

## Risk Factor About Stunting Among Toddlers Aged 24-59 Months in Sabang City

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### Abstract

Stunting is a difficult problem faced by all countries today. Data shows that in 2017 the stunting rate reached 22.2%, or about 150.8 million toddlers experienced stunting. In this study, we used a cross-sectional research design with a total sample of 1489 people. Our results showed 61.9% of toddlers suffered from stunting, 69.8% of respondents with good health care patterns, 74.6% of respondents who had a history of infectious diseases in the existing category, 58.7% of respondents with NLHB in the poor category, and 74.6%. The category of respondents to the information media that ever existed. those at risk of stunting are health patterns (p-value = 0.017), history of infectious diseases (value p = 0.020) and NLHB (value p = 0.031).

**Keywords:** Stunting; Parenting Style; NLHB (Net Living Health and Behaviour); Infectious Disease; information media

### Introduction

Stunting is global problems causes nutritional deficiency. An imbalance causes stunting in the diet. In 2017, there were 150.8 million cases of stunting found in the world. Data shows that in 2017 the stunting rate reached 22.2%, or about 150.8 million toddlers experienced stunting This result indicates a big stunting problem in the Southeast Asia region, especially Indonesia (Pusdatin, 2018). Linear height growth is considered the best indicator of child health for measuring imbalances in growth and development. (Ministry of Health, 2016). Based on the initial survey, it was found that the incidence of stunting in PUSKESMAS Sukakarya was due to the lack of public awareness about stunting (Dinkes Sabang, 2019). According to Ni'mah khoirun, et al. (2015), risk factors associated to stunting events are birth length, malnutrition, history of infectious diseases, family income, maternal education, and nutritional intake knowledge. But there needs to be an integrated and multisectoral program to tackle stunting in toddlers.

According to Solin Angina Rohdalya *et al.*, (2019), the history of infectious diseases shows that toddlers' age characteristics are 12-36 months, as much as 76.4%. The study results of the incidence of

diarrhea and stunting showed results that as much as (93.3%) who often experience diarrhea and stunting. In comparison, those who often experience ISPA with stunting (83.3%).

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### Methods

This study is a type of descriptive-analytical research, dependent variables, and independently researched simultaneously at the time of the study. Researcher chose the Cross-sectional design because the faster it delivers results, fewer research subjects, and can be used to identify various risk factors at once in a single study.

The population is the entire subject of research (Arikunto, 2014). We used all toddlers stunting and not stunting in were sample at the PUSKESMAS. Sukakarya, as many as 149 people were collected. Samples represent a population taken through specific means with certain, clear, and complete characteristics considered to represent the population (Arikunto, 2014). The sample in this study was a small part of the total number of toddlers who have 24-59 months, which is as many as 63 people.

## Results

**Tabel 1.** Respondent Frequency Distribution based on Respondent

Characteristic	Frequency	Percentage (%)
<b>Stunting</b>		
Yes	24	38,1
No	39	61,9
<b>Health Care Pattern</b>		
Good	44	69,8
Not good	19	30,2
<b>Infectious Disease</b>		
Yes	47	74,6
No	16	25,4
<b>NLHB</b>		
Good	26	41,3
Not Good	37	58,7
<b>Information Media</b>		
Received	47	74,6
No Received	16	25,4

Source : Primary Data (Processed in 2020)

The univariate analysis results above, namely the number of samples with stunting nutritional status of 38.1% and models with the regular dietary rate of 61.9%. The example was mainly with a good health care pattern of 69.8%, and there was a history of infectious diseases of 74.6%. The sample that did NLHB well was 41.3%, and the selection that had been informed stunting through the media was 74.6%.

The analysis consists of health care patterns, infectious disease history, NLHB, and information media. In this study, the statistical test used is the chi-square test, follow table 2. below :

**Tabel 2.** Bivariate Analysis

Independent Variabel	Stunting				P-value
	Yes		No		
	N	%	N	%	

<b>Health Care Pattern</b>					
Good	21	47,7	23	52,3	0,017
Not Good	3	15,8	16	84,2	
<b>Infectious Disease</b>					
Yes	14	29,8	33	70,2	0,020
No	10	62,5	6	37,5	
<b>NLHB</b>					
Yes	14	53,8	12	46,2	0,031
No	10	27,0	27	73,0	
<b>Information Media</b>					
Receive	17	36,2	30	63,8	0,950
No Receive	7	43,8	9	56,2	

Source : Primary Data (Processed in 2020)

The result of this study showed that good category parenting patterns as much as 52.3%, more significant than toddlers who did not share stunting (average) with a good parenting pattern of only 47.7%. While toddlers experienced stunting with poor parenting patterns as much as 84.2%, more significant than toddlers who did not share stunting (standard) with a less good category foster pattern of only 15.8%. Chi-square test result obtained a p-value value of 0.017.

The result of this study the percentage of toddlers who experienced stunting with a history of infectious diseases category. There is much as 70.2%, more significant than toddlers who did not share stunting (standard), only 29.8%. Simultaneously, toddlers who did not experience stunting (typical) with a history of infectious diseases were not as much as 62.5% greater than toddlers who participated in stunting, only 37.5%. The p-value obtained after analysis was 0.020.

The result of this study the percentage of toddlers who did not experience stunting (typical) with NLHB good category as much as 53.8%, more significant than toddlers who participated checking only 46.2%. In contrast, toddlers experienced stunting 73.0%, more potent than toddlers who did not share stunting (standard), only 27.0%. Statistical test result obtained a p-value value of 0.020.

Percentage of toddlers who experienced stunting with category information media ever as much as 63.8%, more significant than toddlers who did not share stunting (normal) only 36.2%. In contrast, toddlers who experienced stunting with information media were never as much as 56.2%, more significant than toddlers who did not share stunting (standard), only 43.8%. Chi-square test results with p-value of 0.590.



**Tabel 2.** Multivariate Analysis

Indepent Variable	P value	OR	95% CI
Health Care Pattern	0,023	4,870	1,240-19,119
Infectious Disease	0,024	0,255	0,077-0,836

Source : Primary Data (Processed in 2020)

After being issued gradually, a variable with a significant p-value (lowest p-value) is obtained as a model candidate, namely health care patterns and a history of infectious diseases. Based on the multivariate analysis table above known, the double logistic regression test's final model states the variables associated meaningfully with stunting events are foster health patterns. The variable of health foster patterns obtained or value (Exp B) = 7,693.

## Discussion

### Health Care Pattern

Our study result showed that health care patterns can causes aged 24-59 months in PUSKESMAS Sukakarya Sabang city in 2020 with p-value=0.017. Aramico, et al. (2013) study showed that there is a relationship that the category of poor parenting patterns is at 8.07. In addition, our results also show that stunting can also be caused by low maternal parenting, our analysis shows a p-value of 0.001. Although there are several studies like that done by this research, however, this research is not in line with Renyoet, Brigitte Sarah *et al.*, (2013), showed that parenting is not related, but their study did not explain the parenting style in question. According to Rachmawati (2005), Parenting is any form and process of interaction between parents and children that can affect the individuality of the child and can interfere with the growth and development of the child. Parental interaction in learning to determine the character of the child later. According to Virdani (2015) usually, children who are well cared for by mothers will have an impact on good nutrition. (Virdani, 2015).

### Infectious Disease

In this study, we found that infectious diseases both caused by diarrhea and ARI can affect the growth of toddlers, as evidenced by our analysis in this study that shows p-value 0.002. According to

Solin, A.R *et al.*, (2019). They study showed the same thing with were study. They found that toddlers who have diarrhea with stunting incidence as much as 93.3% with the results obtained P value (0.000) < ( $\alpha = 0.05$ ) states that there is a strong relationship between diarrheal infectious diseases to stunting events in toddlers. But in this section, we differ with Glaudia, P. et al. (2016), which shows the result that there is no correlation between stunting child with diarrhea or (infectious disease). According to them, children who experience stunting can be caused by many factors. Diarrhea or diarrhea that occurs in the child only lasts 1/2 day, so it does not impact stunting. (Gibney, 2016). According to Picauly (2013), children stunting is caused by infectious diseases. Then the condition must occur and last a long time to ascertain and analyze risk factors.

### Dominant Factors

At the end of this section, we will explain that the magnitude of NLHB influence on stunting. We found that people who had unhealthy and unclean lifestyles would have a chance of being inhibited. We also compare with some other pins, as did Munawaroh in 2015. Their results showed that there is a robust correlation between NLHB and independent variables, namely stunting. correlation test relationship product-moment behavior NLHB with nutritional status wight-for-height obtained p-value of 0.030. Schmidt and Charles (2014) stated that the short status (edit) improves nutritional interventions and requires prevention efforts and a life-in-life approach with sanitation and environmental hygiene. One of the factors of Clean and Healthy Living Behavior is the sanitary and ecological hygiene factors.

Based on the chi-square statistical test results, it can be concluded that there is no relationship of information media with stunting incidents in toddlers aged 24-59 months in the working area of the center of gold and Sabang city in 2020 (p-value=0.590). According to researchers, there is no link between the information media and stunting events. Parents who have been informed about stunting can make stunting prevention efforts to reduce the percentage of stunting. On the contrary, parents who never get information about stunting will be less aware of who can prevent stunting, so the number of stunting events increases.

The use of print/visual media produced through mechanical and photographic processes only stimulates the eye's senses (vision). On the other hand, electronics and mechanics can produce optical media by delivering accurate information with both



sound and vision to provide strength in both hearing and vision (Setiawati, 2018).

In this study we prove from the calculation of logistic regression as our analysis unit of several factors related to short in PUSKESMAS Sukakarya. It is known that the most dominant factor influencing stunting events is the pattern of foster health. The greater the OR of a variable, the more likely these risk factors cause toddlers to experience stunting.

## Conclusion

The conclusions in this study show that there is a link between Health Foster Patterns, History of Infectious Diseases, and NLHB to stunting events conducted in PUSKESMAS Sukakarya Sabang city. Still, there is no connection between the Information Media and stunting events in toddlers aged 24-59 months in the working area. The most influential variable in this study is the Health Foster Pattern

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## Author Contribution and Competing Interest

The first researcher has the largest contribution in this research, starting from the preparation of the proposal to the report of the research results. The second and third writers have contributed in collecting the data, processing and assisting the first writer in completing this article. The author assures that there is no conflict of interest in the activities and preparation of this report.

## Publisher's Note

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