



Risk Factors for Stunting at Balung Health Center, Jember Regency, Indonesia

Aisyiyah Alviana Agustin^{1*)}; Muhammad Ali Shodikin²

¹⁾ Puskesmas Balung Kabupaten Jember

²⁾ Program Studi Pendidikan Dokter, Fakultas Kedokteran Universitas Jember

ARTICLE INFO

Article history:

Received 13 February 2021

Accepted 31 May 2021

Published 25 June 2021

Keyword:

Stunting
Gender
Age
Birth length
Birth weight

*) corresponding author

Puskesmas Balung Kabupaten Jember

Email: aisyiyah781994@gmail.com

DOI: 10.30604/jika.v6i2.493

ABSTRACT

Stunting is a condition of failure to thrive in children under five years of age as a result of chronic malnutrition so that the child is too short for his age. The prevalence rate of stunting in Indonesia is still above 20%, meaning that it has not reached the target. Factors that influence stunting include birth length and birth weight. The purpose of this study was to determine the description of the factors that influence the incidence of stunting in children aged 0-59 months in the working area of the Balung Public Health Center in 2021. This research is descriptive in nature which was conducted in the working area of Puskesmas Balung, Jember Regency in April 2021. The population is children under five with age stunting. 0-59 months recorded in the EPPGBM in February 2021. Sampling in this study was carried out by total sampling, namely as many as 639 stunting toddlers. Of the 639 stunted children under five, 347 were male and the majority occurred at the age of 12-23 months, namely 150 under five. From 639 toddlers, it describes 516 toddlers with normal body length and 123 toddlers with short birth lengths. Meanwhile, the birth weight of 639 children under five shows that 422 children under five were born with normal birth weight. From the data above, it can be concluded that the majority of children under five with stunting in the working area of Puskesmas Balung were born with normal body length and weight. For this reason, it is necessary to carry out further research on the relationship of several risk factors using statistical tests. In addition, it is also necessary to look for other risk factors that can cause stunting in children.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Faktor Risiko Kejadian Stunting di Puskesmas Balung Kabupaten Jember

ABSTRAK

Stunting adalah kondisi gagal tumbuh pada anak balita (bayi di bawah lima tahun) akibat dari kekurangan gizi kronis sehingga anak terlalu pendek untuk usianya. Angka prevalensi stunting di Indonesia masih di atas 20%, artinya belum mencapai target. Faktor yang mempengaruhi stunting diantaranya panjang badan lahir dan berat badan lahir. Tujuan penelitian ini adalah untuk mengetahui gambaran faktor yang mempengaruhi kejadian stunting pada balita usia 0-59 bulan di wilayah kerja Puskesmas Balung Tahun 2021. Penelitian ini bersifat deskriptif yang dilakukan di

Kata kunci:

Stunting
Jenis Kelamin
Umur
Panjang badan lahir
Berat badan lahir

wilayah kerja Puskesmas Balung Kabupaten Jember pada bulan April 2021. Populasi adalah balita stunting usia 0-59 bulan yang terdata pada EPPGBM pada bulan Februari 2021. Pengambilan sampel pada penelitian ini dilakukan dengan cara total sampling yaitu sebanyak 639 balita stunting. Dari 639 balita stunting, 347 berjenis kelamin laki-laki dan mayoritas terjadi pada usia 12-23 bulan yaitu sebesar 150 balita. Dari 639 balita menggambarkan 516 balita lahir dengan panjang badan normal dan 123 balita memiliki panjang badan lahir pendek. Sedangkan berat badan lahir 639 balita menggambarkan 422 balita lahir dengan berat badan lahir normal. Dari data diatas dapat disimpulkan bahwa mayoritas balita stunting di wilayah kerja Puskesmas Balung ini lahir dengan kondisi panjang badan dan berat badan normal. Untuk itu perlu dilakukan penelitian lebih lanjut mengenai hubungan beberapa faktor risiko tersebut dengan menggunakan uji statistik. Selain itu perlu juga dilakukan pencarian faktor risiko lain yang bisa menjadikan stunting pada anak.



This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

INTRODUCTION

Stunting is the condition of failure to thrive in children under five years as a result of chronic malnutrition so that children are too short for their age (TNP2K, 2017). The data on the prevalence of stunting of children under five, which was collected by the World Health Organization (WHO) released in 2018, states that Indonesia is one of the third countries with the highest prevalence in the South-East Asian Region after Timor Leste (50.5%) and India (38.4%), which is 36.4% (Ministry of Health RI, 2018). The prevalence rate of stunting in Indonesia is still above 20%, meaning that it has not reached the target.

The prevalence of stunting in East Java according to (East Java Provincial Health Office, 2018) is 26.9%. Jember Regency is one of the districts that is in the spotlight because Jember Regency is one of the districts that entered the stunting locus both in 2018 and 2019. This means that Jember Regency has been included in the priority of accelerating stunting reduction (Ulfah & Nugroho, 2020). This is exacerbated by the increase in the stunting rate in Jember Regency from 17,344 in 2018 to 19,870 in 2019. Based on evaluation data from the Community-Based Nutrition Recording and Reporting Application (EPPBGM) until February 2021, the prevalence of stunting under five in the working area of the Balung Community Health Center is 29,14%. This number is included in the high category in Jember Regency.

Stunting in toddlers needs special attention because it can cause inhibition of physical growth, mental development and health status in children. Recent studies have shown that children who are stunted are associated with poor performance in school, low levels of education and low income as adults. Children who are stunted are more likely to grow up to be unhealthy and poor adults. Stunting in children is also associated with an increase in children's susceptibility to diseases, both infectious and non-communicable diseases (PTM) and an increased risk of overweight and obesity. Long-term overweight and obesity can increase the risk of degenerative diseases (Setiawan, Machmud, & Masrul, 2018).

Risk factors for the genesis of stunting in children under five include birth length, birth weight, history of exclusive breastfeeding, history of BMI, family income, maternal height and number of family members. Stunting can also be caused by risk factors for deficiency of several vitamins such as iron, zinc, calcium and vitamin A (Fitriyani & Mulyati, 2012). In this research, it will be conducted to find risk

factors for stunting in children under five at Balung Public Health Center with stunting incidence factors including gender, age, birth length, birth weight, history of exclusive breastfeeding and vitamin A immunization status. Description of the causes of stunting in children under five at the Public Health Center in Balung so that it can be taken into consideration for policy holders if they will conduct further interventions on stunting children at the Public Health Center in Balung

METHOD

The method in this research used a descriptive research method carried out at the working area of the Public Health Center of Balung in Jember Regency on April 2021. This research used a population of children under five who were stunting recorded in the EPPBGM on February 2021. Sampling in this research was carried out by total sampling, which was 639 of stunting toddlers. The data collection of this research uses secondary data sourced from the Community-Based Nutrition Recording and Reporting Application (EPPBGM) of the Ministry of Health. Furthermore, data processing is carried out in the form of editing, coding, entry, cleaning and analyzed using univariate analysis.

RESULTS AND DISCUSSION

The genesis of stunting in this research was divided into two categories, namely short and very short. The research results can be seen in table 1.

Based on table 1, it is found that the proportion of the genesis of stunting in children 0-59 months is more found in under-fives with male gender 347 people compared to 292 women. This is in line with research conducted by (Angelina, Perdana, & Humairoh, 2018) in Lampung Province, it was found that male were more likely to the genesis of stunting. Male experience more stunting because women have more fat tissue and less muscle tissue than men. Metabolically, muscle is more active when compared to fat, so muscle will require proportionately higher energy than fat, thus, men and women with the same height, weight and age have different body compositions, so that energy needs and

nutrition will also be different. Researchers argue that male toddlers are generally more active than female toddlers. Males are generally more active in playing outside the house, such as running, so they are easier to come into contact with dirty environments and spend more energy, while their energy intake is limited. Gender determines the amount of

nutritional needs for a person so that there is a relationship between nutritional status and gender. The difference in the amount of nutritional needs is influenced by differences in body composition between men and women. So that the amount of intake that must be consumed is more.

Table 1
Distribution prevalence of stunting based on gender

Respondents Characteristics	Short	Very Short	Total
Gender			
Male	228	119	347
Female	200	92	292
Age			
0-11 months	51	72	123
12-23 months	96	54	150
24-35 months	94	44	138
36-47 months	103	27	130
48-59 months	84	14	98

Meanwhile, children under five who experienced stunting were mostly found at the age of 12-23 months. This is in line with research conducted by (Nasrul, Fahmi, Thaha, & Syria, 2015) that baduta aged 12-23 months were 2.7 times more likely to be stunted than children under five aged 6-11 months. Based on baseline health research's data in Andiani's research, it is also stated that baduta aged 12-23 months are a determinant factor of stunting in Indonesia (Sutriana, Usman, & Umar, 2020). This is because the nutrients given at this age are not suitable for that, so that

growth slows down and changes in the form of food given and is not properly controlled (Sutriana et al., 2020).

Risk Factors for the genesis Stunting

a. Body Length of Birth

In this research, the length of the birth body was divided into 2 categories, namely <48 cm which was categorized as short, and ≥48 cm which was categorized as normal. The results of the research can be seen in table 2.

Table 2
Distribution of the length of the birth body

	Short	Very short	Total
Length of the birth body			
Short	82	41	123
Normal	346	170	516
Birth weight			
<2500 gram	6	7	13
≥2500 gram	422	204	626

In this research, the distribution of the frequency of body length at birth in stunting children found that out of 639 respondents, 516 were born with a body length of ≥ 48 cm. The majority of birth length in this research were born with normal body length, namely ≥ 48 cm. This research is in line with the research conducted (Sari & Oktacia, 2018) which states that stunted toddlers are born with a birth length of ≥ 48 cm, namely 61.3% (19 people). The risk of growth disorders is greater in babies whose birth length is far from the average. This can be caused by a lack of nutritional intake during pregnancy which causes the birth length to be below normal. So that in this research it is necessary to do further research on the correlation between birth length and the genesis of stunting using statistical tests.

b. Birth Weight

In this research, birth weight was divided into two categories, namely <2500 grams categorized as low birth weight (LBW), and ≥2500 grams categorized as normal. The research results can be seen in table 2.

In this research, the frequency distribution of birth weight in stunting children found that out of 639 respondents, 626 people were born with birth weight ≥2500 grams, while only 13 children under five were born with low birth weight. This is in line with the research conducted (Sari & Oktacia, 2018) which illustrates that all children under five are stunted in their study, namely 100% born with normal birth weight, namely 2500 grams-4000 grams. Several risks, such as the risk of death, growth disturbance, developmental disruption and stunting are some of the risks that might occur in children under five who are born with low birth weight (LBW) if not handled properly. Adequacy of nutrition, parenting style and incidence of infection affect the incidence of stunting in children under five. In addition, low birth weight and body length are still found at the age of less than 6 months, so if the nutritional status is handled properly, the risk of stunting at the next age will be low.

CONCLUSIONS AND SUGGESTIONS

From this research, it can be concluded that the distribution of stunting incidence among toddlers aged 0-59

months at the Public Health Center of Balung was mostly found at 12-23 months of age and male. In addition, the majority of stunting children have normal birth length and normal birth weight. So that further statistical tests are needed on the risk factors for body length and birth weight. In addition, further research is needed regarding other risk factors such as maternal height, parents' income factors, and others.

Acknowledgment

The researchers would like to thank the Jember District Health Office for giving permission to collect data and to the Public Health Center of Balung for giving research permits in its working area, as well as to all parties who have provided moral support. No funding was received to undertake this study.

Conflict of Interest Statement

The researcher states that there is no potential conflict of interest with respect to the writing and publication of this article.

REFERENCE

- Angelina, C., Perdana, A. A., & Humairoh. (2018). FAKTOR KEJADIAN STUNTING BALITA BERUSIA 6-23 BULAN DI PROVINSI LAMPUNG. *Jurnal Dunia Kesmas*, 7(2), 127–134.
- Dinas Kesehatan Provinsi Jawa Timur. (2018). *Profil Kesehatan Provinsi Jawa Timur Tahun 2018*.
- Fitriyani, F., & Mulyati, T. (2012). Pengaruh Pemberian Makanan Tambahan Pemulihan (PMT-P) terhadap Status Gizi Balita Gizi Buruk di Dinas Kesehatan Kota Semarang Tahun 2012. *Journal of Nutrition College*, 1, 371–381.
- Kemenkes RI. (2018). *Hasil Utama Riskesdas 2018*.
- Nasrul, Fahmi, H., Thaha, A. R., & Suriah. (2015). Stunting Risk Factors Ranging from 6-23 Months Old in Bontoramba District of Jeneponto Regency. *Jurnal MKMI*, (September), 139–146.
- Sari, D. F., & Oktacia, R. (2018). Gambaran Faktor Risiko Kejadian Stunting Pada Balita Di Wilayah Kerja Puskesmas Nangalo Kota Padang. *Jurnal Kesehatan Mercusuar*, 1(1). <https://doi.org/10.36984/jkm.v1i1.10>
- Setiawan, E., Machmud, R., & Masrul, M. (2018). Faktor-Faktor yang Berhubungan dengan Kejadian Stunting pada Anak Usia 24-59 Bulan di Wilayah Kerja Puskesmas Andalas Kecamatan Padang Timur Kota Padang Tahun 2018. *Jurnal Kesehatan Andalas*, 7(2), 275. <https://doi.org/10.25077/jka.v7i2.813>
- Sutriana, Usman, & Umar, F. (2020). Analisis Faktor Resiko Kejadian Stunting pada Balita di Kawasan Pesisir Kabupaten Pinrang. *Jurnal Ilmiah Manusia Dan Kesehatan*, 3(3), 2614–3151. Retrieved from <http://jurnal.umpar.ac.id/index.php/makes>
- TNP2K. (2017). 100 Kabupaten/Kota Prioritas untuk Intervensi Anak Kerdil (Stunting). Sekretariat Wakil Presiden RI, 1(1), 6–8.
- Ulfah, I. F., & Nugroho, A. B. (2020). Menilik Tantangan Pembangunan Kesehatan di Indonesia: Faktor Penyebab Stunting di Kabupaten Jember. 8090, 201–213.