



## The Relationship of Food Intake and Mother's Parenting Patterns With the Incident of Stunting in Toddlers

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**Abstract.** *Stunting occurs when a child's height is lower than average age due to poor growth caused by chronic malnutrition, which occurs when a child's nutritional intake is insufficient for a long period of time. Stunting may have direct and indirect causes. Direct reasons include inadequate nutrition, while indirect causes include parenting. Food consumption is a habit that improves the body's nutritional state in a measurable way. Objective: This research is to determine the relationship between food intake and maternal parenting patterns with the incidence of stunting in toddlers at the Romana Clinic in 2024. Method: Quantitative, observational, cross-sectional techniques were used in this research. The months June to July 2024 were used for this research. Primary data and secondary data are two categories of data. Data were analyzed using the chi-square test for bivariate and univariate analysis. Research results: These findings show a significant correlation ( $p$  value = 0.000 < 0.05) between food consumption and the incidence of stunting.  $P$  value = 0.002 < 0.05, indicating a relationship between maternal parenting and the incidence of stunting. Conclusion: There is a strong correlation between calorie consumption and stunting. Parental involvement is significantly related to stunting levels. Suggestion: We hope that posyandu cadres and community health center officials in the study locations gain a deeper appreciation of the role parents play in monitoring the dietary needs of their toddlers.*

**Keywords:** *Food Intake, Parenting Patterns, and Stunting.*

### 1. INTRODUCTION

Among the many underdeveloped countries where stunting is common is Indonesia (UNICEF, 2017). When children do not get enough food for a long period of time, it can cause developmental abnormalities such as stunting, where they appear shorter than their peers (RI Ministry of Health, 2018). Developing countries are not the only ones paying attention to the problem of malnutrition around the world. Micronutrient deficiencies and stunting, defined as a height/length ratio below 2 standard deviations for the child's age, are examples of such dietary problems (Unicef, Child Malnutrition & COVID-19, 2020).

In its 2022 report, the World Health Organization revealed that of all children “under 5 years of age, 149.2 million are stunted, 45.4 million are underweight, and 38.9 million are overweight. With the exception of Africa, the global trend for stunted children is declining.” Of the “151 million children under the age of five who are stunted, 51 million are in Southeast Asia and Africa”; of them, 75% are in Africa and Asia (World Health Organization, 2022).

Based on an excerpt from the 2020 Sumatera Utara Health Service Performance Report, it is said that the stunting indicator goal for Sumatera Utara is 28% and 19% can be achieved, representing a percentage of 132.14% or the very superior category. Although there were some strange changes in the percentage of children with stunting in Sumatera Utara

between 2017 and 2020, the results were generally good. The first criterion, the proportion of stunted toddlers in Sumatera Utara jumped from 32% in 2017 to 37% in 2018, a significant increase. A significant decrease of 19.5% occurred in 2020, after a decrease of 22.55% in 2019. (Sumatera Utara Health Service, 2020).

The results of the initial survey that the author conducted directly in the field by interviewing several mothers of toddlers, among the 5 mothers of toddlers who had been interviewed, 2 mothers of toddlers whose children experienced stunting said that they had never given exclusive breast milk to their children, while 1 mother of toddlers who had not experiencing stunting said that her child was still less willing to eat rice and more often ate stall snacks, while 1 mother of a toddler who did not experience stunting said that her child had difficulty consuming nutritious food and if she wanted to eat she would only eat instant noodles. and 1 other mother of a toddler whose child is stunted does not know the correct type of food intake to give to her child. Based on the results of the preliminary survey, researchers are interested in conducting research on the relationship between food intake and mother's parenting patterns with the incidence of stunting in toddlers at Romana Clinic in 2024.

## **2. RESEARCH METHODS**

This research uses a cross-sectional design and is based on observations. The aim of this research is to examine the relationship between stunting in toddlers and factors such as maternal parenting and children's eating habits. Up to 1,155 children from the Romana Clinic in Pancur Batu District are study population, according to the latest data available in June 2023, 92 toddlers were used as samples in the sample size calculation using the Mifflin St. formula. Jeor. There are two factors in this study that are considered independent. These variables are responsible for causing the dependent, dependent variable to appear or change. In this study, parenting patterns and food consumption were independent factors. Data administration is facilitated by computer equipment. If the p-value is less than 0.05, it means the independent and dependent variables are related.

## **3. RESULTS**

It was found that the frequency of the most dominant age characteristics of toddlers was between the ages of 51 and 60 months, there were 22 participants, representing 23.9% of the total, and 27 participants, representing 29.3% of the total, in the age range 31-40 months. . Of the total respondents, 47 (or 51.1% of the total) identified as female, while 45 (or 48.9% of the total) identified as male. The frequency of nutritional status for Alita with stunted

toddlers was 32 people with a percentage of 34.8%, and non-stunted toddlers were 60 people with a percentage of 65.2%.

**Table 1. Frequency distribution of maternal parenting patterns at the Romana Clinic.**

Parenting	Frequency	Percentage %
Good	49	53.3
Not good	43	46.7
<b>Total</b>	<b>92</b>	<b>100.0</b>

According to the data total number of respondents, 49 (or 53.3% of the total) had good parenting patterns and 43 (or 46.7% of the total) had bad parenting patterns. The results show that the nutritional status of toddlers with stunting is 29.3% and those who are not stunted is 29.3%, while those with good food intake have a nutritional status of stunting toddlers as much as 5.4% and those without stunting are 35.8%. The results of "statistical tests using Chi Square test obtained p value = 0.000 < 0.05. So there are results that food intake is significantly related to incidence of stunting in toddlers".

#### 4. DISCUSSION

##### Connection food intake and the incidence of stunting in toddlers at the Romana Clinic

The likelihood of stunting is correlated with the amount of food toddlers eat, according to researchers. Of the 92 samples, 29.3% of parents reported having a stunted toddler with low nutritional status, while 29.3% did not. Meanwhile, for other groups, 5.4% of parents reported their toddlers had high nutritional status, while 35.8% did not.

The result  $p = 0.000 < 0.05$  was obtained from statistical tests using the Chi Square test. Then there are findings that show a strong correlation between toddler food consumption and stunting rates. Stunted toddlers may not eat enough for a variety of reasons, such as lack of hunger, an imbalance in the number of meals per day, or low energy density in their diet. Everything a person eats affects the amount of nutrients they get from food, so what they eat essentially determines their nutritional status.

The statistical test results of this research are in line with the statistical test results of Yuliantini et al. (2022), who also found a p value of 0.001 ( $p < 0.05$ ). In Pulau Jambu Village in 2021, findings show that stunting is much more common in toddlers aged 24-59 months without adequate dietary management.

Of the 29 participants who reported insufficient food intake, 27 (93.1%) experienced stunting and 2 (6.9%), according to research by Aisyah, IS, & Yuniato, AE (2021), did not experience stunting. Meanwhile, seven (63.6%) of the eleven people who reported eating well experienced stunting and four (36.4%) of those who reported not eating well experienced stunting. With the result  $\chi^2 = 0.039 < 0.05$  obtained from the chi-square test, we

can reject  $H_0$  and accept  $H_a$ . As a result, toddler food consumption is associated with stunting.

### **Connection Mother's parenting patterns and the incidence of stunting in toddlers at the Romana Clinic**

Researchers found that of the 92 samples, 10.8% of toddlers whose mothers were parents had stunting nutritional status and 42.3% of toddlers whose mothers were not parents had stunting nutritional status; 22.8% of toddlers whose mothers are not parents have stunted nutritional status. The  $p$  value = 0.002 < 0.05 was obtained from statistical tests carried out using the Chi Square test. Apart from that, there is evidence that links stunting in toddlers with the mother's parenting style. When parents model healthy habits for their children, it shows in their children's resilience, intelligence, and overall well-being. Raising children well can pave the way to a more fulfilling life. In fact, the possibility of stunting in toddlers can be reduced by parents who demonstrate appropriate parenting practices.

This research is in line with research conducted in 2021 by Hannah with the title "The relationship between knowledge, family income and parenting patterns with the incidence of stunting in toddlers in the Pekauman Community Health Center Working Area, Banjarmasin City in 2021". The null hypothesis is rejected because the  $p$  value is 0.000  $\alpha$  (0.05) obtained from the chi-square test. In the specified study area, this shows that there is a strong relationship between stunting in toddlers and maternal parenting patterns.

The findings of this study that parenting patterns are significantly related to stunting episodes ( $p=0.00021$ ) are consistent with the findings of Bella et al. (2020). Consistent with this research, private research by et al. (2019) showed a statistically significant correlation ( $p=0.000$ ) between the incidence of stunting and maternal feeding practices. The results of this study are consistent with the results of Rosliana et al. (2020), who found a statistically significant correlation ( $p=0.000$ ) between stunting rates and maternal parenting patterns.

In line with the findings of this research, Ika's (2021) research on the causes and consequences of stunting in children aged 24-59 months in the work area of "Puskesmas Tanjung Agung, Neglasari Village, South Lampung Regency" found a correlation between parental parenting patterns and the prevalence of stunting (values).  $p$  0.000), a result achieved by 53% of study participants.

## **5. CONCLUSION AND SUGGESTION**

### **Conclusion**

Based on the research results, it can be concluded that:

1. "There is a significant relationship between food intake and the incidence of stunting in toddlers at the Romana Clinic, Pancur Batu District."
2. "There is a significant relationship between maternal parenting patterns and the incidence of stunting in toddlers at the Romana Clinic, Pancur Batu District."
3. "There is a relationship between food intake and maternal parenting patterns on the incidence of stunting in toddlers at the Romana Clinic, Pancur Batu district."

### **Suggestion**

1. Educational Institutions For educational institutions, in this case Teuku Umar University, they can use the results of this research in the teaching and learning process.
2. The need for strict monitoring of children's nutritional needs to prevent stunting will be better understood by posyandu cadres and Puskesmas health workers when they learn about the research findings.
3. For respondents
  - Parents, especially mothers, must focus on providing sufficient food for their children. The most critical aspect of nutrition is meeting nutritional needs through a varied and balanced diet.
  - By paying attention to their children's dietary needs at every stage of development, parents, especially mothers who are constantly caring for their children, can ensure that they receive a healthy and well-rounded diet. To prevent the rise of stunting in toddlers, it is hoped that parents of children aged 10-59 months can visit posyandu more often to assess their nutrition for growth and development.
4. The next step for the researchers is to expand their study to include more characteristics that impact the prevalence of stunting in toddlers. They also need to collect more samples from a wider geographic area.

## REFERENCES

- Aisyah, I. S., & Yuniyanto, A. E. (2021). The relationship between energy intake and protein intake with the incidence of stunting in toddlers (24-59 months) in Karanganyar Village, Kawalu District, Tasikmalaya City. *Indonesian Community Health Journal*, 17(1), 240–246.
- Adha, A. S., Bahtiar, N. W., Ibrahim, I. A., Syarfaini, S., & Nildawati, N. (2021). Analysis of the relationship between maternal parenting patterns and the incidence of stunting among toddlers in Jeneponto district. *Indonesian Community Health Journal*.
- Ariyanti, S. (2015). *Analysis of risk factors for stunting incidents in children under five in the Muara Tiga Health Center working area, Pidie Regency* (Master's thesis). Diponegoro University Repository.
- Aulia Hasanah Harahap, A., & Azizi, S. (2020). Description of eating patterns and stunting occurrences in infant children in the Medan Mandala Community Health Center working area. *Indonesian Community Health Journal*.
- Bella, F. D., Fajar, N. A., & Misnaniarti. (2020). The relationship between family parenting patterns and the incidence of stunted toddlers in poor families in Palembang. *Jurnal Epidemiologi Kesehatan Komunitas*, 5(1), 15–22. <https://ejournal2.undip.ac.id/index.php/jekk/article/download/5359/3746>
- Hayat Fattah, A., & Ibrahim, A. (2017). The relationship between parenting patterns and difficult eating behavior in pre-school age children. *JIKP Pencerah Health Scientific Journal*, 6(2), 83–90. <https://stikesmu-sidrap.e-journal.id/JIKP/article/view/96>
- Hutabarat, G. A. (2021). The relationship between knowledge, education, and feeding parenting patterns on the incident of stunting in toddlers aged 36-59 months at the Sigompul Community Health Center (Doctoral dissertation). Public Health Sciences.
- Hasbiah, H. (2021). The relationship between knowledge, family income, and parenting patterns with stunting incidents in toddlers in the Pekauman Community Health Center working area, Banjarmasin City in 2021 (Doctoral dissertation). Kalimantan Islamic University MAB.
- Indonesian Ministry of Health. (2018). *Situation of short toddlers (stunting) in Indonesia*. Jakarta: Author.
- Lenaini, I. (2021). Purposive sampling techniques and snowball sampling. *HISTORY: Journal of History Education Studies, Research & Development*, 6(01), 33–39.
- Rajagukguk, M. (2022). The relationship between knowledge of parenting patterns and eating patterns in toddlers. *Anthropos: Journal of Social and Cultural Anthropology*, 7(2), 204–213.
- Sari, I. Y. (2016). Food consumption and nutritional status of toddlers (24–59 months) in Puger Wetan Fisherman Village, Puger District, Jember Regency [University of Jember]. *Je Universitymber*. <https://repository.unej.ac.id/handle/123456789/77677>

Yuliantini, E., Kamsiah, K., Maigoda, T. C., & Ahmad, A. (2022). Food intake and stunting incidence in fishing families in Bengkulu City. *AcTion: Sumatera Utara Nutrition Journal*, 7(1), 79–88.

World Health Organization. (2021). *Pneumonia*. Retrieved January 28, 2022, from <https://www.who.int/news-room/fact-sheets/detail/pneumonia>