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STATISTICAL ANALYSIS OF STUNTING IN CENTRAL JAVA PROVINCE IN 2024

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Abstract

Stunting is a public health issue that remains a serious challenge in Indonesia because it affects physical growth, cognitive development, and the quality of future human resources. This condition is caused by chronic malnutrition that occurs from pregnancy through early childhood. This study aims to analyze the distribution and trends in stunting prevalence among toddlers in Central Java Province in 2024 based on data from the Indonesian Nutrition Status Survey (SSGI). The research method used is a quantitative approach utilizing secondary data from the 2024 SSGI, analyzed through descriptive statistics, variance analysis, and trend analysis. The results of the study indicate that the prevalence of stunting in Central Java decreased from 20.7% in 2023 to 17.1% in 2024. Statistical analysis shows an average prevalence of stunting across districts/cities of 18.36% with a standard deviation of 4.01%, indicating disparities between regions. Some regions, such as Temanggung, Grobogan, and Boyolali, still have relatively high stunting rates, while urban areas like the city of Semarang and Demak Regency show better results. The 11.30% decrease in prevalence indicates significant progress in efforts to address stunting. However, contributing factors such as parenting practices, sanitation, access to nutritious food, and socioeconomic conditions still influence prevalence differences across regions. Therefore, stunting must be addressed comprehensively through specific and sensitive nutrition interventions involving various sectors, particularly during the first 1,000 days of life (HPK), to support optimal child growth and improve the quality of human resources in the future.

Keywords: Stunting, Nutritional Status, The Indonesian Nutrition Status Survey, Central Java, Public Health.

1. INTRODUCTION

Stunting is a significant public health challenge in Indonesia, driven by chronic nutritional deficiencies, particularly during pregnancy and early childhood. This condition leads to impaired growth and physical and cognitive development in young children. Given its far-reaching impact on reduced immunity and future physical and mental health, stunting is a critical issue that directly threatens the quality of human resources in Indonesia (Yuwanti et al., 2021) Chronic malnutrition, or stunting, among toddlers remains a significant structural challenge to human capital development in Central Java Province in 2024.

Stunting, characterized by a height-for-age (HFA) Z-score of less than minus two standard deviations, is not merely a physical condition but an indicator of growth failure that leads to reduced cognitive function and long-term productivity. Based on the 2024 Indonesian Nutrition Status Survey (SSGI) report released by the Ministry of Health, the national

prevalence of stunting has decreased significantly from 2023 to 2024. This positive trend is also strongly reflected in Central Java Province, which recorded a decrease in prevalence from 2023 to 2024. This study aims to describe the distribution of stunting cases among toddlers in Central Java Province along with its contributing factors. To achieve this objective, the study employs a quantitative analysis of data from the Indonesian Nutrition Status Survey (SSGI).

Stunting is caused by various factors, both direct and indirect. Direct causes include inadequate nutritional intake and infectious diseases. Indirect causes include household food availability, parenting practices, and health services. The impacts of stunting can be divided into short-term and long-term effects. Short-term impacts include increased incidence of illness and mortality, suboptimal cognitive, motor, and verbal development in children, and increased healthcare costs. Long-term impacts include suboptimal body stature in adulthood (shorter than average), increased risk of obesity and other diseases, impaired reproductive health, suboptimal learning capacity and performance during the school years, and suboptimal productivity and work capacity.

2. MATERIALS AND METHODS

2.1. Field of Study

This study covers the administrative region of Central Java Province, comprising the regencies and cities recorded in the 2024 SSGI. The study area was divided based on regional typology to compare risk characteristics between rural and urban areas (Nuryanto et al. 2022). Locations with high prevalence of extremes, as indicated by secondary data, were the focus of the comparative analysis.

2.2. Procedures

The data used are secondary data from the nutritional status prevalence tables (TB/U) for under-five children in Central Java Province, derived from the 2024 SSGI. The procedure began with the tabulation of prevalence data on severely stunted, stunted, and normal children for each district/city. Nutritional status was determined based on the standard deviation from the WHO reference population median. This process included data cleaning to ensure statistical validity prior to modeling (Yuwanti et al., 2021)

Table 1. Stunting Data by Province for 2023 – 2024

Province	2023	2024
West Nusa Tenggara	37.9	37.0
Southwest Papua	31.0	30.5
Aceh	29.4	28.6
Central Sulawesi	27.2	26.1
Southeast Sulawesi	30.0	26.1
Papua	28.6	24.7
West Papua	28.0	24.6
Gorontalo	26.9	23.8
South Sulawesi	27.4	23.3
North Maluku	23.7	23.2
South Kalimantan	24.7	22.9
East Kalimantan	22.9	22.2
Central Kalimantan	23.5	22.1
Banten	24.0	21.1
North Sulawesi	21.3	20.8
Bangka Belitung	20.6	20.1
Bengkulu	20.2	18.8
Yogyakarta	18.0	17.4

Province	2023	2024
Jakarta Capital Region	17.6	17.3
Central Java	20.7	17.1
West Java	21.7	15.9
South Sumatra	20.3	15.9
Riau Islands	16.8	15.0
East Java	17.7	14.7

Source: Kemkes 2024, https://www.badankebijakan.kemkes.go.id/ssgi-2024-prevalensi-stunting-nasional-turun-menjadi-198/

Based on the data in the graph regarding the 24 provinces with a decline in stunting prevalence, it is evident that there is a national downward trend in stunting rates from 2023 to 2024 across all the provinces shown. Results from the 2024 Indonesian Nutrition Status Survey conducted by the Ministry of Health in Jakarta. The results show that the prevalence of stunting in Indonesia decreased from 21.5% in 2023 to 19.8%. Of the 24 provinces in Indonesia, Central Java was one of the regions that recorded significant progress with a 3.6-point decrease in stunting rates, from 20.7% in 2023 to 17.1% in 2024.

The largest reduction in stunting in this data was achieved by West Java, which succeeded in reducing its prevalence by more than 5%—specifically by 5.8 percentage points—making it the only region with a reduction exceeding that threshold. Meanwhile, the majority of other provinces saw reductions of less than 5%, with East Nusa Tenggara recording the highest prevalence but a relatively small decrease compared to other provinces.

3. RESULTS & DISCUSSION

The 2024 Indonesian Nutrition Status Survey (SSGI), conducted by the Ministry of Health in Jakarta, shows a positive trend, with the national prevalence of stunting declining from 21.5% in 2023 to 19.8% in 2024. Specifically, the data shows that 24 provinces succeeded in reducing this prevalence rate, with West Java recording the most significant decrease of 5.8 percentage points. Central Java Province itself demonstrated excellent performance with a decrease of 3.6 percentage points, moving from 20.7% in 2023 to 17.1% in 2024.

This phenomenon reflects the success of various nutrition intervention programs at the provincial level, where most regions recorded a stunting rate change of less than 5% (indicated by the gray bars), while only West Java exceeded the 5% threshold (indicated by the red bars). Nevertheless, significant challenges remain in some regions, such as East Nusa Tenggara, which had the highest prevalence of 37.0% in 2024, despite a slight decrease of 0.9 percentage points from the previous year. This highlights the need to accelerate programs in areas where the burden of cases remains very high.

Overall, Central Java's rate of 17.1% places it among the provinces with a lower prevalence than the national average (19.8%). This position indicates that the stunting mitigation strategy in Central Java is effective, but consistency is essential to achieve further reductions in the future. Strengthening synergy between the central and local governments is key to sustaining this downward trend across all regions of Indonesia

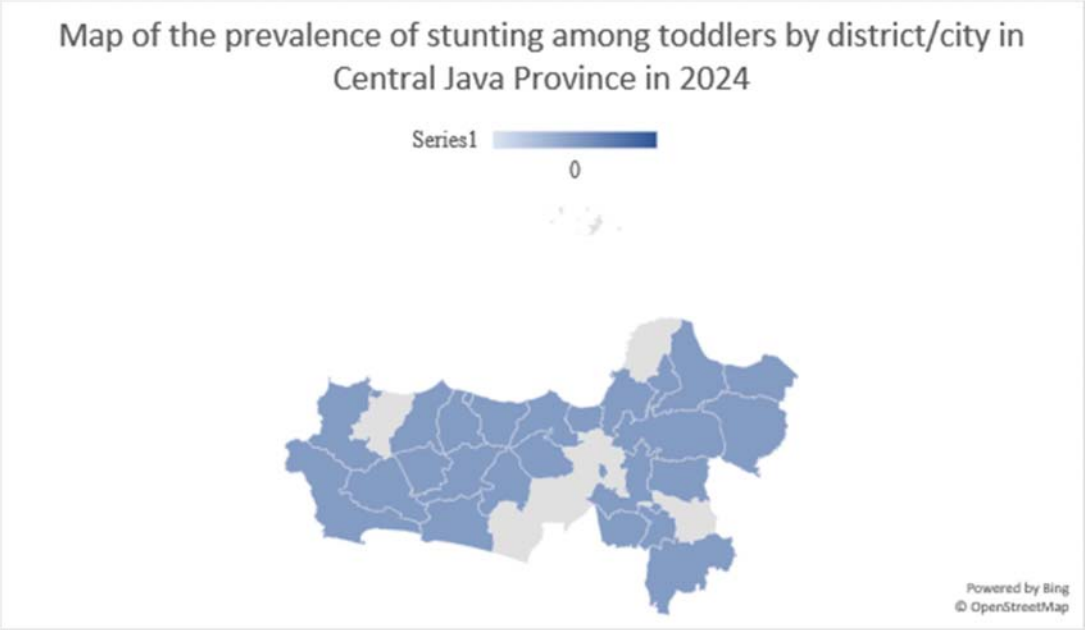

Figure 1. Map of Stunting Case Distribution in Central Java, 2024

Based on the 2024 prevalence map of stunting among toddlers, the Central Java region is generally divided into two risk classifications: the Low Zone (0%–19.9%), marked in green, and the Medium Zone (20%–29%), marked in yellow. The majority of regencies and cities in Central Java have successfully entered the green zone, indicating that the prevalence of stunting in most areas is already below the 20% threshold. This serves as an indicator of the success of health program outreach extending to even the most remote regions.

However, there are pockets of areas that remain in the yellow zone or medium category, such as Brebes Regency (22.1%), Purbalingga (22.3%), Banjarnegara (20.6%), Wonosobo (23.9%), and Temanggung (27.3%). In the east, Grobogan Regency (25.6%) and Blora (21.7%) also still require special attention to reduce prevalence rates so they can move into the green zone. This distribution indicates that the central and northwestern regions of Central Java face more complex geographical or socio-economic challenges in addressing stunting.

The best spatial outcomes are evident in the eastern northern coastal region and several major cities that are entirely dark green, such as the cities of Semarang and Salatiga, and Demak Regency. The success of these extensive green zones reflects the effectiveness of routine monitoring of the nutritional status of infants and toddlers conducted from 2018 to 2024. Moving forward, intervention efforts must be specifically targeted at regencies in the yellow zone to ensure no region is left behind in achieving national nutrition targets.

Table 2. Nutritional Status Prevalence (TB/U) Among Toddlers in Central Java

Nutritional Status by Height and Weight							
	Severely stunting		**Stunting**		**Normal**		
Kabupaten / kota	%	98% CL	%	98% CL	%	98%CL	**N**
Cilacap	2.2	1,3 – 3.9	13.4	10.6-16.8	84.4	80.4-87.7	805
Banyumas	2.7	1,5 – 5.0	16.9	14.0-20.3	80.4	77.1-83.3	810
Purbalingga	2.8	1,5 – 5.2	19.5	16.4-23.1	77.6	73.7-81.1	743
Banjarnegara	2.9	1,7 – 4.8	17.7	14.6-21.2	79.4	75.6-82.7	729
Kebumen	2.2	1,3 – 3.5	15.8	12.5-19.9	82.0	78.0-85.4	751
Purworejo	2.4	1,4 – 4.1	12.5	10.2-15.2	85.1	82.2-87.6	687
Boyolali	3.6	2,3 – 5.8	20.9	16.1-26.5	75.5	69.4-80.7	750
Klaten	2.8	1,9 – 4.2	18.0	15.1-21.3	79.2	75.8-82.2	766
Sukoharjo	2.2	1,0 – 4.4	14.6	11.7-18.0	83.3	79.8-86.3	690
Wonogiri	2.4	1,4 – 3.9	12.7	10.3-15.6	84.9	81.7-87.7	694
Sragen	2.0	1,2 – 3.4	13.8	10.7-17.5	84.2	80.3-87.5	717
Grobogan	4.8	3.4 – 6.8	20.8	17.6-24. 4	74.4	70.3-78.0	769
Blora	3.1	1.9 – 5.0	18.6	15.0-22. 8	78.3	73.4-82.5	583
Rembang	2.7	1.8 – 4.3	13.1	10.2- 16.7	84.1	79.9-87.6	644
Pati	2.4	1.5 – 3.7	14.1	11.4-17.3	83.5	80.0-86.5	748
Demak	1.1	0.4 – 3.1	8.9	6.3-12.4	90.0	86.5-92.8	675
Temanggung	5.3	3.5 – 8.0	22.0	18.1-26. 5	72.7	67.6-77.2	705
Kendal	3.2	1.9 – 5.2	16.0	13.0-19. 6	80.8	76.6-84.5	761
Batang	3.9	2.4 – 6.4	16.8	13.4-20. 9	79.3	75.3-82.8	688
Pekalongan	3.0	1.7 – 5.2	16.5	13.5-19.9	80.5	76.7-83.8	682
Pemalang	3.7	2.2 – 6.1	15.4	12.2-19.3	80.9	76.9-84.3	750
Tegal	3.4	2.2 – 5.2	12.5	9.8-15.9	84.1	80.4-87.2	698
Brebes	3.0	1.9 – 4.8	20.1	16.3-24. 7	76.9	72.7-80.6	671
Magelang City	2.8	1.6 – 4.7	12.5	9.9-15.6	84.8	81.9-87.2	513
Surakarta City	4.1	2.4 – 6.7	12.1	9.7-15.0	83.9	80.3-86.9	586
Salatiga City	1.9	1.0 – 3.6	12.1	8.9-16.3	86.0	81.9-89.3	485
Semarang City	0.6	0.2 – 1.5	10.6	8.1-13.6	88.8	85.8-91.3	740
Pekalongan City	2.4	1.5 – 3.9	16.9	14.3-19.8	80.7	77.7-83.4	651
Tegal City	2.7	1.6 – 4.3	15.3	12.4-18.8	82.0	78.4-85.1	631

The data from the nutritional status prevalence table (TB/U) provides a more detailed picture of the condition of infants and toddlers, showing that Demak Regency has the highest percentage of children with normal nutrition 90.0% and the lowest combined stunting rate among other regions. Data from the nutritional status prevalence table (TB/U) provides a more specific picture of the condition of infants and toddlers, showing that Demak Regency has the highest percentage of children with normal nutrition—reaching 90.0%—and the lowest combined stunting rate among other regions. In urban areas, the City of Semarang demonstrates excellent performance with the lowest prevalence of severe stunting—just 0.6%—and a normal nutritional status rate of 88.8%. This indicates that access to health services and nutrition education in urban areas tends to be more optimal compared to rural districts. Conversely, Temanggung Regency is the area with the highest level of nutritional vulnerability, recording a rate of severe stunting at 5.3% and stunting at 22.0%. Other areas with high stunting rates include Boyolali Regency (20.9%), Grobogan (20.8%), and Brebes (20.1%). The high rates in

these areas align with their "yellow zone" status on the spatial map, confirming the presence of chronic nutritional issues that require more intensive cross-sectoral intervention.

Overall, this table highlights significant variations in nutritional status across regions in Central Java. Although the provincial average has improved, the disparity between Demak Regency (90% normal) and Temanggung Regency (72.7% normal) indicates that local factors such as child-rearing practices, sanitation, and the availability of nutritious food remain highly influential. The use of confidence intervals (95% CI) in the table also provides a strong foundation for local governments to develop more precise and targeted policy planning based on actual conditions on the ground.

Based on the 2024 stunting prevalence data for Central Java, quantitative methods can be used to conduct an analysis through three basic approaches: descriptive statistics (mean), variance (inequality), and trend analysis.

1. Descriptive Statistics: Average Prevalence of Stunting

To determine the average prevalence of stunting (stunting + severe stunting) across all districts and cities in Central Java, the arithmetic mean formula is used

$$\sum Y_i = 532.4$$
$$n = 29$$
$$\bar{Y} = \frac{532.4}{29}$$
$$\{Y\} = 18.36\%$$

where Y_i is the total prevalence (severely stunted + stunted) in each regency/city, and n is the number of regencies/cities in Central Java in 2024.

2. Variance (Inter-regional Inequality)

To measure the level of inequality or the distribution of stunting data across regions, the standard deviation (σ) formula is used:

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n}(Y_i - \bar{Y})^2}{n-1}}$$

$$\sum (Y_i - \bar{Y})^2 = 450.30$$
$$s^2 = \frac{450.30}{28}$$
$$s^2 = 16.08$$
$$\sigma = \sqrt{16.08}$$
$$\sigma = 4.01\backslash\%$$

Variance = 16.08

Standard deviation = 4.01%

This means that the deviation between regions is approximately ±4% from the average. This indicates that disparities between districts/cities are quite noticeable, particularly in areas with high figures such as Temanggung (27.3%), Grobogan (25.6%), and Boyolali (24.5%), and the lowest figures in Demak (10.0%) and Semarang City (11.2%)

3. Trend Analysis

$$\Delta P = \left(\frac{P_{2023} - P_{2024}}{P_{2023}}\right) \times 100\backslash\%$$
$$P_{2023} = 20{,}7\%$$
$$P_{2024} = 18{,}36\%$$

$$\Delta P = \left(\frac{20{,}7 - 18{,}36}{20{,}7}\right) \times 100\backslash\%$$
$$\Delta P = \left(\frac{2{,}34}{20{,}7}\right) \times 100\backslash\%$$
$$\Delta P = 0{,}1130 \times 100\backslash\%$$
$$\Delta P = 11{,}30\backslash\%$$

The figure of 11.30% indicates that, compared to 2023, the stunting rate has been reduced by approximately 11% from the previous total number of cases. The prevalence has decreased by 2.34 percentage points; for every 100 infants, approximately 2–3 fewer children are affected by stunting compared to the previous year. From an epidemiological perspective, a decrease of more than 10% in a single year constitutes a significant improvement.

Stunting in young children is a condition of growth failure caused by chronic malnutrition, influenced by the interaction of various complex factors. Researchers emphasize that the primary causes involve ineffective parenting practices, poor-quality complementary feeding practices, and an unbalanced nutritional intake for mothers from pregnancy through the postpartum period (Adriani & Wirjatmadi, 2022). Additionally, environmental factors such as limited access to clean water, poor sanitation, and a history of recurrent infections in infants further exacerbate the risk of stunted growth(Wulandari & Kurniawati, 2023). Socioeconomic factors, such as low parental education levels and unstable family income, have also been identified as significant predictors that limit families' ability to provide adequate nutrition(Aridiyah et al., 2021).

The effects of stunting are not limited to physical impairments such as below-average height, but also include serious long-term consequences for a child's quality of life. In the short term, children with stunting are more susceptible to illness (morbidity) due to a weakened immune system, which triggers a cycle of recurrent infections and worsening nutritional status(Beal et al., 2024). In the long term, this condition impacts cognitive development, as children tend to have lower IQ scores, difficulty concentrating, and challenges with academic performance in school. These cognitive impairments have the potential to hinder a child's ability to achieve optimal physical and mental development, ultimately limiting their competitiveness and productivity in adulthood.

The effects of stunting risk extending into adulthood, increasing vulnerability to noncommunicable diseases (NCDs) such as type 2 diabetes, hypertension, central obesity, and coronary heart disease(Prendergast & Humphrey, 2024). Beyond health issues, stunting is associated with reduced economic opportunities due to low productivity and income levels during working years, which risks perpetuating the intergenerational cycle of poverty.

Therefore, addressing stunting requires a comprehensive approach starting from the preconception period, throughout pregnancy, and up to the first two years of a child's life (the golden period), to ensure optimal growth and prevent permanent consequences in the future(Ministry of Health of the Republic of Indonesia, 2024)

Stunting is influenced not only by health issues in mothers and infants but also by various other conditions that indirectly affect health. Therefore, improvement efforts must include measures to prevent and reduce both direct factors (specific nutrition interventions) and indirect factors (sensitive nutrition interventions). Specific nutritional interventions are generally carried out in the health sector but contribute only 30%, while 70% comes from sensitive nutritional interventions involving various sectors, such as food security, access to clean water and sanitation, poverty alleviation, and parental education(Directorate of Family Education Development, 2019). Specific nutrition interventions for stunted infants and toddlers are focused on the 1,000 Days of Life (DOL) period, which includes pregnant women, mothers with children aged 0 – 12 months, and mothers with children aged 13–24 months, as the most effective prevention of stunting occurs during the 1,000 DOL. The 1,000-day period

encompasses 280 days during pregnancy and the first 720 days after the baby is born. This period has been scientifically proven to be critical for determining the quality of life(Directorate of Family Education Development, 2019).

Stunting prevention and control efforts are divided into two categories, namely:

1. Specific Nutrition Interventions

Specific nutritional interventions are efforts to directly prevent and reduce nutritional problems. These activities are generally carried out by the health sector. Specific Nutritional Program interventions are carried out by the Ministry of Health (Kemenkes) through Community Health Centers (Puskesmas) and Integrated Service Posts (Posyandu) via the First 1,000 Days of Life (HPK) Movement. According to the National Team for the Acceleration of Poverty Alleviation (2018), specific nutrition interventions include several priority targets and key targets(Kiik & Muhammad, 2020)

Addressing stunting is a key effort in improving public health. This effort is carried out through two main approaches: specific nutrition interventions and sensitive nutrition interventions. Specific nutrition interventions are actions directly targeted at vulnerable groups, particularly pregnant women, breastfeeding mothers, infants, and children under two years of age. This program aims to improve nutritional status and prevent growth disorders in children from the prenatal period through early childhood(Kiik & Muhammad, 2020)

For pregnant women, specific nutritional interventions are implemented through several key activities. The program includes the provision of supplementary food (PMT), iron-folic acid tablet supplementation (TTD), and routine prenatal care (ANC). In addition, pregnant women are also provided with calcium supplementation to support bone health, and disease prevention measures—such as malaria prevention through treatment and the use of insecticide-treated bed nets—are implemented. HIV prevention is also part of the efforts to safeguard the health of both the mother and the fetus(Kiik & Muhammad, 2020)

Furthermore, specific nutrition interventions also focus on breastfeeding mothers and children aged 0–23 months, as this period is a critical time for children's growth and development. Efforts include promoting and counseling on breastfeeding to ensure mothers provide optimal breast milk, as well as promoting appropriate infant and child feeding (PMBA). Additionally, management of malnutrition is implemented, including the provision of recovery food supplements for underweight children, as well as routine monitoring and promotion of growth to ensure children's development proceeds well(Kiik & Muhammad, 2020)

Other programs supporting child health include the treatment of diarrhea through zinc supplementation, the administration of vitamin A capsules, and the provision of taburia supplements to improve micronutrient intake. In addition, children receive a full course of immunizations and health care through the Integrated Management of Sick Toddlers (MTBS). Other supplementary efforts include the use of iodized salt, treatment for parasitic infections, consumption of nutrient-fortified foods, and the use of insecticide-treated bed nets to prevent diseases that can hinder children's growth(Kiik & Muhammad, 2020)

In addition to pregnant women and children, adolescent girls and women of childbearing age are also key targets in stunting prevention. The intervention involves providing iron and folic acid supplements in tablet form. This supplementation aims to prevent anemia and ensure good health prior to pregnancy, thereby minimizing the risk of nutritional problems for both mothers and infants(Kiik & Muhammad, 2020)

2. Nutrition-Sensitive Interventions

Nutrition-sensitive interventions are efforts to prevent and reduce nutrition-related problems indirectly. These activities are generally carried out by sectors outside the health sector. These interventions encompass 12 key activities: In addition to specific nutrition interventions, there are also nutrition-sensitive interventions that play an indirect role in

preventing stunting and generally involve sectors outside of health. These interventions include providing access to clean water and sanitation, food fortification, improving access to health services and family planning, as well as providing health insurance and maternity coverage. Additionally, parenting education for parents, the provision of early childhood education (PAUD), community nutrition education, reproductive health education for adolescents, the provision of social assistance for poor families, and the sustainable improvement of community food security and nutrition are also implemented (Kiik & Muhammad, 2020).

Efforts to provide and improve access to clean water are a key strategy in preventing stunting. This program is implemented through the Community-Based Water Supply and Sanitation Program (PAMSIMAS), which involves the central government, local governments, and community participation. The program aims to improve clean and healthy living practices, expand community access to sustainable drinking water and sanitation, strengthen the capacity of local institutions in managing drinking water and sanitation services, and enhance the sustainability of community-based drinking water infrastructure development. Water used as a source of drinking water should ideally meet physical requirements such as being clear, colorless, odorless, and tasteless. Additionally, drinking water management at the household level is carried out through various methods such as sedimentation, filtration, chlorination, coagulation, and disinfection, as well as the safe storage of water in sealed containers to maintain its quality (Kiik & Muhammad, 2020).

Addition to access to clean water, the provision of adequate sanitation is also a key intervention in the prevention of stunting. This program is implemented through the Community-Led Total Sanitation (CLTS) policy, carried out by the Ministry of Health in collaboration with the Ministry of Public Works and People's Housing. The CLTS approach focuses on changing community behavior through five main pillars: stopping open defecation, handwashing with soap, managing household drinking water and food, managing household waste, and managing household liquid waste. The implementation of these five pillars aims to break the chain of disease transmission originating from sources of contamination such as feces, waste, and sewage (Kiik & Muhammad, 2020).

Other interventions aimed at preventing stunting include food fortification, improving access to health care and family planning services, and providing national health insurance through the National Health Insurance (JKN) program for the poor and vulnerable. In addition, the government also provides the Maternity Insurance (Jampersal) program, which is intended for pregnant women from low-income families who are not yet enrolled in the JKN program. This program aims to ensure that pregnant women receive adequate health services throughout their pregnancy until delivery (Kiik & Muhammad, 2020).

Efforts to prevent stunting are also carried out through improved education and community empowerment. These activities include parenting education for parents, the provision of Early Childhood Education (PAUD) services, and community nutrition education conducted through community health centers (puskesmas) and integrated health posts (posyandu). Community nutrition improvement programs include enhancing nutrition education, addressing protein-energy malnutrition, reducing the prevalence of anemia, addressing micronutrient deficiencies such as iodine, iron, zinc, and vitamin A, as well as strengthening the nutrition surveillance system and empowering communities in efforts to improve family nutrition (Kiik & Muhammad, 2020).

In addition, the government also provides reproductive health and nutrition education to adolescents through the Adolescent Health Care Program (PKPR). This program aims to improve adolescents' knowledge and skills in maintaining reproductive health and adopting healthy lifestyle behaviors. On the other hand, support for poor families is provided through various social protection programs such as the Family Hope Program (PKH) and food subsidies,

which aim to improve families' access to basic necessities and support the nutritional needs of pregnant women, breastfeeding mothers, and infants (Kiik & Muhammad, 2020).

Overall, these various programs are part of the government's integrated strategy to improve food security and nutrition among the population. This approach integrates interventions in the areas of health, sanitation, education, and social protection to reduce the prevalence of stunting and improve public health in a sustainable manner (Kiik & Muhammad, 2020)

4. THE MEANING AND PHILOSOPHY OF BATI

1. Blooming Flowers
   The flowers symbolize the children of Jember as the nation's future generation. A bud that blossoms into a full flower represents the hope that every child can grow up healthy, intelligent, and strong. The repeated flowers reflect the figure of 19.8%, serving as a reminder that there are still children who need our collective attention so they can "bloom perfectly."
2. Vines and Curves
   The flowing curved lines symbolize the continuous process of children's growth and development. The vines also reflect the interconnected roles of families, healthcare workers, and the community in supporting children's growth and development.
3. Diagonal Green Line
   The bold green line stretching diagonally symbolizes the number "1" in 19.8%. his number signifies: 1. One goal: reducing the stunting rate. 2. One commitment: all segments of society working together. One initial step toward greater change.
4. Repeating Pattern
   The regular pattern highlights the importance of program consistency: nutrition education, provision of nutritious food, good sanitation, and support for mothers and children. The regularity of the motif serves as a symbol of structured and sustained collaboration.

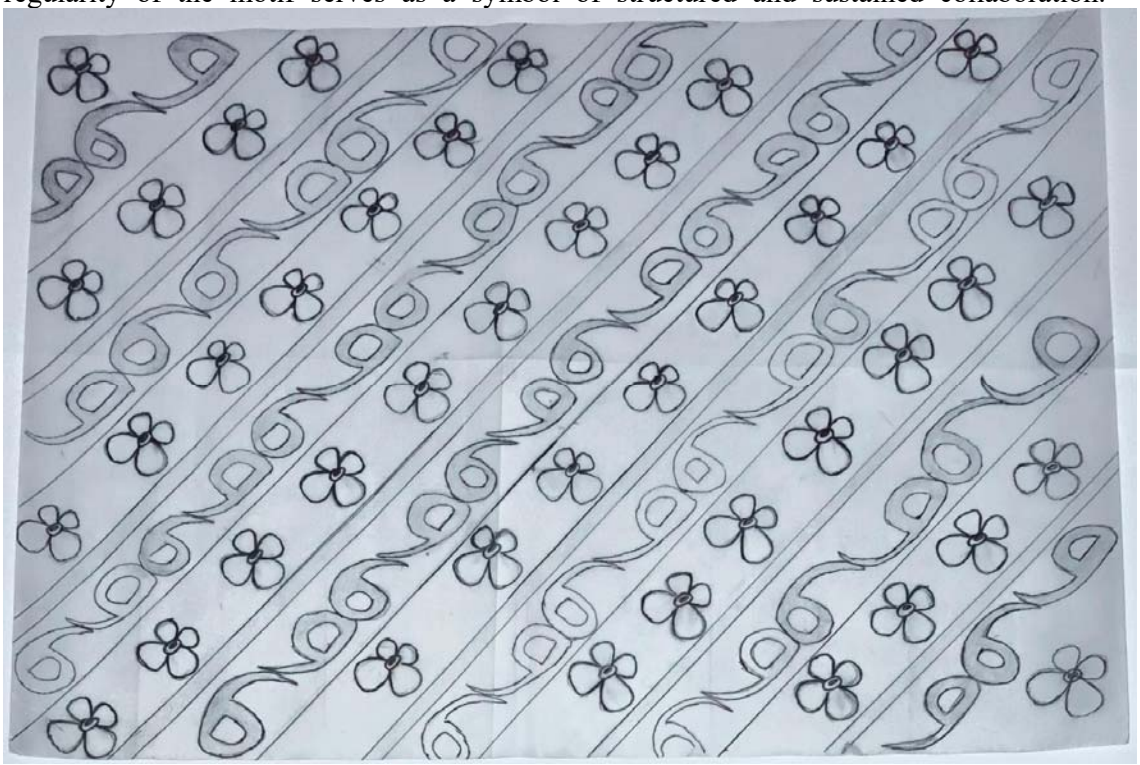

Figure 2. Batik Motif

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