Net Living Health and Behaviour is The Dominant Factor Affecting The Incidence of Stunting in Pidie District, Aceh

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Abstract: Stunting is a condition of failing to grow caused by unbalanced height/age. This study aims to determine the risk factors of stunting events in toddlers in PUSKESMAS Reube, Pidie, Aceh Province. This study method is descriptive with a crossectional design. The population is mothers who have children aged 24-29 months. The sampling technique is cluster sampling. Factors affecting stunting are Net living healthy behavior (NLHB) (4.52 CI95% 0.95-21.5), Infectious diseases (1.35 CI95% 1.25-2.98), First 1000 days of life (2.40 CI95% 0.41-14%), and The role of health workers (2.16 CI95% 0.63-7.38). It is expected that PUSKESMAS officers can improve information related to stunting, the application of proper hygiene, healthy living habits, and provide adequate dietary information to parents, especially mothers with stunting toddlers.

Keywords: Stunting, Toddler, Net Living heathy and Behaviour (NLHB), 1000 Days of life

Introduction

Stunting is a condition that describes malnutrition's status with chronic properties in the period of growth and development of children—since the beginning of life, presented with a z-score value of height according to age < -2 SD based on growth standards. According to World Health Organization (WHO), Indonesia is included in the third country with the highest prevalence in the Southeast Asia/South-East Asia Regional (SEAR) region. The average majority of stunting in Indonesia in 2005-2017 was 36.4%. Based on PSG (*Penilaian Status Gizi*) in 2015-2017, the prevalence rate of stunting in Aceh increased every year, namely in 2015 (31.6%) 2016 (26.4%) in 2017 (35.7%), four areas have the highest stunting prevalence in Aceh, namely Subussalam Regency (47.3%), South Aceh (44.9%), Pidie (43.7%) and East Aceh (44.6%)[1].

Child development is influenced by genetics and the environment. Most of the nutritional problems that occur in the world are malnutrition which is the leading cause of lack of eating. Direct and indirect causes influence growth[6]. Pidie District ranked number three highest (43.7%) stunting events in Aceh province after Subussalam and South Aceh districts. The 26 working areas of PUSKESMAS in Pidie District showed the highest prevalence of stunting in PUSKESMAS Reubee with 140 cases, followed by Tangse Health Center with 128 instances, Kembang Tanjong Health Center with 121 cases, Indrajaya Health Center with 115 patients, and Puskesmas Sakti 105 cases. This is a concern where the percentage of stunting toddlers in the working area of Puskesmas Reubee in 2019 is 19.1%[3].

Stunting is a cumulative process and is caused by insufficient nutrients or recurrent infectious diseases, or both. Stunting can also occur before birth and is caused by an inadequate nutritional intake during pregnancy, a deficient diet, and low quality of food in line with the frequency of infection to inhibit growth[4]. Many studies show that poverty, sanitation, and environmental health are other factors that have consequences of stunting in toddlers. Also, low maternal education and knowledge have a significant effect on stunting events in toddlers[5].

Methods

This research is descriptive analytics with a cross-sectional design, where independent variables and dependent variables are examined simultaneously at the time of analysis. This study's population was all mothers who had toddlers aged 24-59 months who were domiciled in the working area of Puskesmas Reubee, which is 686 respondents. This study's sample was 87 respondents with the sampling method chosen is Cluster sampling with the technical cluster is to take 15 villages from 21 villages. The sample was chosen randomly, and the researchers used a lottery technique to take a small roll of paper inscribed with the village's name. The name of the town listed on the paper roll that was taken is the place of this research. Samples are also conducted by determining inclusion and exclusion criteria.

Variable stunting, clean and healthy living behaviors 1000 HPK, Infectious diseases, and health workers' role. Stunting indicator is to look at the Z score for the category of stunting is If from the measuring result Height / Age $<$-2 SD up to $\leq$ -3 SD and normal If from the measured results Height / Age $\geq$-2 SD to $>$ 2 SD. Net living and healthy behaviors are categorized into Households with net living and healthy behaviors that qualify if the score $\geq$6, and not net living and healthy behaviors if the household is not eligible if the score $<$ the first 6. 1000 days of life are categorized as there (if there are preventive efforts in the first 1000 days of life: score $\geq$6) and classified as non-existent (if no preventive measures are made in the first 1000 days of life: score $<$6), Infectious diseases are classified as existing (if ever suffering from ARI and or diarrhea in the last three months) and none (if not suffering from ARI and or diarrhea in the previous three months), The role of health workers are categorized as playing a role if there is the involvement of the part of health workers in the community $\geq$ 4 and does not play a role if there is no involvement of the role of health workers in the community $<$ 4.

Result

The results of the study are described by univariate, bivariate and multivariate analysis. Univariate analysis shows a picture of the frequency distribution of variables studied by both dependent and independent variables. Following, we will show our research results by distribution frequency on table 1.

Table 1. Distribution frequency

Variable	Frequency	Percentage (%)
Characteristics of Respondents		
20-30 Years	11	17,7
31-40 Tahun	44	70,9
>40 Tahun	7	11,3
Tooldres age		
24-30 Month	19	30,6
31-40 Month	10	16,1
41-50 Month	19	30,6
50-59 Month	14	22,5
Sex		
Male	30	48,4
Female	32	51,6
Nutritional Status		
< -2 (HAZ)	40	64,5
> -2 (HAZ)	22	35,4
Net Living Healthy Behaviour		
Doing NLHB	29	46,7
Not doing NLHB	33	53,2
100 Days of Life		
existent	23	37,1
Not existent	39	62,9
Infectious Disease		
Yes	35	56,4
No	27	43,5
Community Health Workers		
Role of health workers	34	54,8
no role of health workers	28	45,1

Source : Data Analysis

Based on table 1 above shows that the majority of toddlers with normal category (35.4%), the majority of toddlers who have PHBS (46.7%), the majority of toddlers who get prevention efforts 1000 HPK (37.1%), the majority of toddlers who do not have infectious diseases (43.5%), and the majority of health workers who play a role (54.8%). Here we will show the table of results of crosstabulation between independent and dependent variables. Follow table 2 below.

Table 2. Statistical Test Results Using Chi-Square With Margin of Error 95%

Variable		Stunting		P value	OR
		<-2 SD	>-2SD		(CI:95%)
1. NLHB	Doing NLHB	12 (41,3)	17 (58,6)	0,001	4,25
	Not Doing NLHB	28 (84,8)	5 (15,1)		(0,95-21,5)
2. 100 Days of Life	Existent	9 (39,1)	14 (60,8)	0,001	2,40

		Not existent	31 (79,50)	8 (20,5)		(0,41-14,0)
3.	Infectious Disease	Yes	27 (77,1)	8 (22,8)	0,018	4,25
		No	13 (48,1)	14 (51,8)		(0,95-21,5)
4.	Community Health Worker	Role	19 (55,8)	15 (44,1)	0,117	-
		No role	21 (75,0)	7 (25,0)		

Source : Data Analysis

Table 3. Multivariate analysis of the factors associated with stunting

No	Variable	OR	CI 95% Lower	Upper	p *value*
1.	NLHB	4,52	0,95	21.5	0.058
2.	100 Days of Life	2,40	0,41	14,0	0,330
3.	Infectious Disease	0,09	0,18	4,68	0,925
4.	Community Health Worker	2,16	0,63	7,38	0,217

Source : Data Analysis

Discussion

Based on the results of the analysis obtained from the chi-square test obtained, a value of p-value 0.001<0.05 shows that statistically, there is a relationship between NLHB and stunting events Reubee Health's working area Center Pidie District in 2020. Multivariate test results showed that NLHB dominantly influenced stunting incidence in toddlers (OR 7.93). This research is in line with that conducted by Nurgina et al. in their study shows a link between hygiene practices and stunting events.

Health behavior is a person's response to stimulus-related illness and disease, health care system, food, and environment. who can know changes in health behavior in a person through perception. Perception is an experience produced through the five senses. The biological aspect of behavior is an activity or activity of the organism or living being concerned. The basis of people behaving is influenced by values, attitudes, and education[7]. Chamilia research (2016) in the group of stunting toddlers more toddlers who were fostered with poor hygiene with a percentage of 75.8%, while in the group of toddlers did not stunting most toddlers facilitated with good hygiene that is with a rate of 60.6% [8].

Another result of this study is the relationship between 1000 days of life with stunting events. This study's results are in line with Haeriyanti's research (2016), showing most mothers have behaviors that do not apply 1000 days of life appropriately. The most critical first step is the fulfillment of nutrition in children early, even while still in the womb. This period starts from the pregnancy phase (270 days) to the child aged two years/730 days[10].

Another result is the relationship between infectious diseases and stunting events in the Reubee PUSKESMAS area of Pidie District in 2020. This is in line with Dedi's research (2012), showing that there is a correlation between the history of infectious diseases and stunting events11. Research conducted by Nasikhah et al. (2012) on the risk factors of stunting events in toddlers aged 24-59 months in East Semarang District using bivariate analysis shows that a history of acute diarrhea is a risk factor for stunting events (p=0.011). It also shows that toddlers

who often experience infectious diseases such as acute diarrhea will be at risk of stunting. Based on the findings in the field, it is known that 63% of toddlers have infectious diseases such as diarrhea, ISPA, and disability to disrupt the growth of children[12].

Infectious diseases are common and easily contagious infections in children. The condition is also relatively mild, where the fever that accompanies the cold cough lasts for 2-3 days. Upper respiratory tract infections can heal on their own in a short period. In this study, the symptoms of respiratory diseases that occur may not affect the appetite so as not to degrade the child's nutritional status[13].

Our latest findings show no link between health workers' role and stunting events in The Reubee Health Center Pidie district's working area in 2020. According to Yusdraif (2017), the role is something that the environment expects done person or a group of people because his position will put a risk on the environment. While a health worker is someone responsible for providing health services to individuals, families, and communities[15].

Health promotion is an approach to increase people's willingness and ability to maintain and improve health. This approach is carried out to the community by public health promotion workers in PUSKESMAS with health campaign activities by disseminating health information (counseling) for community groups, individuals, and families[16]. The lack of involvement of health workers with mothers in providing nutritional promotion during pregnancy impacts others on maternal and child knowledge.[18] Therefore, efforts are needed to prevent stunting in toddlers either directly or indirectly involving across sectors and communities in the provision of food, clean water, and sanitation, poverty alleviation, education, social and so on[17].

To realize a small and prosperous family, this integrated service post (Posyandu) is a meeting point between professional services from health workers and community participation in tackling public health problems. Therefore, Posyandu is a place to get essential services, especially in health and family planning managed by the community. This program is implemented by cadres who have been trained in health and family planning. Health cadres are the embodiment of the community's active participation in integrated services[14].

Conclusion

Our study found that there is an influence of NLHB on stunting in our field of study. We have an assumption that in the place where we do research, there are still many residents/communities who do not understand the importance of protecting the surrounding environment to avoid infectious diseases. Therefore, we strongly recommend that socialization about NLHB be conducted in PUSKESMAS where we study.

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