International Research Journal of Pharmacy and Medical Sciences
ISSN (Online): 2581-3277

Analysis of Stunting Risk in Couple of Reproductive Age in Pidie District

Ari Mustina[1], Irwan Saputra[2], M. Yani[3], T. Maulana[4], Said Usman[5]
[1,2,3,4,5]Syiah Kuala University Banda Aceh, Aceh, Indonesia
Email address: arimustina91aja@gmail.com, iwanbulba@usk.ac.id, saidusman@unsyiah.ac.id, onabrabo@gmail.co.id, saidusman@unsyiah.ac.id,

Abstract*—*Introduction: *Some people also think that stunting only occurs in children from poor families, even though stunting can also occur in families with high economic incomes. For this reason, the government is trying to prevent stunting by training health workers and posyandu cadres so they are able to educate the public in efforts to prevent stunting. Objective: The purpose of this study is to analyze the risk of stunting in couples of childbearing age (PUS) from secondary office data in Pidie Regency in 2023.* ***Methodology***: *This type of research uses a quantitative type with a research designAnalytical Surveys, using secondary data from Family Data Collection (PK) 2021 District Office for Women's Empowerment and Child Protection Family Planning (DP3AKB) Pidie. The sample in this study was total sampling based on data on the number of families at risk of stunting in 23 districts, totaling 50,912 families***.** ***Results***: *There is no difference in the risk of stunting between urban sub-districts and inland sub-districts (P.Value 0.265), There is a significant influence between the factor of being too close to the child and the risk of stunting (P.Value 0.040),The factor that greatly contributes to the risk of stunting is the variable too many children with a significant value of 0.000. The second contributing factor is the type of dirt floor with a significant value of 0.003, and the third contributing factor is the inadequate housing variable with a significant value of 0.009.* ***Recommendation***: *Houses that are not suitable are very at risk of stunting, therefore modifying the home environment with clean rooms and adequate ventilation is highly recommended for the head of the family.*

Keywords— *Stunting Risk, Age of Childbearing.*

I. INTRODUCTION

Stunting is a condition characterized by failure to thrive in children under five whose height is much shorter than the height of children of the same age due to malnutrition. Stunting is a problem that is increasingly being found in developing countries, including Indonesia. Based on data from(RI Ministry of Health, 2018)the results of basic health research (RISKEDAS) show that infants under five years of age (toddlers) suffer from stunting reaching 30.8%.

In 2019 it fell to 27.67%, in factThis shows that the decline in stunting rates in Indonesia so far has not shown any significant changes. Children with stunting nutritional status will experience growth disturbances until adolescence so that children's growth is lower than normal adolescents. Adolescents who are stunted are at risk of getting chronic diseases, one of which is obesity. Stunted adolescents are at risk of obesity two times higher than adolescents of normal height.

The stunting prevention program is one of the national development programs that is included in health development. Strong health development begins with improving the quality of human resources, for this reason it is necessary to prepare early, including at school age. One of the indicators in achieving health development is the nutritional status of children under 5 years of age (toddlers). In accordance with Presidential Regulation Number 42/2013 concerning the National Movement to Accelerate Nutrition Improvement Listed in the 2015-2019 RPJMN, Minister of Health Regulation No 23 of 2014 concerning Efforts to Improve Nutrition, Minister of Finance Regulation No 61/PMK.07/2019 concerning Village Fund Allocation to support implementation of integrated stunting prevention intervention activities.

This regulation serves as a reference for the National Stunting Prevention Program. Prevention of stunting is one that is focused on in health development because growth at an early age is an important thing to pay attention to. Because one of the causes of stunting is that it can arise from environmental factors, as well as from the food consumed, both in terms of nutritional sources or vitamins. By looking at the percentage of stunting increases, currently in Indonesia it is being intensified in each region based on government supervision. One of them is in Pidie District, Aceh Province.

Based on data from(bappeda. pidiekab, 2022)the stunting rate in Pidie has decreased from 22.06 percent in 2018, shrinking to 18.87 percent in 2019. In 2020, the stunting rate has decreased by 0.37 percent from 2019: 18.50 percent. The highest prevalence of stunting was in Tangse District at 19.35 percent, followed by Ujong Rimba at 18.5 percent. "All districts have the same trend, which is decreasing from 2018 to 2020, except for Tangse District, which will increase in 2020.

Even though there has been a decrease in the stunting rate in Pidie Regency, it has not shown a significant number, so that Pide is still a special location (locus). from 23 city districts for handling stunting. The high number of stunting cases in Pidie Regency has made the government's basis to focus more on the success of development in Pidie Regency, especially in health development programs. Currently, Pidie Regency is intensifying a stunting prevention program in each village.

Ari Mustina, Irwan Saputra, M. Yani, T. Maulana, and Said Usman, "Analysis of Stunting Risk in Couple of Reproductive Age in Pidie District," *International Research Journal of Pharmacy and Medical Sciences (IRJPMS)*, Volume 6, Issue 4, pp. 47-50, 2023.

Based on the village minister's regulation, the development of underdeveloped areas and transmigration No. 16 of 2018 concerning priority use of village funds in 2019 is prioritized, one of which is to accelerate the prevention of stunting in villages. For this reason, the village is very involved in the stunting prevention program because the village has a very flexible budget to allocate for the stunting prevention program. The high level of community participation and village government participation is the spearhead of the success of efforts to prevent stunting in villages which will directly impact poverty alleviation.

To facilitate stunting prevention activities as part of Village development activities which are prioritized to be financed with the Village budget, especially from the Village Fund. With the accuracy of the targets, that the goals are more long-term oriented and strategic in nature, the determination of the right targets is well set so that it greatly determines the success of activities in stunting prevention, if the targets set are not precise, it will hinder the implementation of the Pidie Regency prevention program.

Some people also think that stunting only occurs in children from poor families, even though stunting can also occur in families with high economic incomes. For this reason, the government is trying to prevent stunting by training health workers and posyandu cadres to be able to educate the public in efforts to prevent stunting. One of the objectives of holding a stunting prevention program is to provide a reference for stakeholders in the village to prevent the risk of stunting. Based on the data described above, the researcher is interested in conducting a study entitled "Analysis of the Risk of Stunting in Couples of Reproductive Age (PUS) in Pidie Regency.

II. METHOD

This type of research uses a quantitative type with a research design*Analytical Surveys*,using secondary data from Family Data Collection (PK) 2021 District Office for Women's Empowerment and Child Protection Family Planning (DP3AKB)Pidie.

A. Location

The location of this research was conducted inOffice of Women's Empowerment and Family Planning Child Protection (DP3AKB)di Kaputen Pidie.

B. Time of Research

The research time was from March to June 2023.

C. The Sample In This Research

The sample in this study was total sampling based on data on the number of families at risk of stunting in 23 districts, totaling 50,912 families. This sampling method was chosen to facilitate the implementation of research with the consideration that the data to be used is based on data from families at risk of stunting.

III. RESEARCH RESULT

From Table 1. it can be seen that there is no difference in the risk of stunting between urban sub-districts and inland sub-districts (P.Value 0.265)

TABLE 1. Differences in the risk of stunting by sub-district category (urban sub-district and rural sub-district)

District category	Stunting Risk			
	N	MeanRanking	*Z*	*P. Value*
Urban District	8	14.25	-1,162	**0.265**
Interior District	15	10.80		
Total	**23**			

From Table 2. it can be concluded that in the majority there is no difference between screening factors and the risk of stunting, except for the factor of being too close to the child (P.Value 0.040).

TABLE 2. Differences in Stunting Risk and Screening Factors in Pidie District

Variable/ Coating Factor	Stunting Risk				
	District category	N	Mean Ranking	Z	P Value
Mother's education below junior high school	district PK	8	12.13	-.065	0.975
	PD district	15	11.93		
No Source of Income	district PK	8	13.13	-.581	0.591
	PD district	15	14.40		
Floor Type Tanh	district PK	8	14.63	-1,356	0.190
	PD district	15	10.60		
Not Consuming Food with a Gram	district PK	8	12.75	-.3887	0.728
	PD district	15	11.60		
Pre-Prosperous Family	district PK	8	13.75	-. 904	0.392
	PD district	15	11.07		
Inadequate Drinking Water	district PK	8	10.44	-.807	0.428
	PD district	15	12.83		
Inadequate Latrine	district PK	8	11.50	-.258	0.825
	PD district	15	12.27		
Uninhabitable House	district PK	8	12.50	-.258	0.825
	PD district	15	11.73		
Too Old Wife	district PK	8	15.25	-1,678	0.101
	PD district	15	10.27		
Too Close Child	**district PK**	**8**	**15.94**	**-2,034**	**0.040**
	PD district	**15**	**9.90**		
Too Many Children	district PK	8	14.75	-1,420	0.169
	PD district	15	10.53		

From Table 3. test resultsMultiple logistic regression from the 11 independent variables above, it can be concluded that the factor that most contributes to the risk of stunting is the variable too many children with a significant value of 0.000. Next in second place is the type of ground floor with a significant value of 0.003, and the third is the variable of an unfit house with a significant value of 0.009.

TABLE 3. TestMultiple Logistic Regression

Model	Unstandardized Coefficients		Standardized Coefficients	Q	Sig.
	B	std. Error	Betas		
(Constant)	.446	13,671		.033	.975
Mother's Education Below SLTP	084	.207	.017	.404	.693

Ari Mustina, Irwan Saputra, M. Yani, T. Maulana, and Said Usman, "Analysis of Stunting Risk in Couple of Reproductive Age in Pidie District," *International Research Journal of Pharmacy and Medical Sciences (IRJPMS)*, Volume 6, Issue 4, pp. 47-50, 2023.

No Source of Income	-.007	.495	-.001	-.015	.989
Ground Floor Type	**-3,032**	**.827**	**-.057**	**-3,664**	**003**
No Family Members Eat Diverse	-.299	.589	-.012	-.508	.621
Pre-Prosperous Family	.585	.428	083	1,367	.197
Inadequate Drinking Water	.060	.131	005	.457	.656
Inadequate Latrine	.018	.135	007	.135	.895
Uninhabitable House	**.304**	**.098**	**.182**	**3,095**	**.009**
Too Young Age Wife	3,915	6,748	.017	.580	.573
Too Close Child	2,193	1,765	083	1,243	.238
Too Many Children	**1,420**	**.140**	**.676**	**10.174**	**.000**

IV. DISCUSSION

Differences in Stunting Risk Based on District Categories (Urban Districts and Rural Districts)

Based on the Mann Whitney bivariate statistical test, the results showed that there was no difference in the risk of stunting between urban and inland sub-districts (P.Value 0.265). The results of this study are different from research conducted by(Lusita et al., 2017) The results showed that there were significant differences including the length of mother's education, level of knowledge of mother's nutrition, duration of upper respiratory tract infection. While the factors that did not have a significant difference included the age of the toddler, the sex of the toddler, the Z-score of the toddler, the mother's employment status, the economic status of the family, the frequency of upper respiratory tract infections, the duration of diarrheal illness, the frequency of diarrheal illness, the level of energy consumption and protein consumption level.

Although based on the results of the study, there was no difference in the risk of stunting in urban sub-districts and inland sub-districts. However, based on the researchers' knowledge and referring to the results of other studies, the researchers assumed that there were indeed differences in the risk of stunting between urban and rural sub-districts. One of the factors that we can see is the utilization of access to health services, often access that is far inland, makes people reluctant to visit health facilities.

This assumption is also in line with the opinion(Khatimah et al., 2019), in(Raditiya et al., 2021)Long travel times hamper accessibility to health facilities. The travel time to the puskesmas is more than 30 minutes, reducing the utilization rate of the puskesmas. Travel time has an influence on access to health facilities where the travel time for health facilities is less than or equal to 30 minutes, access is more frequent than the travel time for health facilities of more than 30 minutes.

Differences in Stunting Risk and Screening Factors in Pidie District

After conducting the Mann Whitney test, it can be concluded that in the majority there is no difference between screening factors and the risk of stunting, except for the factor being too close to the child (P.Value 0.040). This study is in line with research conducted by(Susanti, 2019) Whereas in testing the Pearson Correlation with the sig. 0.001 < a (0.05), that is, there is a correlation between maternal factors that are too close to the risk of stunting in East Kalimantan.Referring to the same two conclusions, the researchers concluded that too close birth spacing affects children's growth, due to the lack of attention of parents towards children both in terms of fulfilling nutrients and in terms of other affection.

The Relationship Between Too Many Children and the Risk of Stunting

Based on statistical teststestMultiple logistic regressionobtained a significant value of 0.000. This value indicates that there is a significant relationship between too many children and the risk of stunting. This research is relevant to the results of research conducted by Candra (2013) in(Rufaida, 2020), stated that the number of children> 2 is a risk factor for stunting. Family food availability is affected by the number of children in the family. The chance of a child experiencing malnutrition is greater in families with low economic status who have many children.

Mothers who work to help support the family's finances cause neglect of toddler nutrition. Children need attention and food according to their needs, but families with poor economic conditions and have many children will find it difficult to meet these needs (Karundeng et al., 2015).

The Relationship between the Type of Ground Floor and the Risk of Stunting

Based on statistical tests using testMultiple logistic regression has a value of 0.003. This value indicates that there is a significant relationship between the type of dirt floor and the risk of stunting. These results are in line with research conducted by(Budi et al., 2022) Based on the test analysis of the difference in the type of floor of the widest house in families at risk of stunting in Bojonegoro Regency using the Paired Sample T Test, the majority of results were significant (<0.05), so it can be interpreted that the difference in the type of floor in the widest house is the cause of families at risk of stunting in Bojonegoro Regency .

In line with Novianti & Padmawati's research (2020), where environmental risk factors have a relationship with stunting such as the use of types of walls and floors. Yuniarti et al.'s research. (2019) showed that children in the stunting group have a living environment where cleanliness is not maintained, such as a damp house floor. The condition for a healthy house is a type of floor that is not dusty during the dry season and does not get wet during the rainy season. The type of house floor is a risk factor for diarrhea in toddlers. Floors that are not watertight, such as still with soil, can trigger diarrheal diseases because they allow the floor to become a nest for germs and dust (Notoatmodjo, 2003) in(Lestari & Siwiendrayanti, 2021)

The relationship between uninhabitable houses and the risk of stunting

Ari Mustina, Irwan Saputra, M. Yani, T. Maulana, and Said Usman, "Analysis of Stunting Risk in Couple of Reproductive Age in Pidie District," *International Research Journal of Pharmacy and Medical Sciences (IRJPMS)*, Volume 6, Issue 4, pp. 47-50, 2023.

Based on statistical tests using testMultiple logistic regression on the uninhabitable house variable obtained a value of 0.009. This value indicates that there is a significant relationship between uninhabitable houses and the risk of stunting. The results of this study are in line with research conducted byLestari (2014) where stunting occurs more often in children who suffer from diarrhea and ARI in the last 2 months. In another study, there was a relationship between home environmental sanitation and nutritional status (Hidayat, 2011).On the other hand, in a different study conducted by(Parhusip et al., 2023)it was explained that the relationship between livable housing and stunting, the results of the Spearman correlation test obtained a p-value > 0.05, namely p = 0.805 with a correlation value of 0.032, which means that there is no relationship between habitable houses and the incidence of stunting in Lesluru Village and Kuralele Village.

Home environmental factors are related to stunting, namely home environmental sanitation (WHO, 2013).(Prima et al., 2020). The effect of sanitation in the home environment with stunting is related to infectious diseases such as diarrhea or ARI (Acute Respiratory Infection). Poor sanitation in the home environment can cause infectious diseases such as diarrhea and ARI which in turn can affect stunting. Sanitation factors in the home environment, namely the source of drinking water, the availability of latrines, and the condition of the floor of the house.

V. Conclusion

The conclusions in this study are:

1. There is no difference in the risk of stunting between urban sub-districts and inland sub-districts (P.Value 0.265)
2. There is a significant influence between the factor of being too close to the child and the risk of stunting (P.Value 0.040).
3. The factor that greatly contributes to the risk of stunting is the variable too many children with a significant value of 0.000.
4. The second contributing factor is the type of ground floor with a significant value of 0.003,
5. The third contributing factor is the unfit house variable with a significant value of 0.009.
6. While the variable is no source of income, no family members eat diverse, pre-prosperous families, pre-prosperous families, inadequate drinking water, inadequate latrines, too young age of wife, and too close to children also contribute to the risk of stunting indirectly, because smaller significant value.

Research Ethics

The research ethics has been issued by the Head of the Health Research Ethics Committee (KEPPKN) of the Faculty of Medicine, Syiah Kuala University (USK) with registration number: 1171012P. Ethical Exempted with letter number: 065/EA/FK/2023.

References

[1] Asbar, R. (2018). *Faktor Determinan Kejadian Stunting*. *25*, 69–76.

[2] bappeda.pidiekab. (2022). *Hasil Analisis Pengukuran Data Stunting Tingkat Kabupaten Pidie Tahun 2021*. http://bappeda.pidiekab.go.id/berita/kategori/bidang-perencanaan-pemerintahan-dan-sumber-daya-manusia/hasil-analisis-pengukuran-data-stunting-tingkat-kabupaten-pidie-2021

[3] Budi, E., Putri, P., Namira, F. P., & Minum, S. A. (2022). *Gambaran Penyebab Keluarga Berisiko Stunting Di*. *1*, 13–21.

[4] Hairunis, M. N., Rohmawati, N., & Ratnawati, L. Y. (2016). *Determinan Kejadian Stunting pada Anak Balita di Wilayah Kerja Puskesmas Soromandi Kabupaten Bima Nusa Tenggara Barat (Determinan Incidence of Stunting in Children Under Five Year at Puskesmas Soromandi Bima district of West Nusa Tenggara)*. *4*(2), 323–329.

[5] Hastono, S. P. (2016). *Analisa Data Bidang Kesehatan*. Fakultas Kesehatan Massyarakat UI.

[6] Kemenkes RI. (2018). Hasil Riset Kesehatan Dasar Tahun 2018. *Kementrian Kesehatan RI*, *53*(9), 1689–1699.

[7] Lestari, M. E. P., & Siwiendrayanti, A. (2021). Kontribusi Kondisi Fisik Lingkungan Rumah dengan Kejadian Diare dan Hubungannya terhadap Kejadian Stunting. *Indonesian Journal of Public Health and Nutrition*, *1*(1), 360.http://journal.unnes.ac.id/sju/index.php/IJPHN.

[8] Lusita, A. P., Suyatno, & Rahfiludin, M. Z. (2017). Perbedaan Karakteristik Balita stunting di Pedesaan dan Perkotaan Tahun 2017. *Jurnal Kesehtan Masyarakat*, *5*(4), 600–612.

[9] Moksin, M. V., Muslim, R., & Ishak, S. N. (2022). Pencegahan Stunting Di Wilayah Ternate Melalui Perubahan Perilaku Wanita Hamil. *Jurnal Serambi Sehat*, *XV*(1), 27–35.

[10] Nurbati, P., Suharno, B., & Cahyani, D. D. (2019). Faktor Determinan Kejadian Stunting Pada Anak Usia 13-24 Bulan Di Desa Wilayah Kerja Puskesmas Poncokusumo Kab. Malang. *Jurnal Pendidikan Kesehatan*, *8*(2),201-217. http://ojs.poltekkesmalang.ac.id/index.php/jpk/article/view/1089.

[11] Parhusip, S. L. D., Moniharapon, E., & Sipahelut, S. G. (2023). Jurnal Agrosilvopasture-Tech Faktor-Faktor yang Mempengaruhi Stunting pada Anak Balita di Desa Lesluru dan Desa Kuralele Kecamatan Teon Nila Serua , Kabupaten Maluku Tengah Factors Affecting Stunting in Toddlers in Lesluru Village and Kuralele Village , T. *Jurnal Agrosilvopasture-Tech Journal*, *2*(1), 4–10.

[12] Pemkab Pidie. (2022). *Demografi Kabupaten Pidie*. Pidiekab.Go.Id. https://pidiekab.go.id/pages/3/demografi.

[13] Prima, A., Irianto, S. E., & Masra, F. (2020). Analisis Faktor Risiko Stunting Balita Usia 1-2 Tahun Di Pemukiman Kumuh Berat (Studi Kasus Di Kota Bandar Lampung). *Journal Gizi Aisyah STIKes Aisyah Pringsewu Journal*, 70–86.

[14] Raditiya, F. M., Ragil, S. D., & Eva, A. (2021). Faktor-Faktor yang Mempengaruhi Akses Kesehatan. *Indonesian Journal of Pharmacy and Natural Product*, *04*(May), 142–149. http:/jurnal.unw.ac.id/index.php/ijpnp.

[15] Rita Kirana, Aprianti, N. W. H. (2022). Pengaruh Media Promosi Kesehatan Terhadap Perilaku Ibu Dalam Pencegahan Stunting Di Masa Pandemi Covid-19 (Pada Anak Sekolah Tk Kuncup Harapan Banjarbaru). *Jurnal Inovasi Penelitian*, *2*(9), 2899–2906.

[16] Rufaida, F. D. (2020). *The Correlation of Family and Household Factors on The Incidence of Stuntingon Toddlers in Three Villages Sumberbaru Health Center Work Area of Jember*. *6*(1), 1–6.

[17] Rukmana, E., Briawan, D., & Ekayanti, I. (2016). Faktor Risiko pada Stunting pada Anak usia 6-24 Months in Bogor. *Jurnal MKMI2*, *12*(3), 192–199.

[18] Sinarpidie.co. (2021). *Angka Stunting di Pidie Turun*. Sinar Pidie. https://sinarpidie.co/news/angka-stunting-di-pidie-turun/index.html

[19] Soekidjo Notoadmojo. (2012). *Metodologi Penelitian*. Jakarta Rineka Cipta.

[20] Susanti, S. (2019). Determinan Kekambuhan Pasien Gangguan Jiwa Yang Dirawat Keluarga Di Wilayah Kerja Uptd Puskesmas Suak Ribee Aceh Barat. *Majalah Kesehatan Masyarakat Aceh (MaKMA)*, *2*(1), 99. https://doi.org/10.32672/makma.v2i1.887

[21] Yurisa, W. (2008). *Etika penelitian kesehatan*. https://docplayer.info/31768459-Etika-penelitian-kesehatan.html