
Comparative Review of Stunting Prevalence Rates in Banten Province, Causal Factors and Preventive-Curative Measures

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Abstract

This research is important because it has a novel to stunting intervention through a family approach. The research also answers previous researchers' expectations regarding the scarcity of research on stunting with a family approach. This research is a cross-sectional study conducted in March-May 2023 using secondary data processed from the 2021 Family Data Collection (PK21) data which is then carried out with a descriptive analysis. Banten Province has a number of families at risk of stunting, one-third of the total families in the province. Namely, 2,658,505 families were recorded and 885,301 families at risk of stunting. In sequence the number of families at risk of stunting in regencies and cities in Banten Province from the largest to the smallest is Cilegon City 219,973 families, Serang City 143,187 families, Tangerang City 118,273 families, South Tangerang City 126,800 families, Pandeglang Regency 115,807 families, Lebak Regency 74,313 families, Serang District 52,204 families and Tangerang District 43,744 families. This study concludes that Serang City, South Tangerang City and Pandeglang Regency are 3 districts/cities that have data on families at risk of stunting exceeding families that are not at risk of stunting in these districts/cities. Lebak, Pandeglang and Serang Regencies which border the Indian Ocean have the dominant factor causing stunting from the sanitation aspect. This study concluded that three times the number of family assistance staff from families at risk of stunting is needed in the context of stunting eradication and stunting prevention in the future.

Keywords: factors causing stunting, families at risk for stunting, preventive-curative interventions, prevalence of stunting

Abstrak

Penelitian ini penting dilakukan karena memiliki kebaruan intervensi stunting melalui pendekatan keluarga. Penelitian juga menjawab harapan peneliti sebelumnya tentang kelangkaan penelitian tentang stunting dengan pendekatan keluarga. Penelitian ini merupakan *cross sectional study* yang dilakukan pada bulan maret-mei 2023 menggunakan data sekunder hasil olahan data Pendataan Keluarga Tahun 2021 (PK21) yang selanjutnya dilakukan analisis deskriptif. Provinsi Banten memiliki angka keluarga beresiko stunting sepertiga dari total keluarga di provinsi tersebut. Yaitu keluarga terdata 2,658,505 dan keluarga beresiko stunting sebanyak 885,301. Secara berurutan jumlah keluarga beresiko stunting di kabupaten dan kota se Provinsi Banten dari yang terbesar hingga terkecil adalah Kota Cilegon 219.973 keluarga, Kota Serang 143.187 keluarga, Kota Tangerang 118.273 keluarga, Kota Tangerang Selatan 126.800 keluarga, Kabupaten Pandeglang 115.807 keluarga, Kabupaten Lebak 74.313 keluarga, Kabupaten Serang 52.204 keluarga dan Kabupaten Tangerang 43.744 keluarga. Penelitian ini menyimpulkan Kota Serang, Kota Tangerang Selatan dan Kabupaten Pandeglang adalah 3 kabupaten/kota yang memiliki data keluarga beresiko stunting melebihi keluarga yang tidak beresiko stunting di kabupaten/kota tersebut. Kabupaten Lebak, Pandeglang dan Serang yang berbatasan dengan Samudera Hindia

memiliki factor dominan penyebab stunting dari aspek sanitasi. Penelitian ini menyimpulkan tenaga pendampingan keluarga dalam jumlah tiga kali lipat dari keluarga beresiko stunting dibutuhkan dalam rangka eradikasi stunting dan pencegahan stunting di masa selanjutnya.

Kata kunci: faktor penyebab stunting, intervensi preventif-kuratif, keluarga beresiko stunting, prevalensi stunting

Introduction

Stunting prevalence is the total number of stunting problems that occur at a certain time in an area. Meanwhile, stunting is a chronic nutritional problem due to a lack of nutritional intake over a long period of time. BKKBN's action in reducing stunting is through a family assistance program carried out by the Family Assistance Team (TPK) consisting of midwives, cadres, and PKK staff to eliminate the main factors that cause stunting (BKKBN, 2021). BKKBN's action in reducing stunting is through a family assistance program with preventive steps in the form of counseling to target families and delivering assistance in the form of ready-to-eat food at certain time intervals (BKKBN, 2022). According to Fatmaningrum et al. (2022) families at risk for stunting are families that have one or more risk factors for stunting consisting of families with teenage daughters/prospective brides/pregnant women/children aged 0-23 months/children aged 24-59 months coming from poor families, low parental education, poor environmental sanitation, and inadequate drinking water. According to Widasari et al. (2023) the occurrence of stunting, among others, is influenced by direct causal factors, namely insufficient intake of nutrients and health status or a history of illness. Meanwhile, indirect causes include food availability and household consumption patterns, parenting patterns, environmental sanitation, and utilization of health services. According to Setiawan and Machsus (2023), Family has responsibilities to provide healthy food and nutritious food to children, and families have to create a healthy environment and provide good stimulation for children's growth. Their study confirms that the influence of social, economic, and health variables has a significant influence on the high incidence of stunting in Bekasi Regency.

Natural and non-natural factors can cause stunting. According to Barai et al. (2023). The impacts of climate change exacerbate the problems of food insecurity and malnutrition, especially child stunting. There are many risk factors that affect the occurrence of "stunting" besides the lack of intake of balanced nutritious food. For this reason, prevention of "stunting" needs to be done more comprehensively. According to Siswati (2018), Stunting causes a lost generation, becomes a burden and a threat to the nation in the future and causes state losses of up to 300 trillion rupiahs per year. Stunting carries a short-term impact in the form of a high risk of morbidity and mortality, in the medium term in the form of low intellectual and cognitive abilities, and in the longterm risk in the form of the quality of human resources and degenerative disease problems in adulthood. According to the Ministries/Institutions Implementing Programs/Activities for Stunting Prevention (2018), inter-agency collaboration is needed to ensure convergence of all programs/activities related to stunting prevention. Primarily to increase the coverage and quality of specific nutrition interventions and sensitive nutrition interventions in groups of pregnant women. Breastfeeding mothers and children aged 0-23 months or the first 1000 days of life. According to Cahyadi et al. (2018), society must protect vulnerable families and provide them with additional assistance. Another reason

for this additional effort was based on concerns about inequality and its detrimental impact on intergenerational poverty, with transfers as a mechanism to help increase investment in children's health and education. According to Leroy et al. (2015) after building a synthesis of strong evidence, a comprehensive theory-based evaluation of sensitive intervention program models other than nutrition includes interventions from various sectors (health, education, agriculture, social protection, women's empowerment), water and sanitation, and so on) are essential to provide the necessary guidance for future investments in improving nutrition. Beal et al. (2018), mentions that eradicating stunting in children is the first goal of the 6 goals in the global nutrition target for 2025 as well as being a key indicator in the second Sustainable Development Goal free from hunger conditions. Research conducted by Khusna and Nuryanto (2017) found a tendency that the earlier the age of the mother's marriage, the higher the percentage of stunted children.

Stunting in children is a result of factors such as poverty, lack of nutrition, health, environment and sanitation. According to Dorsey et al. (2016) Among factors at the household and community level, household expenditure and community infrastructure have a strong and inverse relationship with an increase in the risk of stunting. Social and cultural factors (education, employment and income), poverty, repeated exposure to infectious diseases, food insecurity and community access to health services are the five most important causes of stunting (Putri, 2020). Riu and Bunsal (2022), state that household conditions that cause a high prevalence of stunting include children under five who live in households with inconvenient latrines compared to better latrines (35.3% vs 24.0%). Audah et al. (2019) stated that the community should be provided with access to clean water and proper sanitation facilities because this is one of the absolute conditions for ensuring the quality of life of the community. However, what has happened to this day is that there are still many people who have not been fortunate enough to have the opportunity to access an adequate source of drinking water. According to Hermawan et al. (2023), there is still a lack of research that uses a family approach in researching the causes of stunting, so it is necessary to dig deeper into the family approach to stunting.

In connection with the various phenomena that have been examined above, this study intends to examine :1. the position of the stunting status of the Banten province compared to other provinces, 2. the imbalance that occurs in two aspects of community hygiene throughout Banten Province including how the condition of latrines is proper and water sources proper drinking, 3. examining the comparison of risk factors recorded through PK21, 4. examining the targets of family assistance recorded in PK21 in order to improve hygiene and eradication of the 4 T's (too young to give birth, too old to give birth, too close to give birth and too many child).

Methods

Participants

This research design is descriptive with a case study approach. The data used is quantitative data. The study will compare factors that cause families at risk of stunting from the 4 T aspect (too young to give birth, too old to give birth, too close to give birth and too many children) and factors that cause stunting from the family's living environment including the availability of proper latrines and proper drinking water sources in 8 districts -cities in Banten Province. It will also be compared to families at risk of stunting, what kind of family assistance is provided. The type of data analyzed is

secondary data. Secondary data was obtained from Processed Family Data Collection (PK) results for 2021. The research was conducted from March to May 2023.

The study population totaled 2,658,505 families and the sample was 1,763,211 families in Banten Province. This study uses secondary data from the results of the 2021 Family Data Collection, abbreviated as PK21, which was carried out by the BKKBN. The 2021 Family Data Collection will be carried out in all provinces using the census method. Based on this, the main table and dynamic table of 2021 Family Data Collection results present tables of recapitulation data by national, provincial, district/city, sub-district, village/kelurahan, hamlet/RW, neighborhood association (RT), to family levels. The data used in this study is processed data in the form of tabulations which are freely accessible to the public.

Measurement

In this study the data has been processed in tabular form with the available variables including data from 33 provinces in Indonesia minus DKI Jakarta which are not included in the 2021 Family Data Locus, these data form the component of graph 1 which compares the number of families to the number of families at risk stunting nationally. Furthermore, data from 8 regencies and cities in Banten Province were used to compile graph 2 which compares the number of families compared to the number of families at risk of stunting in Banten Province. Graph 3 presents a comparison of the number of families, the number of PK 21 target families, families at risk of stunting and families not at risk of stunting in 8 districts/cities in Banten Province.

Data from 8 sub-districts in Cilegon City were used to compile table 1 which compares the four target categories of facilitation for families at risk of stunting in Cilegon City. Data from 13 sub-districts in Tangerang City were used to compile table 2 which compares the four target categories of family assistance in Tangerang City. Data from a number of 7 sub-districts in South Tangerang City were used to compile table 3 which compares the four targets of assisting families at risk of stunting in South Tangerang City. Data from 28 sub-districts in the Lebak Regency area were used to compile table 4 which compares the factors that cause stunting in Lebak Regency.

Comparative narratives in a number of regencies and cities in Banten Province were actually compiled with the help of tables and graphs, but most of these tables and graphs were not included in the body of the paper to keep the number of pages. There are numbers that we narrate which are absolute numbers, namely numbers that we get from tables, and there are numbers that are approximate numbers, namely numbers that we get from graphs. When we refer to the chart, what we narrate are the numbers on the scale shown on the chart, such as more than 2500, more than 8000, less than 2000 and the like.

Analysis

PK 21 data was collected by PK 21 data cadres under strict supervision by PKB and PLKB and was carried out using an android enumerator. These data were collected from 1 April to 31 May 2021. The analysis used was descriptive qualitative analysis using excel charts from Microsoft Office 2013. Measurements in this study used descriptive analysis by comparing polygon graphs at various levels of the region.

Findings

Comparison of Number of Families with Families at National Stunting Risk

In the 2021 family data collection (PK21) there were 66,207,133 Indonesian families, while for Banten there were 2,658,505 families. Nationally there are 4 provinces that can suppress the very small number of families at risk of stunting compared to the number of families in those provinces, namely West Java, Central Java and East Java, although in terms of quantity they are certainly still higher than the other 30 provinces. Banten is a province in a group of 30 other provinces as a province with a small population but has families at risk of stunting, which accounts for almost half the number of families, approximately 2,658,505 families compared to 885,301 families. If we look at Figure 1, the wider the gap between the number of families at the point on the dash line and the number of families at high risk of stunting marked by the point on the solid polygon.

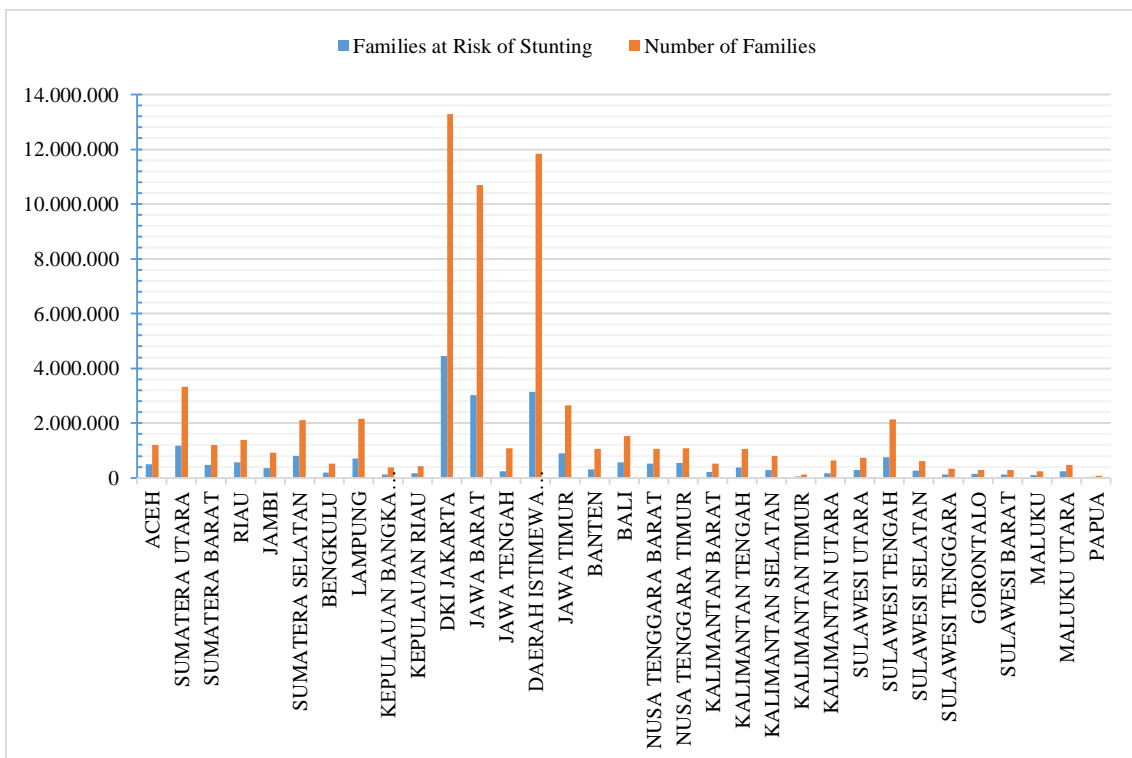


Figure 1. Comparison of the number of families with the number of families at risk of stunting Nationally

The number of families and the number of families at risk of stunting in Banten Province

Banten Province has 4 cities and 4 districts with an average of one-third of the families recorded in each district/city in the province being families at high risk of stunting. Sequentially the largest to the smallest number of families in districts/cities in Banten Province are Tangerang Regency with 652,781 families, Serang Regency with 425,073 families, Tangerang City with 418,191 families, Lebak Regency with 354,080 families, South Tangerang City with 275,800 families, Pandeglang Regency with 267,557 families, Serang City with 158,540 families, and the smallest number of families is Cilegon City with 106,483. Families at risk of stunting in Banten Province are described in Figure 2.

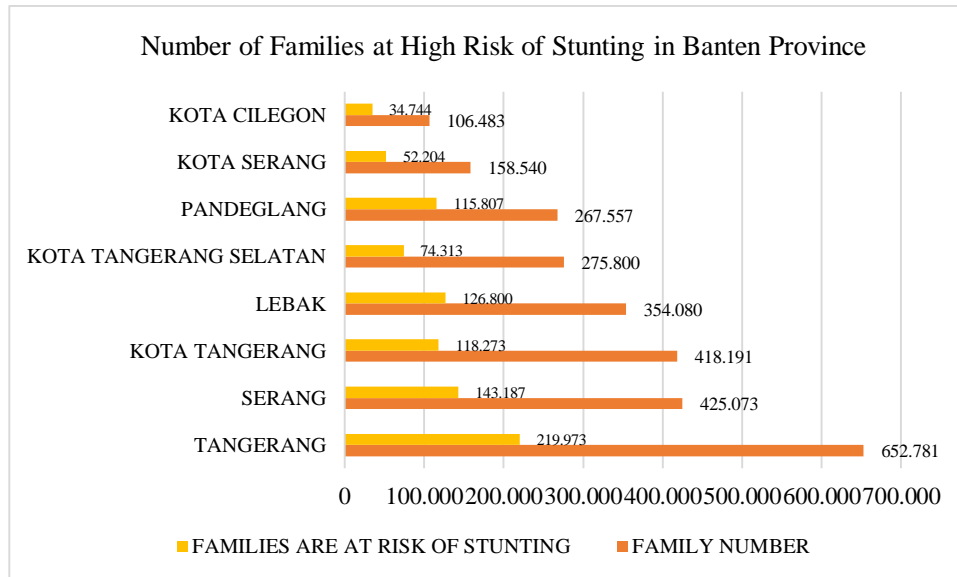


Figure 2. The number of families compared to the number of families at risk of stunting in Banten Province

Factors Causing Families at the Risk of Stunting in Cilegon City

In this study sequentially from the largest to the smallest the causes of families at risk of stunting from environmental and non-environmental aspects are (1) too many children (> 3), this case occurred massively in 8 sub-districts but the highest record was in Cintangkil Sub-district, more than 4000 cases, (2) the wife was too old to give birth (35-40 years), this case occurred in 8 sub-districts with a record low of 2000 cases in Cilegon and Purwakarta sub-districts while the highest record also occurred in Cintangkil sub-district with more than 3000 cases, and (3) do not have proper latrines, this case occurs evenly in 8 sub-districts with a frequency of less than 500 cases per sub-district. Cause (4), namely the ownership of proper drinking water sources did not appear significantly in 8 sub-districts in the city of Cilegon, for this case it only appeared very significantly in the Pulomerak sub-district. The causal factors for (5) the wife giving birth too young (<20 years) and (6) the wife giving birth too frequently (<2 years) appeared insignificant in 8 sub-districts in Cilegon City with a frequency per each sub-district of less than 100 cases. The four targets for facilitating families at risk of stunting in Cilegon District are presented in Table 1.

Table 1. Four targets for assisting families at risk of stunting in Cilegon City

Subdistrict	Babies under two years (0-23 months)	Infants under five years (24 - 59 months)	Couples of reproductive age	Pregnant couples of reproductive age
Cibeber	1.356	2.713	9.098	452
Cilegon	1.262	2.185	7.059	424
Pulomerak	1.211	2.224	8.028	444
Ciwandan	1.441	2.512	8.789	483
Jombang	1.403	2.885	10.148	481
Gerogol	1.235	2.223	7.898	398
Purwakarta	1.145	2.077	7.267	457
Citangkil	2.418	3.997	13.033	781
Total	11.471	20.816	71.320	3.920

Factors Causing Families at Risk for Stunting in Serang City

The city of Serang has 6 subdistricts, namely Serang, Kasemen, Walantaka, Curug, Cipocok Jaya and Taktakan. Among the six factors that cause families at risk of stunting in this city, the two biggest factors that cause families at risk of stunting in Serang City are too many children (> 3) with more than 9000 cases in Serang Subdistrict, more than 5000 cases in Kasemen District, 5000 cases in Cipocok Jaya District, 4500 cases in Walantaka and Taktakan Subdistrict and 2500 cases in Curug Subdistrict. The second biggest causative factor is the wife being too old to give birth (35-40 years), with 7000 cases in Serang District, 4000 cases in Walantaka and Cipocok Jaya Subdistrict, 3900 cases in Kasemen and Taktakan Subdistrict and 2100 cases in Curug Subdistrict. Families not having proper latrines are the 3rd biggest causal factor among the 6 factors causing families at risk of stunting in Serang City with an absolute number of 1,209 cases in Serang District, 2,406 cases in Kasemen Subdistrict, 751 cases in Walantaka Subdistrict, 452 cases in Curug Subdistrict, 406 cases in Cipocok Jaya Subdistrict and 695 cases in Taktakan Subdistrict.

The target of family assistance in Serang City show that PK21 data is able to determine which families need family assistance. The decision to determine this target is obtained from the accumulation of several characteristics such as specific causal factors related to oral interventions and physical maintenance such as intake of nutritious food and drinks, and sensitive causative factors such as the micro-family environment, mezzo and macro system. One very significant target of family assistance in Serang City is Couples of Reproductive Age (PUS), that is, from the largest to the smallest sub-district, Serang Subdistrict 29.000, Walantaka and Cipocok Jaya Subdistrict 15.000, Kasemen Subdistrict and Takakan Subdistrict 15.200, and Curug Subdistrict 10.000. The other assistance targets are not as big as the assistance targets for PUS. For example, for families with toddlers in Serang Subdistrict, only 5.500 targets, in Walantaka Subdistrict, 5.000 targets, Kasemen and Takakan Subdistrict, 4.900 targets, and Curug Subdistrict, 2.500 targets.

Factors Causing Families at High Risk of Stunting in Tangerang City

Tangerang City has 13 Subdistrict. In these 13 sub-districts, the 2 highest causes of a family's risk of stunting are wives who are too old to give birth (35-40 years) and too many children (> 3). The third cause, in a number that is not too significant, is that families do not have proper latrines. These occurred in Tangerang Subdistrict with an absolute number of 454 cases, Jatiuwung 951 cases, Batu Ceper 821 cases, Benda 386 cases, Cipondoh 138 cases, Cileduk 82 cases, Karawaci 487 cases, Periuk 196 cases, Cibodas 730 cases, Neglasari 482 cases, Pinang 513 cases, Karang Tengah 157 cases, and Larangan 47 cases. The factors that cause stunting 4-6 even though there are very insignificant numbers. The 4-6 stunting factors referred to are the wife being too young at delivery (< 20 years), the wife giving birth too closely (< 2 years), and the family not having a proper source of drinking water.

The target with regard to the factors that cause stunting above, where the two highest targets are wives who are too old to give birth (35-40 years) and families with too many children (> 3), the target of family assistance in Tangerang City is directed at (1) families of couples aged fertile (PUS), (2) families with toddlers aged 24-59 months, and (3) families with toddlers, while pregnant PUS receive assistance in a very insignificant amount compared to the two (Table 2).

Table 2. The four targets of family assistance in Tangerang City

Subdistrict	Babies under two years (0-23 months)	Infants under five years (24 - 59 months)	Couples of Reproductive Age	Pregnant Couples of Reproductive Age
Tangerang	1.603	4.129	16.537	484
Jatiuwung	1.878	3.829	15.472	530
Batu Ceper	1.489	3.128	12.524	441
Benda	1.356	3.221	11.752	330
Cipondoh	3.327	8.356	32.700	766
Ciledug	2.580	5.805	21.799	660
Karawaci	3.392	6.929	25.030	949
Periuk	2.450	4.998	19.089	583
Cibodas	2.684	5.468	20.856	655
Neglasari	2.286	4.698	16.878	593
Pinang	3.311	7.075	26.585	898
Karang Tengah	2.241	4.908	18.108	538
Larangan	2.346	5.713	22.168	515
Total	30.943	68.257	259.498	7.942

Factors Causing Families at Risk for Stunting in South Tangerang City

South Tangerang City has 7 Subdistrict namely Serpong, North Serpong, Pondok Aren, Ciputat, East Ciputat, Pamulang and Setu. The two highest causes of families at risk of stunting in South Tangerang City are (1) wives are too old to give birth (35-40) with the highest number in Pondok Aren District with more than 10.000 cases, the second most is in Pondok Aren District with a number approaching 10.000 cases. Furthermore, the causes (2) are too many children (> 3) with the highest number in Pondok Aren District and Pamulang District with more than 9000 cases. The other 4 causes are less significant, namely the wife giving birth too young (<20 years), the wife giving birth too frequently (<2 years), the family does not have proper latrines and the family does not have a proper source of drinking water. Target of family assistance in south tangerang city, in connection with these two highest causal factors, the PK21 data directs that the target of assisting families at risk of stunting is put forward for PUS and toddlers aged 24-59 months and 0-23 months (Table 3).

Table 3. The four targets for assisting families at risk of stunting in South Tangerang City

Subdistrict	Babies under two years (0-23 months)	Infants under five years (24 - 59 months)	Couples of reproductive age	Pregnant couples of reproductive age
Serpong	1.580	3.720	17.392	501
Serpong Utara	880	2.314	11.774	235
Pondok Aren	3.620	8.752	38.391	1.149
Ciputat	2.112	5.678	25.230	603
Ciputat Timur	1.713	4.483	20.091	511
Pamulang	3.270	7.843	35.822	901
Setu	1.653	3.434	13.928	456
Total	14.828	36.224	162.628	4.356

Factors Causing Families at Risk for Stunting in Lebak Regency

Lebak Regency has 28 Subdistrict. A slightly different phenomenon was found compared to the conditions that cause families at risk of stunting in Cilegon City, Serang

City, and Tangerang City. In Lebak Regency, there were 4 prominent causative factors, namely because the wife was too old to give birth, too many children, did not have a main source of drinking water. decent, and lastly not having proper latrines, the fourth score is high. This condition is very concerning because of the 6 factors that cause families at risk of stunting, 4 exist and are very dominant in Lebak Regency. The dominant factor causing stunting is because there are too many children in the subdistricts of Malinping, Cipanas, Leuwidamar, Banjarsari, Cileles, Cimarga, Sajira, Maja, Rangkasbitung, Warunggunung, Cijaku, Cikukur, Cibadak, Cibeber, Cilograng, Wanasalam, Sobang, Curugbitung, Karanganyar, Cihara and Cirenten, in other words 21 of the 28 sub-districts in Lebak Regency have families at risk of stunting caused by too many children (> 3) (Table 4).

Table 4. Factors that cause families to be at risk of stunting in Lebak Regency

Subdistrict	Too many (≥ 3 children)	Does not have a proper main source of drinking water	Does not have a decent latrine	Too old (wife's age 35-40 years)	Too young (wife's age < 20 years)	Too close to giving birth (< 2 years)
Malingping	3.166	1.233	2.091	2.771	156	17
Panggarangan	1.191	1.956	1.731	1.657	90	11
Bayah	1.618	2.279	754	1.612	76	5
Cipanas	2.192	1.048	2.929	1.794	62	22
Muncang	1.442	1.262	1.191	991	55	4
Leuwidamar	2.505	2.452	2.513	2.091	193	24
Bojongmanik	797	514	812	1.111	43	6
Gunungkencana	1.962	683	982	1.575	78	17
Banjarsari	2.596	1.096	1.962	2.355	91	26
Cileles	2.185	551	1.128	1.944	55	20
Cimarga	3.207	824	1.211	2.654	138	13
Sajira	2.969	589	1.356	2.144	89	40
Maja	2.969	358	980	2.113	122	45
Rangkasbitung	6.170	125	776	5.434	259	132
Warunggunung	3.321	252	1.068	2.248	154	39
Cijaku	1.383	686	851	1.216	64	7
Cukukur	1.639	261	668	1.286	120	11
Cibadak	3.496	140	686	2.762	122	37
Cibeber	1.317	2.563	2.755	2.596	143	7
Cilograng	1.801	1.974	1.219	1.487	81	14
Wanasalam	2.786	1.196	2.932	2.507	159	26
Sobang	822	783	1.715	983	49	8
Curug Bitung	1.904	479	1.256	1.498	79	15
Kalangangar	2.036	279	495	1.296	95	29
Lebakgedong	607	355	1.115	749	41	4
Cihara	1.212	1.058	1.106	1.463	73	10
Cirinten	1.067	716	1.165	1.289	74	5
Cigemblong	666	1.548	1.822	1.011	40	4
Total	59.026	27.260	39.269	52.637	2.801	598

Target of family assistance in Lebak Regency Even though in Lebak Regency, there are 4 factors that cause families at risk of stunting which are very dominant, PK21 data only shows one target for assisting families at risk of stunting, namely PUS with target data of nearly 25.000 in Rangkasbitung Subdistrict, more than 10.000 in Malinping, Cimarga, Cibeber and Cibadak, exactly 10.000 targets in the Districts of Banjarsari, Warunggunung and Wanasalam, more than 5000 in the Districts of Panggarangan, Bayah, Cipanas, Gunungkencana, Cijaku, Cilograng, Curug Bitung, Kalanganyar, Cihara and Cirenten. The rest are Muncang, Bojongmanik, Sobang, Lebakgedong and Cigemblong Subdistricts with the target number of families at risk for stunting in the PUS category below 5000. The other assistance targets are families with toddlers who are quite prominent at more than 5000 in Rangkas Bitung District, the remaining 27 subdistricts are under 5000 families. We did not disclose the third and fourth assistance targets, namely families who own Baduta and pregnant PUS families, we did not disclose further because were not significant.

Factors Causing Families at Risk for Stunting in Pandeglang Regency

Factors causing families at risk of stunting arise from environmental aspects and 4 T conditions, using an average of 3-5 very dominant causes in at least 500 families in the sub-district and from of the 6 factors studied, only 5 districts emerged from extreme conditions, namely Picung Subdistrict, Pandeglang, Karang Tanjung, and Mekarjaya subdistrict, on the other hand Koroncong subdistrict which were only extreme in conditions of too many children and too old to give birth. The remaining 30 sub-districts are in extreme conditions causing families to be at risk of stunting, namely families not having a proper source of main drinking water, families not having proper latrines, families marrying at too young an age, and families having a history of giving birth too closely together. In terms of the number of cases, the 10 sub-districts with the peak number of too many children (> 3) are Mandalawangi Sub-District with close to 3500 cases, Majasari Sub-district close to 3000 cases, Saketi Sub-District with exactly 2500 cases, Cikeusik and Pagelaran Sub-Districts close to 2500 cases, then for a figure of approximately 2000 cases include the Districts of Panimbang, Banjar, Pandeglang, Sukaresmi and Pulosari.

Target of family assistance in Pandeglang Regency, however the PK21 data shows that the dominant target for families in Pandeglang is only two aspects, namely PUS and toddlers aged 24-59 months, while in several districts there is a rather large portion, namely assistance to Baduta (babies under two years) but not too big, only over 1000 families in Mandalawangi District. Given the condition of too many children in 35 sub-districts in Pandeglang Regency, the number of families targeted for PUS assistance reached a peak of more than 8,000 families for Cikeusik and Mandalawangi sub-districts, over 7000 for Labuan sub-district, over 6000 for Cigeulis, Saketi, Kaduhejo sub-districts, Majasari and Sobang. Between 5000-6000, among others, in the sub-districts of Cimanggu, Panimbang, Bojong, Menes, Banjar, Pandeglang, Carita and Sukaresmi. The rest of the other sub-districts with the number of target families between 2000-5000 families. For the second target family, namely families with toddlers, it is quite dominant, but the highest point is only between 2500-3000 families, namely in Mandalawangi District.

Factors Causing Families at Risk for Stunting in Serang District

Serang Regency has 29 sub-districts, has fewer factors causing families to be at risk of stunting than Pandeglang Regency. There are 3-5 causal factors in 30 sub-districts out of 35 existing sub-districts. The causes of families at risk for stunting in Serang Regency are similar to those in Lebak Regency, namely the factors of too many children (> 3), too old to give birth (wife's age 35-40 years) and several sub-districts reported not having proper latrines. The highest number of too many children (> 3) occurred in Kramatwatu and Cikande Districts with cases of more than 5000 families. The second causal factor, namely the wife being too old at delivery (35-40 years) occurred in Cikande sub-district with more than 5000 cases, Kramatwatu sub-district 4000 cases, Ciruas and Kragilan sub-districts with 3500 - 4000 cases. The third cause, namely families not having proper latrines, occurred in Padarincang District with the highest number of 3000 - 4000 cases. Causes 4-6 are all present but less significant than those already mentioned.

Target of family assistance in Serang regency. Serang Regency has 29 Subdistricts. As a district, Serang has factors that cause families at risk of stunting which are similar to those of Lebak and Pandeglang Regencies, namely besides having too many children (>3 children), the wife is too old to give birth (35-40 years), it also grazes the problem of not feasible latrines. For this reason, the PK21 data highlights the importance of targeting family assistance to PUS, Toddlers (24-59 months) and Baduta (0-23 months). The peak number of assistance was addressed to PUS with figures reaching 20.000 families in Cikande subdistrict, more than 15.000 targets in Kramatwatu, and 15.000 in Ciruas, assistance to more than 10.000 – 10.100 targets was carried out in Kibin, Petir, Cikeusal, Pamarayan, Jawilan and Padarincang Subdistrict. With the exception of Gunungsari sub-district, which has a number below 5000, there are 15 sub-districts that have not been mentioned yet, with a target number of 5000 – 10.000 families for assisting PUS. The 2nd-4th assistance targets are the families who own Baduta, Toddlers and pregnant Pus, all of them, but the number is below 5000 targets.

Factors Causing Families at Risk for Stunting in Tangerang District

Factors that cause families at risk of stunting in Tangerang Regency are dominated by wives who are too old to give birth (35-40 years) and too many children (> 3), these two data almost always coexist with more or less the same magnitude in 29 sub-districts in the Regency. Some of the sub-districts in order from largest to smallest are as follows: Rajeg and Pasar Kemis sub-districts with more than 8000 targets. Tiga Raksa, Teluk Naga and Cikupa subdistricts more than 6000 targets. Furthermore, the Subdistricts of Curug, Balaraja and Pagedangan were more than 5,000 targets. Panongan, Kelapa Dua and Solear sub-districts are also sub-districts where the factors that caused stunting are dominated by wives being too old to give birth (35-40 years) and too many children (> 3) with a target number of over 4000. The sub-districts of Jayanti, Jambe, Cisoka, Kresek, Mauk, Kosambi, Mauk, Sepatan Timur, and Gunung Kaler are sub-districts where the factors causing stunting are dominated by wives, being too old to give birth (35-40 years) and too many children (> 3) over 2000.

Target of Family Assistance in Tangerang Regency

For Tangerang Regency the dominance of the target of facilitation for families at risk of stunting is at PUS and families with toddlers (24-59) months with a very prominent number. For assistance to PUS in Rajeg and Pasar Kemis Subdistricts it reached 35.000 targets, then Tiga Raksa, Teluknaga and Cikupa Subdistricts reached more than 25.000

targets, Curug Subdistrict 25.000 targets, Solear, Sindang Jaya, Kelapa Dua, Pagedangan, Legok, Panongan, Pakuhaji Districts, more than 15.000 targets. Then Jayanti, Kosambi, and East Sepatan Subdistricts more than 10.000 targets. Assistance to PUS reached around 9000 targets in the Districts of Jambe, Kelapa Dua and Gunung Kaler. Assistance to more than 5000 PUS targets was carried out in the Districts of Kronjo, Kemiri, Sukadiri, Sukamulya. Assistance to PUS for the least number of targets is only for Mekar Baru Subdistrict with a total of 2500 targets.

Comparison of Number of Families, Families at Risk of Stunting and Families Not at Risk of Stunting in 8 Regencies/Cities in Banten Province

Comparison of stunting prevalence data in Banten Province found the following data: for Cilegon City, Serang City, Tangerang City, South Tangerang City as a city in Banten Province has a posture of the number of families compared to the number of families recorded in the 2021 family data collection (PK21) compared to families without at risk of stunting compared to families at risk of stunting such as stairs going down, this indicates that although there are cases of stunting in the 4 cities, the situation is much better because there are more families who are not at risk of stunting than those who are at risk of stunting. For those in the Regency category, there were cases where families at risk of stunting were far more than families who were not at risk, namely in Lebak Regency, Pandeglang Regency and Serang Regency. Tangerang Regency has the same fate as the 4 cities in Banten Province where the graphic posture is like a staircase where families at risk of stunting are on the last steps (Figure3).

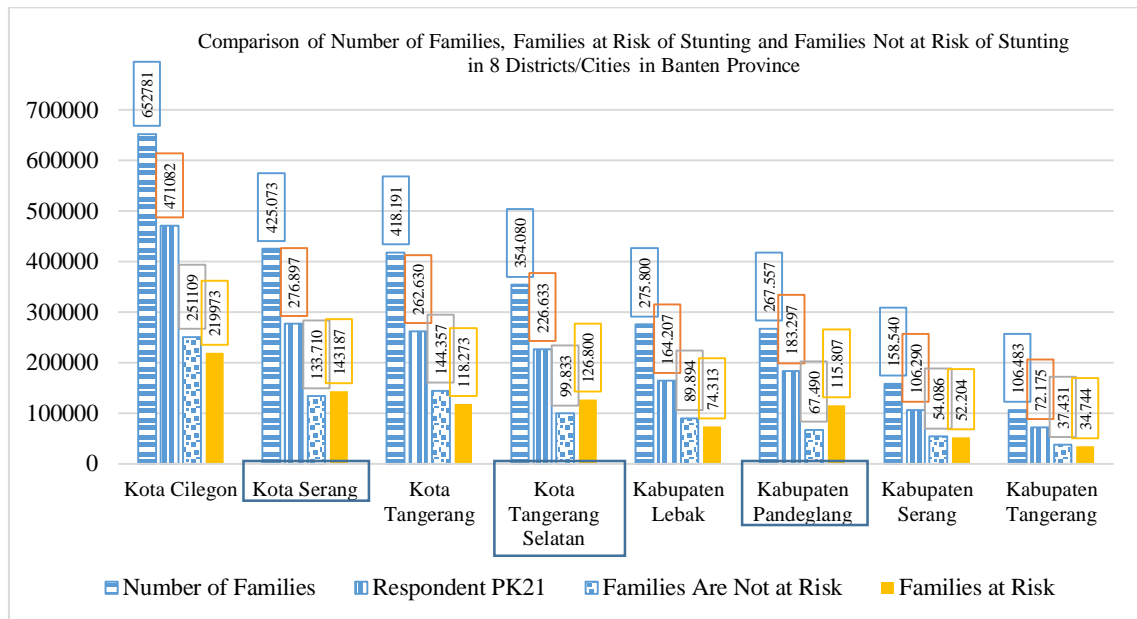


Figure 3. Comparison of the number of families, families at risk of stunting and families not at risk of stunting in 8 districts/cities in Banten Province

Discussion

This comparative review of the prevalence of stunting in all regencies and cities throughout Banten Province is very interesting. And of course this is the first time this has been done using PK21 data. The district-city with the largest number of families is Tangerang Regency with 652.781 families, at the same time this district has listed itself as the Regency with the largest number of families at risk of stunting in Banten Province with a number of 219.973 families, even though the polygon posture of families who are not at risk of stunting in Tangerang Regency is much higher namely 251.109 families. Tangerang Regency, because of its location close to the National Capital City, is not surprising if it becomes a place for community service for a group of university students. This service program is an awareness of the students that the availability of clean water and good sanitation is the main requirement for creating a healthy society. A healthy society will guarantee the health of the nation as a whole which is also the main requirement for achieving community welfare (Audah et al., 2019).

Cilegon City is the city with the least number of families, only 108,483 families were recorded. Of this number, only 72.175 families were recorded through PK21, a number of 37,431 or half less were marked as not at risk of stunting and 34.744 at risk of stunting. Of the 8 regencies and cities in Banten province, Lebak Regency, Pandeglang Regency, and Serang Regency have registered more families at risk of stunting than those who are not. It is necessary to suspect why there are far more families at risk of stunting because of their location far from the Center of Government and the Trans Java Main Line, such as Lebak Regency, Pandeglang Regency and Serang Regency, the three of which are the largest areas in Banten Province, directly bordering the Indian Ocean. In his research, Nursalamah et al. (2021) stated that there was a change in behavior in the community with the Germas program in Lebak Regency, but the changes that occurred were not significant. Then changes in people's behavior with the existence of the Germas program, according to them, have changed for the better in terms of health. That means that efforts to assist from any party, both government and non-government, to this remote area will have leverage on the hygiene situation in Lebak Regency.

For the City category, Serang City consists of 6 sub-districts, 2 of which are quite prominent in terms of the availability of proper latrines, namely in Serang Subdistrict 1.209 families and Kasemen subdistrict 2.406. As for the remaining 4 sub-districts, there are still problems with healthy latrines but in a small portion, namely Walantaka subdistrict 751 families, Curug subdistrict 452 families, Cipocok Jaya subdistrict 406 families and Takakan subdistrict 695 families. Yuningsih (2019) found that in Serang City, there were still (27.2%) of people practicing open defecation (indiscriminate defecation) such as in rivers, rice fields and others. The main cause is the factor of habit. Factors causing stunting are identified as environmental and non-environmental factors. Environmental factors could be due to sanitation conditions, in this study two examples were shown, namely the availability of proper main drinking water and ownership of inadequate latrines. According to Mariana and Lestari (2022), personal hygiene factors and access to sanitation cannot directly influence stunting because these factors influence through infectious diseases.

While non-environmental factors can be caused by adequate nutritional intake and condition four too. Research by Khusna and Nuryanto (2017) shows that there is a tendency that the earlier the age of the mother marries, the higher the percentage of stunted and malnourished children. The results of this research are confirmed by

Khairunnisa and Yuniarti (2020) and Andarini et al. (2022). Referring to research by Raikhani et al. (2022) efforts to free families from the chance of being stunted are through specific nutritional interventions at a target of 1000 HPK, starting from pregnant women, breastfeeding mothers to children aged 23 months. Nutrition-sensitive interventions also need to be carried out including the provision of drinking water and sanitation, increasing access and quality of counseling, increasing awareness and commitment and good child care as well as improving maternal nutrition, and increasing access to nutritious food.

Another interesting thing found in this study is that Lebak Regency, Pandeglang Regency and Serang Regency have factors that cause families at high risk of stunting from an environmental health aspect. Widiastuti (2019) researched the SWOT aspects and stated that internally the weaknesses of the Serang Regency Regional Government were the cause of stunting incidents, among others, due to the low financial condition of the Regional Government, lack of coordination between agencies in setting policies and in mobilizing the community's role, and the lack of provision of adequate sanitation facilities. The analysis for external conditions is that the Regional Government of Serang has not made optimal use of the Community-Based Sanitation National Program (STBM), also regarding the low level of public knowledge in managing environmental hygiene and health (Widiastuti, 2019). For Lebak Regency, 28 of the 28 sub-districts have problems with inadequate latrines. For Pandeglang Regency, it is much worse where 30 of the 35 existing sub-districts, from an environmental health aspect, apart from having problems with healthy latrines, also have problems with proper main drinking water sources. Serang Regency consists of 29 sub-districts, of which the factors that cause families to be at risk of stunting from the 4th aspect are too many the most common are too many children (> 3 children) and the wife is too old to give birth (35-40 years), which is unique and has a resemblance to Lebak and Pandeglang as fellow regencies in the outermost position, namely 9 out of 29 sub-districts in Serang Regency (Bojonegara, Ciruas, Cikande, Baros, Ciomas, Padarincang, Anyer, Cinangka and Nancak) have problems with the availability of proper main drinking water sources and the availability of proper latrines .

A comparative review of this research also highlights the partiality of family assistance, which turns out that out of the 8 regencies and cities where all assistance is available, the majority of assistance is intended for families with the age of PUS and toddlers aged 24-59 months. However, apart from assisting these two targets in all districts and cities, the third dominant target falls on mentoring children aged 0-23 months. In connection with the high rate of mothers who are too old to give birth and have too many children, PK21 data states that the two highest targets for family assistance at risk of stunting are families with partner status of childbearing age (PUS) and families with children under five 24-59 months. The assistance referred to here is the presence of officers who are mandated by the government to take preventive actions, namely to take preventive measures so that stunting does not occur in the next child. The method is to communicate, inform and educate the target families (IEC) so they know the causes, impacts and steps that can be taken to eliminate stunting in these families. The purpose of assistance to the target is not only for preventive purposes but also for curative purposes, namely children who are already stunted while still within the first 1000 days of life (1000 HPK), including 270 days in the womb and 730 days after birth are given early initiation of breastfeeding (IMD), then must be consistently given exclusive breastfeeding for the first 6 months and complemented by breastfeeding until they are even 2 years old. Assistance for families with children under five years of age 24-59

places more emphasis on intensive nutrition interventions for 3 months to 6 months. Curative treatment of stunting also involves drugs taken orally.

The role of family assistance is very important for solving community problems, because family assistance will be continuous until the goal is achieved. Assistance will usually also be sought from agents from the local community, in addition to operational cost efficiency measures it is also seen as being able to understand the local community from a religious and cultural perspective. Rahmawati and Kisworo (2017) argue that family companions are not just random people or teams, they are companions who must have four skill roles, namely facilitative, educator, community representative, and technical roles. Even though in this study with secondary data no data were found on the criteria for community companions, in reality in the field it is certain that family companions are people or teams who understand the substance of the stunting problem, the causes of stunting, rehabilitation/curative efforts and stunting prevention/preventive efforts. Family companions must become representatives of the community to voice their needs and interests. On the other hand, companions must also be able to convey a deposit from the government regarding materials, infrastructure, communication, information and education for stunting alleviation for the community in the area they are fostering. Throughout this study, it can be said that the most extreme conditions that cause families at risk of stunting are in Lebak Regency, showing 5 polygons out of 6 polygons. Factors that cause families at risk of stunting, when examined carefully, show their dominant character, that is, families do not have proper latrines, families do not have a source of drinking water. PK data shows the target of assistance to Baduta for preventive as well as curative action motives. Generally, under-fives in a bad biological environment will suffer from recurrent diarrhea which is a symptom of cases of stunting babies in the future. Ibrahim et al. (2021) stated that school-age children are still vulnerable to diseases, especially diarrhea. They call diarrhea an infectious disease whose spread is based on the environment. In other words, epidemiologically, school-age children are very affected by environmental hygiene. In cases like this, it is therefore appropriate for the Government of the Republic of Indonesia to carry out communication, education and information through family support teams for the purpose of changing stunting prevention behavior. According to Kobayashi (2022), diarrhoea occurrence was related not only to the level of water contamination, but also to a behavioural factor, i.e. people's careful management of the choice of multiple water sources.

The limitation of our research is that by using secondary data we cannot conduct in-depth interviews about what actually happens to each family at risk of stunting. The second is that the status of the object of research is babies under five years old and pregnant women whose status will quickly change.

Conclusion and Recommendation

Conclusion

As a comparative review, the research results have been sufficient to map which districts/cities are the most severe and mildest in terms of stunting prevalence in Banten Province, namely Lebak District as the area with the worst condition and Cilegon City as the mildest area in terms of number of families (106.483 families) and the number of families at risk of stunting (34.744 families).

Furthermore, this study was also able to answer the research objectives, namely (1) the stunting position of Banten Province compared to other provinces is moderate, in the

sense that it is not included in the 12 national priority stunting alleviation provinces (2) answering the second research objective in terms of hygiene or clean sanitation and Health includes the availability of proper main drinking water sources and the availability of healthy latrines, the people of Banten who live in urban areas are in much better condition, while the people in 3 regencies bordering the Indian Ocean namely Lebak, Pandeglang and Serang are in worse condition. (3) answering the third research question regarding the comparison of risk factors recorded through PK21, it can be stated that in general urban areas in Banten Province are more concerned with non-environmental aspects while in districts bordering the Indian Ocean it is more concerned with sanitation aspects. For example, Cilegon also faces the Indian Ocean, but its status as a city has factors that cause families to be at risk of stunting, not from environmental aspects but from the dominance of families with too many children (> 3) and wives who are too old to give birth (35-40 years) (4) for the purpose of further research. four namely the personnel that must be deployed in efforts to assist families, in Banten Province the largest were in assisting PUS (1.741.025 targets), pregnant women (61.249 targets), Toddlers (443.814 targets), and babies under two years (206.408 targets).

Recommendation

This research has the privilege of comprehensive data coverage covering one entire province, so it can provide a general picture of the situation of stunting prevalence in Banten Province. However, along with these generalities, detailed matters cannot be realized in this research. Therefore: (1) researchers and academics can follow up on this research by taking the locus of one of the sub-districts or districts/cities in the Banten region to further deepen the existing stunting problem. (2). The Central government, Banten Provincial Government and district/city level governments throughout Banten Province must be able to create a zero defecation program (zero open defecation) including providing 100% of the main source of adequate drinking water for all its citizens. (3). For University and Community Service Institution (LPPM) circles, the Real Work Lecture Program within a certain period of time can target efforts to fulfill the need for healthy toilets and adequate primary drinking water for the Banten Community. (4). For the business world and BAZNAS RI, this gap analysis of hygiene needs in Banten Province should be a reference for opportunities for the Corporate Social Responsibility (CSR) Program in the form of materials, methods and preparation of experts to work side by side with the Family Assistance Team in order to realize Banten Province 100 % adequate primary drinking water needs and adequate latrines. (5). For the Family Assistance Team in Banten Province to be more enthusiastic in carrying out the mandate of specific and sensitive interventions for families at risk of stunting.

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