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Determinants of Stunting Incidence in Sukarame Village Tasikmalaya District Jawa Barat Province Indonesia

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ABSTRACT

Background: Stunting is a disorder of children's growth and development due to chronic malnutrition and recurrent infections, which is characterized by their length or height being below standard. The prevalence of stunting in Indonesia continues to decline from 2018-2022, but the prevalence is still above the WHO prevalence. stunting is still one of the health problems in Indonesia. The incidence of stunting in toddlers is related to various factors such as sanitation and clean water, worm diseases, immunization status, smoking behavior and Chronic Energy Deficiency (CHD) in pregnant women.
Purpose: The research aims to determine the distribution of stunting in the Sukarame District, Tasikmalaya Regency, West Java Province in 2024.
Methods: This study is an analytical descriptive research. The subjects targeted in this study are mothers who have stunted toddlers in February 2024, the inclusion criteria in this study are respondents who are declared stunted and willing to be interviewed. There were 341 stunting incidents in Sukarame District.
Results: Based on the results of the study, there are several determinants of stunting in Sukarame District, namely access to healthy latrines has only reached (77.7%), there are still (12.6%) people who do not have access to proper drinking water, there are (7%) mothers of stunted toddlers who experience KEK during pregnancy and only (30%) families of children under five who have BPJS/JKN.
Conclusion: Based on research that has been conducted in Sukarame Subdistrict, Tasikmalaya Regency, there are four main factors that influence the incidence of stunting in children under five years old, namely: 1. Community access to healthy latrines, 2. Community access to proper drinking water 3. Chronic Energy Deficiency (CHD) in pregnant women, 4. BPJS National Health Insurance coverage.

Keywords : *Determinant Factors; Stunting; Tasikmalaya; Toddlers*

INTRODUCTION

According to the World Health Organization (WHO), Indonesia is the third country with the highest prevalence of drowning in the Southeast Asia region ata *World Health Organization* (WHO) (World Bank, 2023). Based on data from the Nutrition Status Monitoring (PSG) in Indonesia during 2015-2017, stunting with a prevalence of 29.6% is the highest rate compared to other nutritional problems (undernutrition, thinness, and fatness) (Kemenkes RI, 2018). The results of the Survey on the Nutritional Status of Indonesian Under-five Children

(SSGBI) in 2019 showed that the prevalence of stunting was 27.67%, down from 30.8% in 2018. However, this figure is still greater than the WHO target of 20% (Kemenkes RI, 2020). The government's commitment stated in the policy can be the basis and direction of policy in designing programs and reducing stunting for stunting prevention.

Then based on the results of the Indonesian Nutrition Status Survey (SSGI) in 2021, there was a decrease in the prevalence of stunting to 24.4%. Then the latest data based on the results of the SSGI in 2022 there was another decrease in the prevalence of stunting to 21.6% (Kemenkes RI, 2022). However, this figure is still greater than the WHO target of 20% (Kemenkes, 2018). The government's commitment stated in the policy can be the basis and direction of policy in designing programs and reducing stunting for stunting prevention. This is contained in the AIMING HIFH Indonesia Ambition to Reduce Stunting, including interventions in diet, parenting, and sanitation. The program unites all existing efforts with the Gerakan Masyarakat Hidup Sehat (Germas) and the revitalization of posyandu in rural areas. At the same time, it ensures public access to proper sanitation and clean water facilities, so that by 2022 it has improved access At the same time, it ensures public access to proper sanitation and clean water facilities, so that by 2022 it has improved access to decent water to 90.7% and access to sanitation to 80.2% (Portal Informasi Indonesia, 2022).

Based on the results of the Basic Health Research (Riskesdas) in 2018, many provinces have a high prevalence of stunting, one of which is West Java Province, which has a stunting prevalence of 29.08% (Kemenkes RI, 2018). Based on the results of SSGI in 2021, the prevalence of stunting in West Java Province was 24.5%. Then experienced a significant decrease to 20.2% in 2022 (Kemenkes RI, 2022). Tasikmalaya Regency is a district that still has a higher prevalence of stunting than the average of West Java Province.

During the last 5 years from 2017-2021, the prevalence of stunting in Tasikmalaya Regency showed fluctuating data. In 2017 Tasikmalaya Regency ranked third with the highest stunting prevalence in West Java province at 15.0% (Dinkes Jabar, 2017). Based on the regional health report of Tasikmalaya Regency, the prevalence of stunting in 2020 was 17.2%. The results of SSGI in 2021, Tasikmalaya Regency ranks in the top 10 of stunting prevalence in West Java Province at 24.4%. Then it increased by 2.8% to 27.2% in 2022 and ranked 4th in the prevalence of stunting out of 27 districts/cities in West Java Province (Pemkab Tasikmalaya, 2022). There are 21 sub-districts that are special locations (locus) of the Tasikmalaya Regency stunting intervention convergence in 2023 (Keputusan Bupati Tasikmalaya, 2022).

Sukarame sub-district is one of the sub-districts that is the locus of stunting intervention. The prevalence of stunting in Sukarame sub-district was 22.89% in 2020 and 18.60% in 2021. Then it increased to 20.16% in 2022. The Sukarame sub-district area consists of 6 village governments, namely Sukarapih Village, Sukamenak Village, Sukarame Village, Sukakarsa Village, Wargakerta Village, and Padasuka Village (Badan Pusat Statistik, 2014). There are 3 villages that are included in the stunting locus, namely Sukarame Village, Sukamenak Village, and Padasuka Village (Keputusan Bupati Tasikmalaya, 2022).

This decrease and increase occurs fluctuatively, and this must be addressed immediately, because according to Presidential Regulation 72 of 2021 concerning the acceleration of stunting reduction, it must be resolved immediately because it will have an

impact on the development of future generations. Therefore, this research will look at the mapping of Sukarame Subdistrict, where the stunting rate is quite high and increasing. This study aimed to know the distribution of stunting in Sukarame Sub-district, Tasikmalaya Regency, West Kalimantan Province.

MATERIALS AND METHODS

The incidence of stunting in the Puskesmas Sukarame area is the unit of analysis in this study. Mapping the incidence of stunting in the puskesmas sukarame area will provide an overview of what causes stunting, so that when getting the main problem, so that when intervening it can be right on target effective and efficient. This research is an Analytical Descriptive research. The subjects targeted in this study were mothers who had toddlers who experienced stunting in February 2024, the inclusion criteria in this study were respondents who were declared stunted and willing to be interviewed.

RESULT

1. Distribution of Stunting Cases in Sukarame Subdistrict, Tasikmalaya Regency, West Java Province

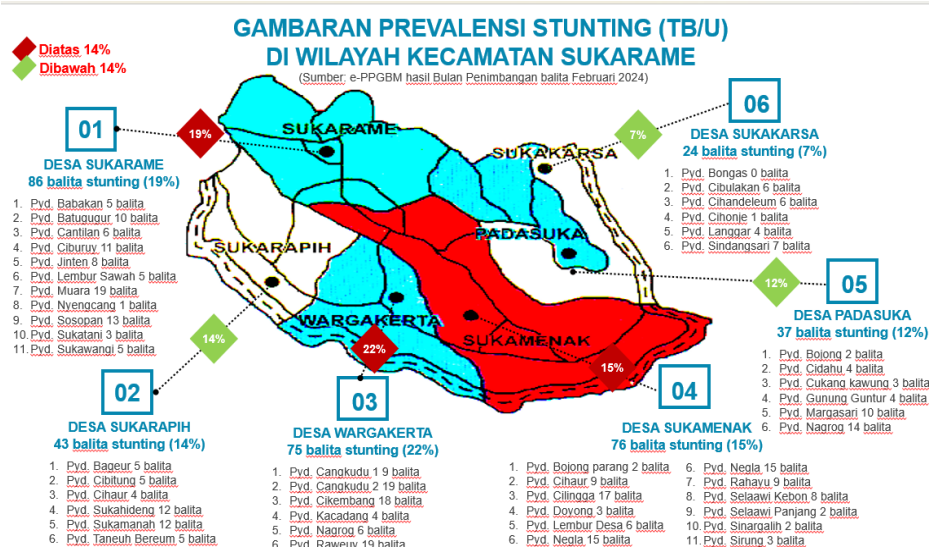


Figure 1: Stunting Prevalence Map by Area in Sukarame Subdistrict

Based on the data above, the prevalence of stunting in the Sukarame area shows that Sukarame, Sukarapih, Wargakerta, Sukamenak villages are above 14% while the rest are below 14%. This can be seen in table 1

Table 1: Prevalence of Stunting by Village in Sukarame Sub-district

No	Village	Total Stunting	Prevalensi *Stunting* (%)
1	Sukarame	86	19
2	Sukarapih	43	14
3	Wargakerta	75	22
4	Sukamenak	76	15
5	Padasuka	37	12
6	Sukakarsa	24	7

The 14% target must be implemented because it is in accordance with Presidential Regulation Number 71 of 2021 concerning Stunting Prevention. The regulation states that stunting cases in each region must be reduced to 14%.

2. Stunting Cases by Age Group

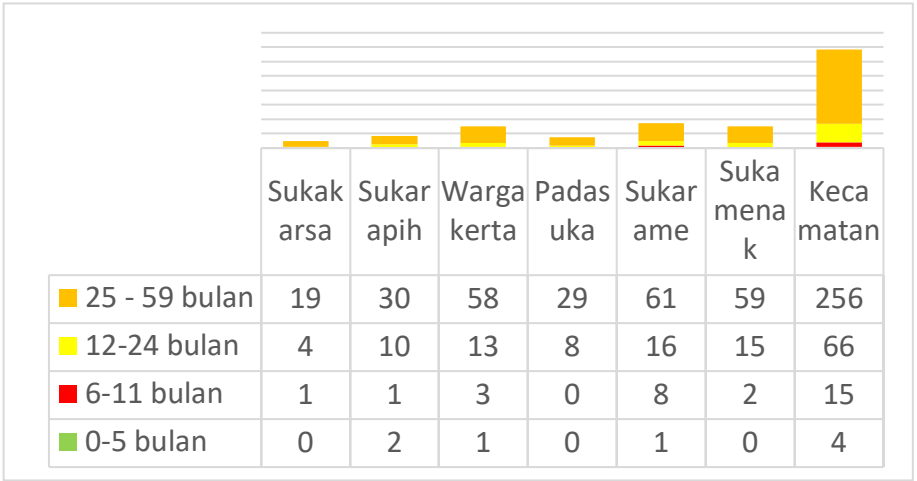


Figure 2: Stunting Cases by Age Group

If seen from this graph, the incidence of stunting in February 2024 is still mostly at the age of 25-59 months as many as 256, while at the age of 12-24 months there are 66 children, age 6-11 months as many as 15 children and 0-5 months as many as 4 children.

3. *Stunting Prevalence Trends*

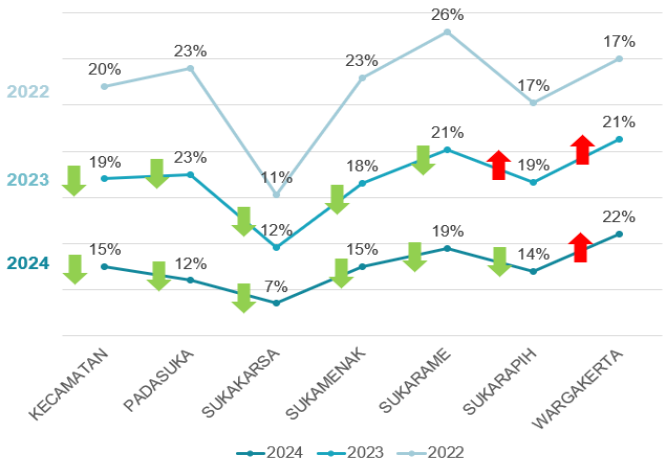
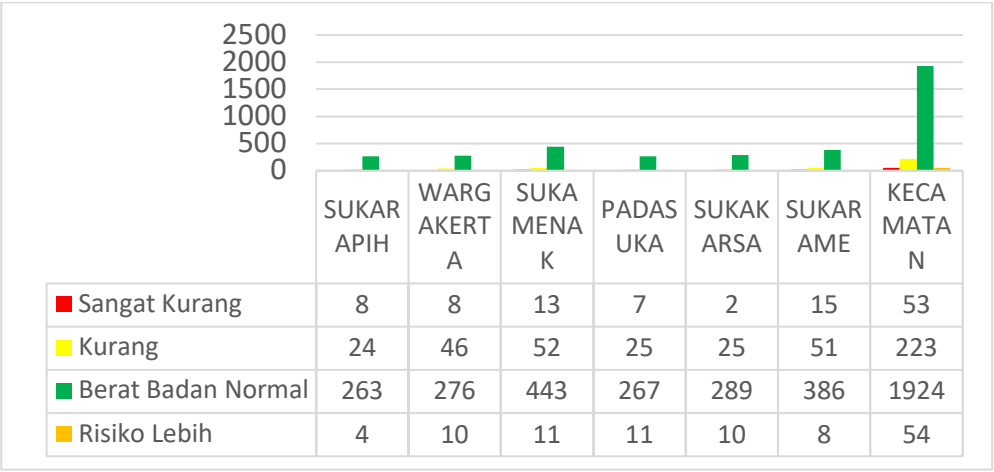


Figure 3: Trend of Stunting Prevalence

The figure above shows that:

a. In 2022 (BPB August 2022) the number of stunted toddlers was 418 toddlers (20%), the number of toddlers measured by TB / TB was 2073 (86%).
b. Year 2023 (BPB February 2023) the number of stunted toddlers is 414 toddlers (19%), the number of toddlers measured by TB / BP is 2170 (86%) there are 3 stunting locus villages namely Pdasuka, Sukarame and Sukamenak Villages.
c. Year 2024 (BPB February 2024) the number of stunted toddlers is 341 toddlers (15%), the number of toddlers measured by TB/PB is 2254 (96%) and there are 3 stunting locus villages namely Padasuka, Sukarame and Sukakarsa villages.

4. Frequency Distribution of Underweight (BB/U) in Sukarame Subdistrict

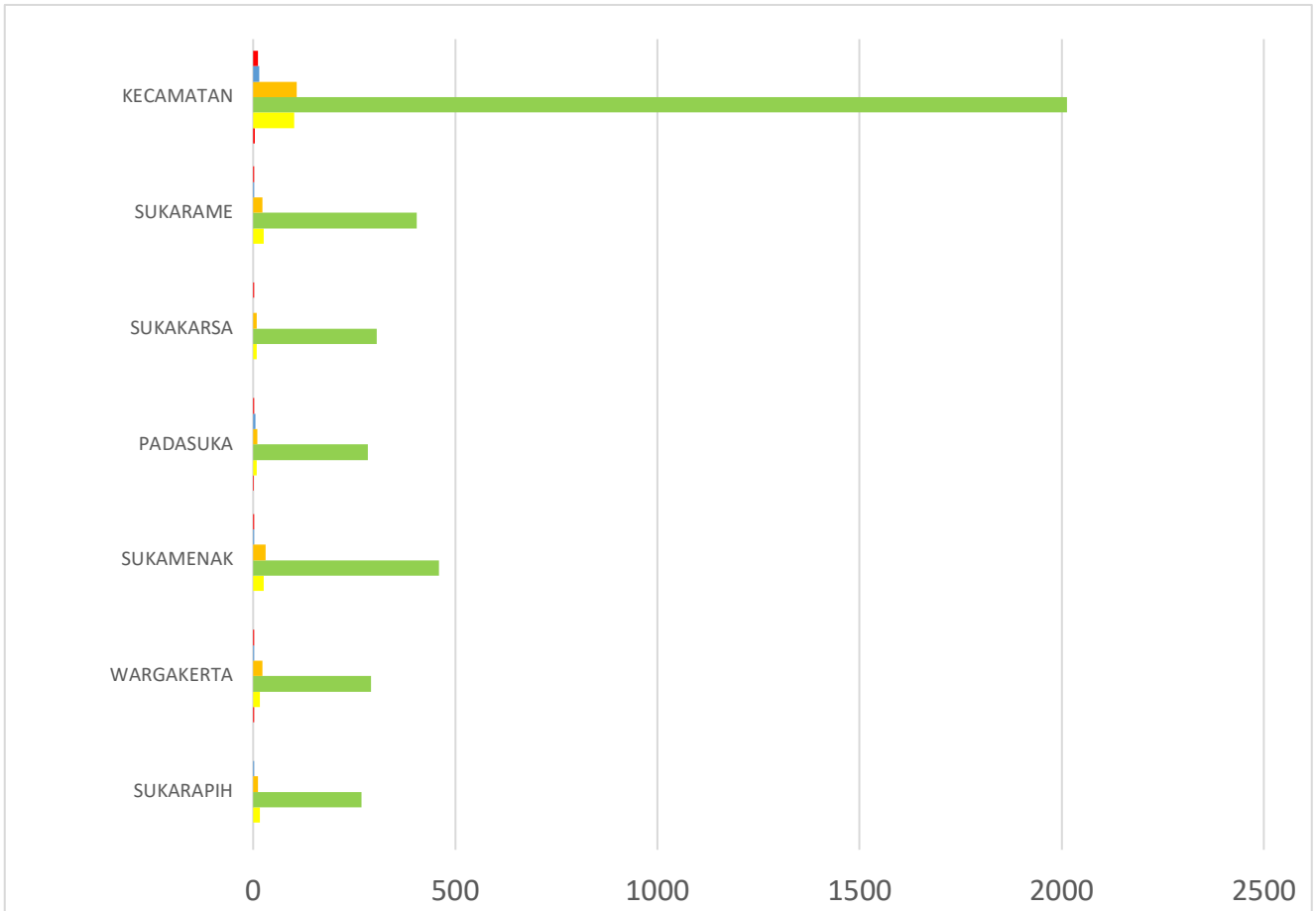


	SUKARAPIH	WARGAKERTA	SUKAMENAK	PADASUKA	SUKAKARSA	SUKARAME	KECAMATAN
Sangat Kurang	8	8	13	7	2	15	53
Kurang	24	46	52	25	25	51	223
Berat Badan Normal	263	276	443	267	289	386	1924
Risiko Lebih	4	10	11	11	10	8	54

Figure 4: Frequency Distribution of Underweight (BB/U) in Sukarame Sub-district area

The prevalence of underweight toddlers (very low birth weight and low birth weight) in Sukarame sub-district was 12.2% (276 out of 2254 toddlers), still above the national target of 12% in 2024. This causes underweight to still be one of the nutrition problems in the community.
The risk of failure to thrive in toddlers can be detected through assessing growth trends using growth lines and weight gain over time and weight gain tables.

5. Frequency Distribution of Wasting (BW/TB) in Sukarame Sub-district area
   a. The prevalence of wasting (malnutrition and undernutrition) in Sukarame sub-district was 4.8% (106 out of 2254 children under five).
   b. There were 3 toddlers with malnutrition in Wargakerta Village and 1 toddler with malnutrition in Padasuka Village.



	SUKARAPIH	WARGAKERTA	SUKAMENAK	PADASUKA	SUKAKARSA	SUKARAME	KECAMATAN
Obesitas	0	2	2	2	3	3	12
Gizi Lebih	2	3	2	5	0	3	15
Risiko Gizi Lebih	12	23	30	11	9	23	108
Normal	268	292	459	283	306	405	2013
Gizi Kurang	17	17	26	8	8	26	102
Gizi Buruk	0	3	0	1	0	0	4

Figure 5: Frequency Distribution of Wasting (BW/TB) in Sukarame Sub-district.

6. Determinants of Stunting

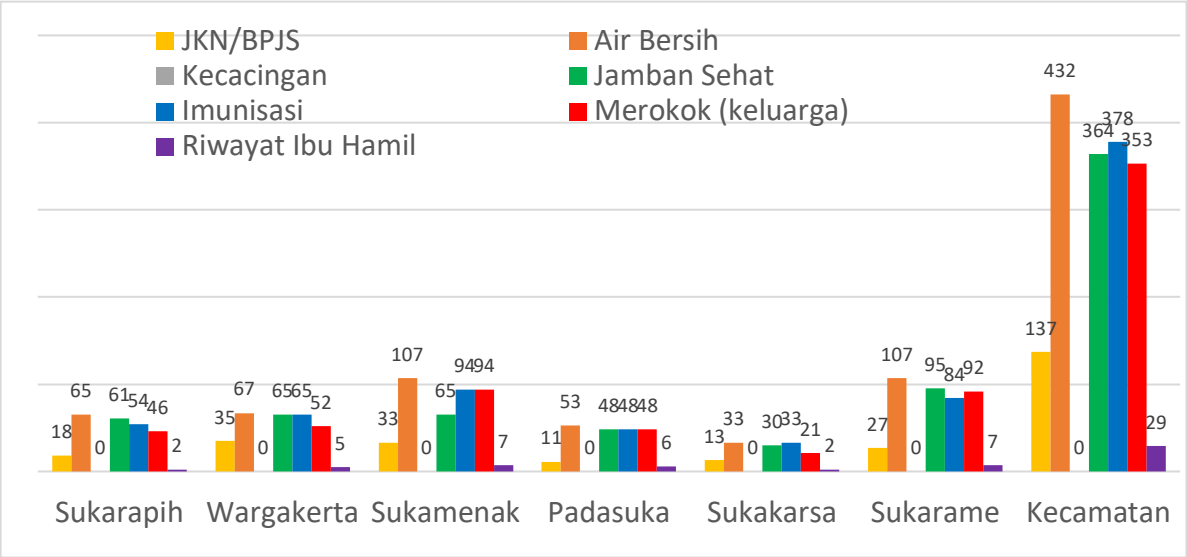


Figure 6: Graph of Determinants of Stunting in Sukarame Sub-district

- The survey found the following results:
- - Only 30% of stunted toddlers have JKN / BPJS
- - 98% of families of stunted toddlers use clean water
- - 100% of stunted toddlers have never experienced helminthiasis
- - 83% of families of stunting toddlers have access to latrines
- - 86% of stunted toddlers are fully immunized
- - 80% of family members of stunted toddlers smoke at home

- - 7% of mothers of stunted toddlers experience CHRONIC ENERGY DEFICIENCY during pregnancy

7. Prevalence of women with severe pregnancy loss in 2022-2024

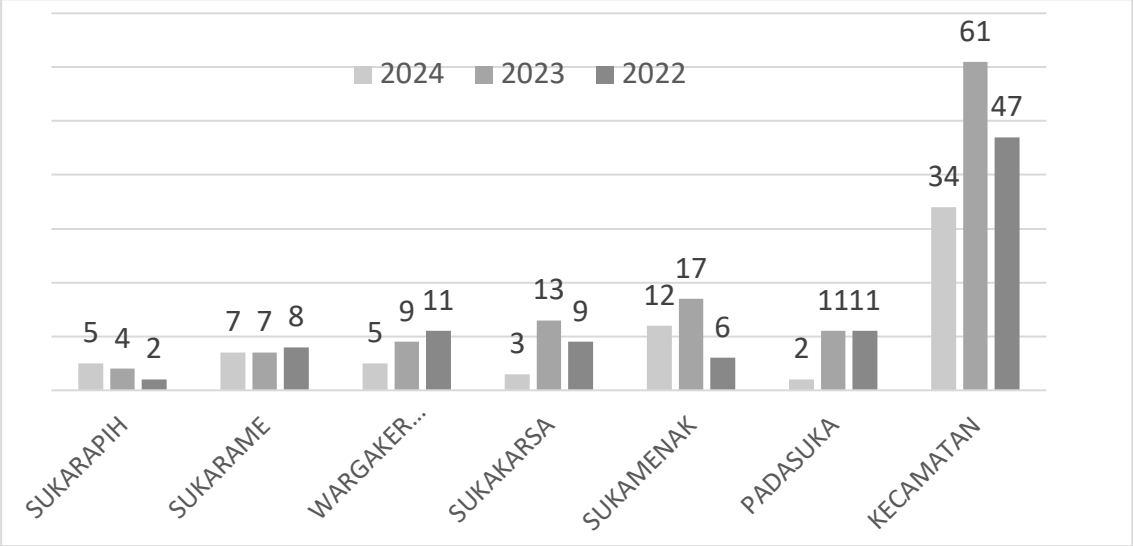


Figure 7: Graph of Prevalence of Pregnant Women with CHRONIC ENERGY DEFICIENCY in Sukarame Sub-district Year 2022-2024

a. Based on the picture above, it shows:
b. 6.4% of pregnant women experienced CHRONIC ENERGY DEFICIENCY in 2022 (47 pregnant women)
c. 8% of pregnant women will experience CHRONIC ENERGY DEFICIENCY in 2023 (61 pregnant women)
d. 15.9% of pregnant women will experience SEVERITY in 2023 (34 pregnant women)

8. Overview of Access to Appropriate Sanitation Facilities
   a. 77.7% of people in Sukarame Sub-district have access to healthy latrines.
   b. There are still 22.3% of people who do not have access to healthy latrines

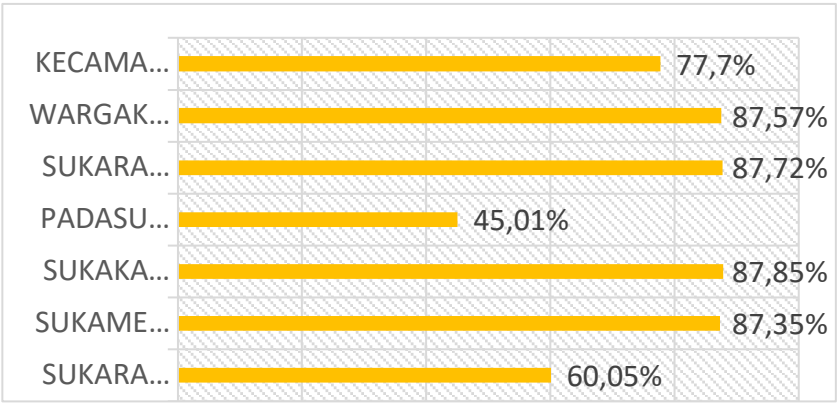


Figure 8: Graph of Prevalence of Pregnant Women with Chronic Energy Deficiency in Sukarame Sub-district Year 2022-2024

9. Overview of Access to Clean Water and Adequate Drinking Water

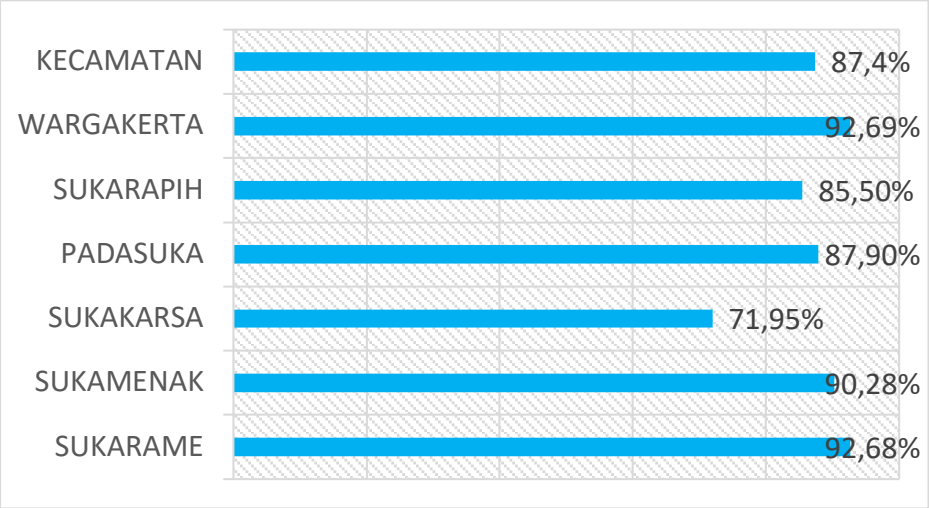


Figure 8 : Graph of Access to Clean Water and Adequate Drinking Water in Sukarame Sub-district

- Based on the figure above, the results show that:
- 87.4% of people in Sukarame Sub-district have access to clean water and proper drinking water.
- There are still 12.6% of people who do not have access to clean water and proper drinking water

DISCUSSION

Based on the results of the study, there are 4 main determinant factors that influence the incidence of stunting in Sukarame Subdistrict. The four determinant factors are as follows:

1. Community Access to Healthy Latrines

   The existence of healthy latrines is one of the indicators that must be met to reduce stunting rates in children under five. The existence of people who do not have access to proper healthy latrines is certainly closely related to the incidence of stunting in toddlers. This is due to the contamination of E.coli bacteria in water bodies caused by poor fecal management. The presence of E.coli bacteria in water bodies

can interfere with the absorption of toddler nutrition if the water is consumed by the community.

In line with other studies that mention that the incidence of stunting in toddlers is closely correlated with sanitation in the region (Htet, et al., 2023). In accordance with the results of a survey conducted in Sukarame Subdistrict, Tasikmalaya Regency, not all people have access to healthy latrines. This is because not all people understand the criteria for healthy latrines, there are still people who do not have septic tanks and a lack of awareness about human feces management so as not to pollute the surrounding environment.

On the other hand, access to healthy latrines that have not reached 100% is an obstacle because stunting interventions in Sukarame Sub-district still focus on specific interventions in the form of supplementary feeding (PMT) to improve the nutritional status of toddlers. Whereas in other studies it is mentioned that there is a need for a combination of specific and sensitive interventions to reduce stunting rates (Dewey, 2016).

2. Community Access to Adequate Drinking Water

Drinking water is a basic need required by humans every day. Proper drinking water is drinking water that meets physical, chemical and microbiological requirements (Kemenkes RI, 2023). Decent drinking water should provide good benefits to everyone.

Based on the results of research that has been conducted, access to proper drinking water has not reached 100%. This is certainly a crucial problem because drinking water is a basic need for every human being. Inadequate drinking water can cause various diseases and developmental abnormalities in toddlers or what is called stunting.

Another study states that toddlers aged 24-59 months need a lot of micronutrients found in the drinking water they consume (Ashraf, et al., 2024). If the drinking water consumed is not suitable, some micronutrients are lost in the drinking water. As a result, the drinking water consumed cannot provide the micronutrient value needed by the body. Thus, nutrient requirements are reduced, which can lead to impaired nutrient absorption, resulting in stunting

3. Chronic Energy Deficiency in Pregnant Women

The high number of pregnant women who experience chronic energy deficiency (CHD) can be a source of various health problems for infants and toddlers. One of the health problems caused by chronic energy deficiency in pregnant women is stunting.

The number of pregnant women who experience chronic energy deficiency in Sukarame Sub-district is 34 people. Meanwhile, Tasikmalaya Regency's target for pregnant women with chronic energy deficiency is no cases of pregnant women with chronic energy deficiency. this shows that the health program has not been effective in reducing the number of pregnant women with sex and stunting.

A study in Ethiopia found that children born to pregnant women with chronic energy deficiency and anemia had a higher risk (OR=1.25) of stunting compared to children

born to pregnant women who were normal weight, not anemic and not chronic energy deficiency (Sahiledengle, et al., 2023). The study also mentioned that normal body mass index (BMI) and Hemoglobin (Hb) levels that meet the standards are protective factors so that mothers do not give birth to stunted children.

In line with research in Pakistan, specific nutrition interventions and improved antenatal care during pregnancy can reduce the risk of mothers giving birth to stunted babies. This reduction in risk has been shown to be effective in preventing stunting in children under 6-59 months of age (Kureishy, et al., 2017).

The presence of pregnant women with SEZ in Sukarame Sub-district is due to the low consumption of blood supplementation tablets (TTD) during pregnancy. As a result, in April 2023 there were 20.4% of pregnant women who were anemic. This is due to the lack of monitoring of the consumption of blood supplement tablets for pregnant women. Other factors include pregnant women's unwillingness to take blood tablets, lack of family support and antenatal care (ANC) coverage that still does not meet the target. Low ANC visits are caused by pregnant women not understanding the importance of antenatal care during pregnancy. In antenatal care, there are various kinds of information provided to pregnant women. The information can be in the form of health and nutrition evaluation for pregnant women. Low ANC visits lead to a lack of health information obtained by pregnant women. As a result, the knowledge of pregnant women in preparing for birth is low. This can lead to low birth weight (LBW) and stunting in toddlers. In line with research which states that ANC visits can reduce the risk of stunting in toddlers (Zaidi, et al., 2020).

4. BPJS National Health Insurance Ownership

BPJS national health insurance ownership is indirectly related to the incidence of stunting in toddlers. This is because ownership of national health insurance is a facility that can facilitate access to public health services. With national health insurance, people tend to find it easier to get checked at health care facilities.

Based on the results of research in Sukarame Sub-district, there are only 30% of families with stunted toddlers who have national health insurance. This can lead to low access to health care facilities because health services without insurance tend to be expensive for the community. As a result, people are not exposed to health services.

Unequal access to health services is one of the causes of high stunting rates in Indonesia. National health insurance has not been able to provide comprehensive services for everyone. This is due to low economic capacity. In a study conducted in Kigali in 2022, it was found that economic status correlated with health insurance ownership. Stunted toddlers who are born from families with low economic status and do not have health insurance, tend to receive health services less often than toddlers from middle to upper economic status families who have health insurance (Nzayirambaha, et al., 2022).

Having national health insurance is also associated with the frequency of visits to health care facilities. People who have health insurance will not feel burdened to visit and check themselves at health care facilities. The more often a person visits a

health facility for nutrition consultation, the lower the risk of stunting (Khan, et al., 2019). Pada balita stunting, kunjungan ke fasilitas pelayanan kesehatan sangat dibutuhkan. Karena dengan begitu orang tua balita dapat berkonsultasi mengenai gizi atau kesehatan lingkungan sehingga dapat meningkatkan status gizi balita secara komprehensif.

CONCLUSIONS

Based on research that has been conducted in Sukarame Subdistrict, Tasikmalaya Regency, there are four main factors that influence the incidence of stunting in children under five years old, namely:

1. Community access to healthy latrines
2. Community access to proper drinking water
3. Chronic Energy Deficiency (CHD) in pregnant women
4. BPJS National Health Insurance coverage

ADVICE

1. Conduct nutrition-specific and sensitive interventions to reduce stunting in Sukarame Sub-district.
2. Conduct cross-sectoral collaboration to reduce stunting in Sukarame Sub-district.

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