



Analysis of The Relationship Between Personal Hygiene Practices of Mothers and Toddlers with The Incidence of Stunting in Paluh Sibaji Village, Pantai Labu Sub-District

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ABSTRACT

Deli Serdang Regency is a region that contributes to stunting rates in North Sumatra Province, with a stunting prevalence of 13.9% in 2022, a 1.4% increase from 2021. Personal hygiene is an individual factor that can contribute to stunting when associated with infectious triggers. This study aims to analyze the relationship between maternal and toddler personal hygiene and stunting in toddlers in Paluh Sibaji Village. This type of research is analytical with a cross-sectional study design. The population is 375 mothers with a sample size of 141 calculated based on the Lameshow formula using cluster sampling techniques. The chi-square test results showed that maternal personal hygiene had a p-value of 0.567, while toddler personal hygiene had a p-value of 0.228. The results showed no significant relationship between maternal and toddler personal hygiene and stunting. Stunting is caused by other factors not studied. Recommendations for mothers of toddlers include meeting protein needs and maintaining personal hygiene.

Kabupaten Deli Serdang merupakan wilayah dengan penyumbang angka stunting di Provinsi Sumatera Utara dengan prevalensi stunting sebesar 13,9% pada Tahun 2022 dan angka ini mengalami kenaikan sebesar 1,4% dari tahun 2021. Personal hygiene merupakan faktor individu yang dapat berkontribusi terhadap kejadian stunting jika dikaitkan dengan pencetus infeksi. Penelitian ini bertujuan untuk menganalisis hubungan personal hygiene ibu dan balita dengan kejadian stunting pada balita di Desa Paluh Sibaji. Jenis penelitian ini adalah analitik dengan desain studi cross sectional. Populasi adalah ibu yang memiliki balita sejumlah 375 dengan jumlah sampel 141 yang dihitung berdasarkan rumus lameshow menggunakan teknik cluster sampling. Hasil uji chi square menunjukkan variabel personal hygiene ibu memiliki nilai (p-value =0,567) dan personal hygiene balita (p-value=0,228). Hasil penelitian menunjukkan tidak ada hubungan yang signifikan antara personal hygiene ibu dan balita dengan kejadian stunting. Stunting disebabkan oleh faktor lain yang tidak diteliti. Saran bagi ibu balita agar memenuhi kebutuhan protein dan tetap menjaga personal hygiene.

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1. Introduction

Public health issues are fundamental to realizing Advanced Indonesia 2045. Stunting is a disease that many toddlers face in Indonesia and is currently a government focus. Stunting is a government target issue in realizing the Golden

Indonesia program, which requires a quality young generation. Delayed growth in early childhood, especially during the first 1,000 days from conception to age two, will negatively impact a child's functionality. Stunting not only increases the risk of death in children but also increases the risk of impaired motor skill development,

infectious diseases, decreases interest in learning in school, and impairs children's productivity as adults (Paskalia et al., 2020).

Malnutrition will be eradicated by 2030, in accordance with SDG target number two. As many as 87 million stunted children live in Asia. The Indonesian Nutritional Status Survey (SSGI) reported that the prevalence of stunting in Indonesia in 2022 was 21.6%, and in North Sumatra, the prevalence was 15.8%. North Sumatra still has red-flagged districts/cities, indicating that the prevalence of stunting in the region remains above 30%. North Sumatra is among 12 provinces prioritized for stunting reduction (Ministry of Health, 2022).

The results of the Indonesian Nutritional Status Study (SSGI) in 2022 recorded a stunting prevalence in Deli Serdang Regency of 13.9%, and this figure has increased by 1.4% since 2021. Deli Serdang Regency has 25 districts that are priority locations for stunting, one of which is Pantai Labu District, located in the coastal area, ranked 9th out of 10 Deli Serdang districts with stunting cases. The initial survey results obtained data on 60 cases based on data from the Pantai Labu District Health Center, which covers several villages, including Paluh Sibaji Village with 10 cases.

Risk factors for stunting include low food availability at the family level, poor hygiene, poor sanitation, inadequate nutritional intake, and several social factors. Personal hygiene, nutrition, and environmental sanitation are crucial factors in addressing malnutrition. Poor hygiene practices can make children susceptible to infectious diseases, which ultimately hinder the absorption of essential nutrients for growth and development (Aisah, 2019). Poor hygiene standards, such as poor handwashing habits with soap and proper steps, can also increase the incidence of infectious diseases such as diarrhea (Ministry of Health of the Republic of Indonesia, 2018). Prolonged infections without treatment can lead to stunting (Rismawatiningsih, 2022).

The reason for choosing this location as the research locus is based on the consideration that Paluh Sibaji Village is one of the villages in Deli Serdang Regency, North Sumatra Province with a high number of cases of stunting in toddlers and requires assistance in resolving health problems, especially regarding handling nutritional problems.

Mothers' hygiene practices that do not maintain hand hygiene when breastfeeding or preparing and processing food for their toddlers can cause food consumed by toddlers to be contaminated with pathogenic bacteria and result in impaired absorption of toddler nutrients. Regarding this background, researchers are interested in conducting research on the relationship between personal hygiene and the incidence of stunting in toddlers in Paluh Sibaji Village.

2. Methods

This type of research is an analytical survey with a cross-sectional research design, where data on community characteristics and potential stunting are collected. and personal hygiene behavior were collected simultaneously. The study was conducted for five months in Paluh Sibaji Village, Pantai Labu District, Deli Serdang Regency. Data were analyzed univariately and bivariately, including personal hygiene data and stunting cases. The Chi-Square test with a significance level of 95% (Norfai, 2019).

The population were all mothers who had toddlers who lived in 4 hamlets of Paluh Sibaji village (375 mothers), with a sample of 141. Sampling was carried out using the cluster sampling technique.

3. Results

A total of 141 mothers with toddlers were sampled in this study, spread across four hamlets. The following data on the characteristics of mothers and toddlers in Paluh Sibaji Village is displayed in Table 1.

Based on Table 1, the distribution of respondents based on the characteristics of the mother's age when married was mostly <21 years old, as many as 86 mothers (61%), based on parity, the most were secondary, as many as 99 mothers (70.2%), while based on the distance between pregnancies and previous children, the most were ≥ 2 years, as many as 95 mothers (92.2%), based on occupation, the majority of mothers were unemployed, as many as 97 mothers (68.2%), the most family income was below the UMK of Deli Serdang Regency (<3,400,000), namely 131 mothers (92.9%), the majority of mothers' educational background was middle, as many as 72 mothers (51.1 %).

Table 1. Characteristics of Mothers and Toddlers

Variables	n=	%
	141	
Mother's age at marriage		
< 21 Years	86	61
≥ 21 Years	55	39
Parity		
Primipara (first child)	38	27.0
Secundy (second child)	99	70.2
Multipara (number of children >2)	4	2.8
Pregnancy interval with previous child		
< 2 years	8	7.8
≥ 2 years	95	92.2
Work		
Work	44	31.2
Doesn't work	97	68.2
Income		
Below the Deli Serdang UMK (<Rp. 3,400,015)	131	92.9
Above the Deli Serdang UMK (≥Rp. 3,400,015)	10	7.1
Education		
Base	60	42.6
Intermediate	72	51.1
Tall	9	6.4

Based on Table 2, it shows the distribution of respondents based on the incidence of stunting. Of the 141 mothers who have toddlers, 118 toddlers (83.7%) were not stunted, while 23 toddlers (16.3%) experienced stunting.

Table 2. Distribution of Stunting Incidents

Toddler Stunting	n	%
No Stunting	118	83.7
Stunting	23	16.3

The statistical test results in Table 3 show that maternal and toddler personal hygiene variables are not associated with stunting in toddlers in Paluh Sibaji Village ($p > 0.05$). This indicates that stunting in Paluh Sibaji Village is caused by other risk factors.

Table 3. Relationship between Mother and Toddler Personal Hygiene and the Incidence of Stunting

Variables	Stunting		No-Stunting		P
	n	%	n	%	
Mother's Personal Hygiene					
Bad	8	19.0	34	81.0	0.567
Good	15	15.2	84	84.8	
Toddlers Personal Hygiene					
Bad	6	25.0	18	81.0	0.228
Good	17	14.5	100	85.5	

The statistical test results in Table 3 show that maternal and toddler personal hygiene variables are not associated with stunting in toddlers in Paluh Sibaji Village ($p > 0.05$). This indicates that stunting in Paluh Sibaji Village is caused by other risk factors.

4. Discussion

Nutritional problems can be caused by various factors, one of which is due to unhygienic behavior that can lead to infectious diseases (WHO, 2019). Personal hygiene is a self-care action that aims to maintain personal cleanliness to avoid various diseases. Hygiene efforts can prevent diseases caused by bacterial germs. Maintaining personal

hygiene is an important effort both for oneself and others (Vitriawati & Arradini, 2019). Maternal personal hygiene behaviors include the habit of washing hands with soap, keeping fingernails clean, and feeding toddlers, including food processing, including eating habits, which can affect toddlers' health.

The results of this study indicate that maternal personal hygiene is not associated with stunting in toddlers ($p = 0.567$). This finding aligns with research conducted by Nisa and Suksesi (2022) in the Kalasan Community Health Center, Sleman Regency, which found that hygiene practices were not associated with stunting. ($p = 1.000$). This is because hygiene practices such as washing hands with soap have been practiced correctly by the

majority of respondents.

This study contrasts with research conducted by Aisah (2019) in Wukirsari Village, Cangkringan District, which found a significant relationship between personal hygiene and stunting ($p=0.000$). This significant result is due to the fact that the majority of mothers with toddlers wash their hands with soap when they are dirty and after defecating. However, this is not done before feeding, cleaning, or preparing food. Food preparation is crucial and, if not properly carried out and observed, can lead to contamination. Food touched with unwashed hands can become a source of diarrheal germs. Contamination in food will produce pathogenic bacteria that cause disease.

Research conducted in Paluh Sibaji Village found that the majority of respondents had implemented standard hygiene practices for their toddlers. Hygiene habits were well-received by mothers because education about the importance of maintaining health through clean living behaviors had been received and understood by all groups, allowing them to implement them within the family. Education is one way to improve maternal hygiene knowledge. Providing education to mothers with toddlers about the importance of Clean and Healthy Living Behaviors (PHBS), including handwashing with soap (CTPS), and the use of clean running water at all times is an effort to prevent stunting (Audiena et al., 2021).

Personal hygiene in toddlers is also crucial. Not only mothers, but toddlers also need to be supervised by their parents regarding personal hygiene. A toddler's hygiene will depend on the behavior modeled by their caregivers and their surroundings. Children will observe and imitate these habits, so hygiene habits should be instilled as early as possible, hopefully, and will be implemented into adulthood (Zamrodah, 2022).

Personal hygiene in toddlers includes cleanliness of the body, nails, skin, teeth and mouth, as well as cleanliness of toddler clothes. The results of this study indicate that there is no relationship between toddler personal hygiene and the incidence of stunting with a p -value of 0.228 ($p > 0.05$). The results of this study are not in line with research conducted by Anshari (2023) which found that there is a significant relationship between personal hygiene behavior and the incidence of stunting in toddlers in Serakapi Village, Woja

District, Dompu Regency in 2023 with a p value = 0.014 (< 0.05).

Washing hands with soap and running water is linked to preventing stunting and diarrhea in children (Mashar et al., 2021). Hands are a rapid transmitter of germs, which can be transmitted through direct hand-to-hand contact or by touching objects. Poor hygiene in daily life increases the risk of bacterial contamination, which can impact health. Failure to wash hands with soap and touching food or drinks with dirty hands can lead to bacterial contamination, which, if ingested, can cause digestive problems. If not addressed properly and in conjunction with adequate nutritional intake, this can disrupt the digestive system and stunt growth (Pradana et al., 2023).

5. Conclusions

Research result The results showed no significant relationship between maternal and toddler personal hygiene and stunting. Stunting is caused by other factors not studied. Mothers of toddlers are advised to meet their protein needs and maintain personal hygiene.

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