processed from secondary data of the Ministry of Health, Republic of Indonesia (2023)

The data on the prevalence of stunting in the Maluku Utara Province in 2021 shows significant variation among regencies/cities. Halmahera Barat, Halmahera Utara, Morotai, Taliabu, and Tidore do not have available data. Halmahera Tengah recorded a stunting prevalence of 19.2%, indicating a relatively high level of malnutrition. In contrast, Sula has a relatively low prevalence of 3.1%, reflecting better nutritional conditions for children. Halmahera Selatan and Halmahera Timur have stunting prevalences of 12.2% and 22.7%, respectively, indicating significant disparities in child nutrition conditions in those regions. Ternate does not have provided data. The analysis of this data indicates the need for special attention to stunting prevention efforts in some areas with high prevalence, while also understanding local factors that may influence the nutritional conditions of children in each regency/city.

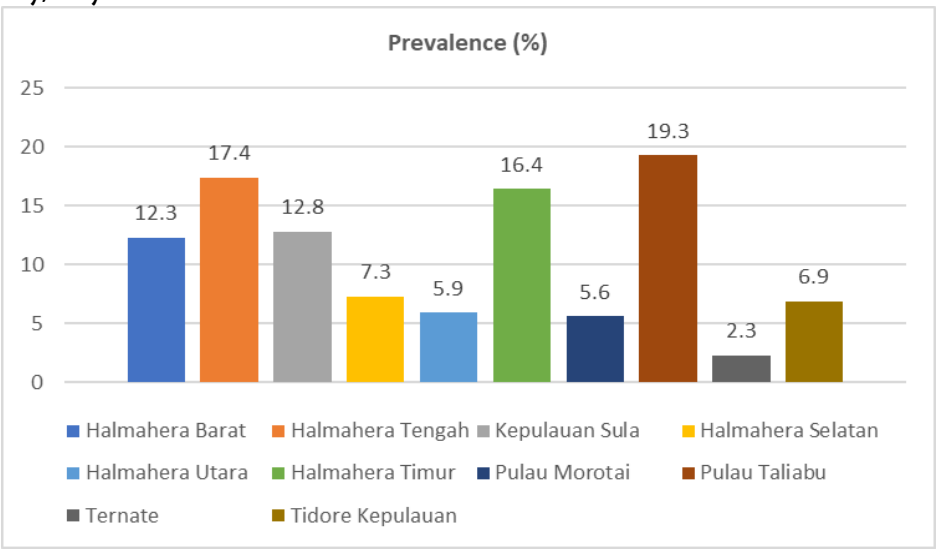

Figure 5 shows the prevalence of stunting in each district/city in the Maluku Utara province (2022)

Source: Processed from secondary data of the Indonesian Ministry of Health (2023)

In 2022, the data on the prevalence of stunting in the districts/cities of the Maluku Utara Province revealed significant variations. Taliabu District had the highest prevalence rate of stunting, reaching 19.3%, indicating a chronic nutritional problem that requires special attention in addressing stunting. Followed by Halmahera Tengah and Halmahera Timur with 17.4% and 16.4% respectively, these figures also indicate serious challenges related to child nutrition in those areas. Conversely, Ternate had the lowest prevalence rate of stunting, at 2.3%, suggesting relatively better child nutrition in the city. Nevertheless, further analysis is needed to understand the factors influencing the differences in stunting prevalence in each district/city to formulate more effective strategies in addressing child nutrition issues in the overall Maluku Utara Province.

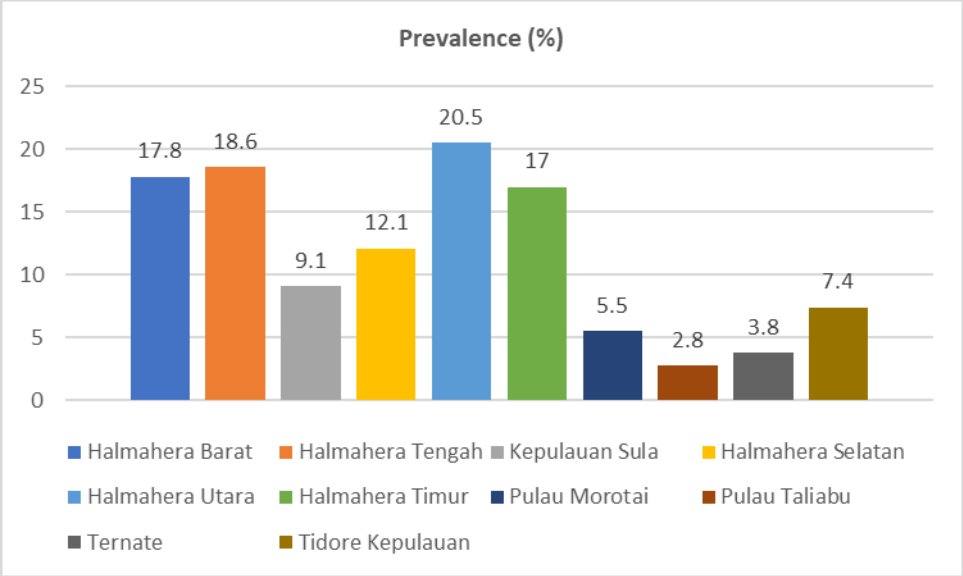

Figure 6. Prevalence of stunting in each district/city in the Maluku Utara Province (2023)

Source. Processed from secondary data of the Indonesian Ministry of Health (2023)

In the year 2023, the data on the prevalence of stunting in the districts/cities of Maluku Utara Province revealed significant variations. Halmahera Utara District recorded the highest prevalence rate at 20.5%, indicating a serious nutritional problem in that region. This was followed by Halmahera Tengah with 18.6% and Halmahera Timur with 17%, indicating similar challenges related to stunting issues. Meanwhile, Morotai had a relatively low prevalence rate, standing at only 5.5%, suggesting better nutritional conditions compared to other districts/cities. Low figures were also observed on Taliabu (2.8%), Ternate (3.8%), and the Sula (9.1%), reflecting better efforts in addressing nutritional issues in children in those areas. Nevertheless, further attention and collective efforts are needed to reduce the prevalence of stunting across all districts/cities, with a specific focus on areas with high prevalence rates.

CONCLUSION

The importance of understanding the trends in stunting prevalence is not only informative but also crucial in planning accurate and targeted interventions. By considering the characteristics and specific needs of each region, intervention programs can be designed to enhance their effectiveness and ensure the sustainability of stunting mitigation efforts in the long term. The analysis of stunting prevalence in the Maluku Utara Province from 2019 to 2023 revealed significant fluctuations over the five years. Despite a decrease in 2022, the prevalence rate of stunting in 2023 experienced a resurgence, especially in Halmahera Utara District, reaching 20.5%. District/city-level analyses highlight disparities, with high prevalence rates in Halmahera Selatan and Halmahera Timur, while the Sula have a relatively low rate. Therefore, continuous and focused efforts are required in addressing stunting in the Maluku Utara Province, emphasizing high-prevalence areas, and expanding understanding of the factors causing stunting to design more targeted and holistic intervention strategies.

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