

The Correlation between Parenting Pattern and Stunting in Toddlers Aged 24-36 Months in Percut Sei Tuan District Deli Serdang Regency

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ABSTRACT

Stunting is a major cause of high mortality (mortality) and morbidity (morbidity) in toddlers under five years of age. The Integrated Toddler Nutrition Status Study (SSGBI) and Susenas (2020) explain that the prevalence of stunting in Deli Serdang Regency is 30.97%. The aim of this study is to find the correlation between parent patterns and stunting case at age of 24-36 months toddlers in Percut Sei Tuan District Deli Serdang Regency. This research is a quantitative study with a Cross Sectional Study design. Data analysis used the chi-square test with a sample of 100 mothers with toddlers aged 24-36 months. The results showed that the related variables were exclusive breastfeeding ($p=0.026$), breastfeeding experiences for > 2 years old toddlers ($p=0.026$) and basic immunization ($p=0.017$) with stunting.

KEYWORDS

feeding; disease infection; stunting

INTRODUCTION

Stunting is a condition stunted growth in toddlers under five who have a below normal height when compared to their age. Body measurement is less from the World Health Organization's average growth standards for toddlers (WHO) (Ministry of Health, 2018). Stunting is a major cause of high mortality and in the under 5 years old of the toddlers. Diarrhea and respiratory infections can be serious barrier to human development.

Generally, it is estimated that 162 million toddlers under five experience developmental delays. If this trend continues, it can be estimated that by 2025, 127 million toddlers under five will be stunted. Therefore, to get the goals of the World Health Assembly, the next step is to reduce this number to 100 million by 2025 (WHO, 2014). And reducing stunting rates is still far from the target, so a systematic evaluation of government programs is so needed (Hidayat and Erlyn, 2021).

Based on 2018 World Health Organization (WHO) data in the Ministry of Health (2018) about to avoid stunting in < 5 years old toddlers, Indonesia has 3rd highest of stunting most in Southeast Asia. The average prevalence of stunting among toddlers in Indonesia from 2005 to 2017 was 36.4 percent. In 2017, globally, 150.8 million (22%) toddlers under five were stunted. More than half of the toddlers under five in the world who experience stunting come from Asia (55%) and a third more than 39% come from Africa. Among the 83.6 million stunted toddlers, Asia has the largest proportion from South Asia (58.7%), and the lowest percentage is from Asia (0.9%).

World Bank (2015), malnutrition in toddlers can start early in life, namely when in the womb. Stunting is a sign of chronic malnutrition which adversely affects brain development. Stunting can reduce IQ by 5-11 points, toddlers' performance at school decreases, the weight of toddlers is light or 2,6 times less to continue with a better education, income of stunted

toddlers is 10 percent lower. The condition of stunted toddlers, decreased productivity at a young age, low education level so they will get jobs and low income. When they gain too much weight in old age, they have risk in obesity and other diseases related diet which constitute a double burden of malnutrition.

A child who is stunted tends to find it difficult to reach optimal height in the next period. The risk factor that directly influences stunting is nutrient intake. Adequacy levels of macro and micro nutrients including energy, protein, vitamin A, vitamin C, calcium, iron, zinc, and vitamin D are important components that play a role in child growth.

The United Nations Toddlers' Fund states that nutritional intake, infectious diseases and nutritional status directly affected nutrition status. If the intake of nutrients increases, the nutritional status will also increase and the body's immunity increases so it is not susceptible to disease. Conversely, if the nutrition intake is poor, the body will be more susceptible to disease, especially infectious diseases that cause nutritional problems. In addition, factors indirectly also affect nutritional status such as food availability, parenting patterns, environmental hygiene/ sanitation and health services. The basic things that influence the intake of nutrients and infectious diseases are food availability, sanitation and health services, while the parenting style towards nutritional status apart from indirect factors can also be directly influenced vertically. Then the parenting style must get attention for efforts to improve the nutritional status of toddlers.

Data of Riskesdas 2018, the short and stunted babies in 2018 was 30.8 percent, which means a decrease from 37.2 percent in 2013 and 36.8 percent in 2007. The data shows that the incidence of stunting in Indonesia is still high and has not improved significantly. Meanwhile, WHO stipulates that the stunting rate is no more than 20 percent.

The problem of stunting which is in the spotlight in the province, one of which is North Sumatra, which is 32.39 percent (Riskesdas, 2018). Meanwhile, in 2019, the prevalence in North Sumatra was 30.11%. Based on these data, there are 15 regencies/cities in North Sumatra which are centers for stunting prevention, namely South Nias, Nias, Mandailing Natal, North Padang Lawas, West Nias, Padang Lawas, Dairi, West Pakpak, Central Tapanuli, Simalungun, Deli Serdang, North Nias, Gunung Sitoli, Langkat, and the city of Medan. The location chosen for this research is in Deli Serdang Regency.

Deli Serdang Regency was chosen based on the fact that Deli Serdang is an area that is close to the provincial capital, namely Medan City, Deli Serdang Regency also has abundant natural potential with an area of 2,497.72 km² and the number of sections roads 2,497.72 km² There are 22 roads with the largest road section being the Upstream Sinembah Tanjung Muda (STM) (223.38 km²) and the smallest being Deli Tua District (9.36 km²). This region consists of lowlands which are rich in seafood and livestock products, and highlands/mountains which are rich in agricultural products and plant products, such as vegetables and fruits. However, Deli Serdang Regency still has a high stunting rate of 30.97 percent, down only 6.71 percent from 2013, compared to South Nias, West Nias, Padang Lawas, West Pakpak, Tapanuli Tengan, North Nias, Gunung Sitoli and Langkat .

That survey is out of 30 houses with toddlers aged 24-36 months who were observed, 20 respondents (66.7%) experienced stunting, while 10 respondents (33.3%) were normal in Percut Sei Tuan District, Deli Serdang. So that the authors want to analyze the correlation between parenting patterns and stunting in toddlers aged 24-36 months in Percut Sei Tuan District, Deli Serdang Regency.

RESEARCH METHODS

This research is a quantitative study with a Cross Sectional Study design. The population in this study were toddlers aged 24-36 months who lived in the Percut Sei Tuan District, Deli

Serdang Regency. The sample was 100 people. Inclusion criteria: 1). Domiciled in the Percut Tuan District, Deli Serdang Regency and share the same house with their parents; 2). Mothers who have toddlers aged 24-36 months who live permanently in Percut Tuan District, Deli Serdang Regency; 3). Toddlers who have a book on maternal and child health (MCH); 4). Willing to be a respondent. Exclusion criteria is Toddlers with physical disabilities. Method of collecting data use two methods. They are Primary data that obtained directly from the results of interviews using questionnaires and observations by researchers directly to respondents regarding the incidence of Stunting and Secondary data that obtained from stunting data on toddlers obtained from Deli Serdang Regency Health Office in 2021. Dependent Variable is a Stunting events with using observation as a measurement tool. Further categorized into normal and Stunts.

Independent Variable

1. Exclusive breastfeeding histories: Exclusive breastfeeding and Not Exclusive Breastfeeding
2. Breastfeeding for 2 years old toddlers: Yes and No
3. Giving Complimentary food: >6 Months and ≤6 Months
4. Completing Basic Immunization: Complete and Incomplet
5. Infectious Diseases Experiences : No and Yes
6. Treatment Seeking: Health Services and Not a Health Service

Data Analysis Method

Univariate analysis

To get an overview of the variables of Feeding Practices (Exclusive Breastfeeding experiences, Breastfeeding for > 2 Years old toddlers, Giving complimentary food), Health Care (Completing Basic Immunization, Infectious Diseases experiences, and Seeking Treatment) and events stunting.

Bivariate Analysis

The variables Feeding Practices (Exclusive Breastfeeding experiences, Breastfeeding for > 2 Years old toddlers, Giving complimentary food), Health Care (Completing Basic Immunization, Infectious Diseases experiences, and Seeking treatment) with variables bound (stunting events). The type of data is categorical with the analysis technique used is chi square. If the p value <0.05 means there is a significant relationship between the two variables.

RESULTS AND DISCUSSION

Univariate Analysis Results

Frequency Distribution of Feeding Practices (Exclusive breastfeeding, breastfeeding to 2 years old toddlers, giving complimentary food), Health Care (Complete basic immunization, infectious diseases experiences and seeking treatment) and stunting case in 24-36 months toddlers living in Percut Sei Tuan District, Deli Serdang Regency.

Table 1. Univariate Analysis Result

Variable	n=100	Percentage (%)
Exclusive breastfeeding		
Exclusive breastfeeding	45	45
Not Exclusive breastfeeding	55	55

Breastfeeding to > 2 years old toddlers		
Yes	51	51
No	49	49
Giving complementary food		
>6 months	45	45
≤6 months	55	55
Completing basic immunization history		
Complete	44	44
Incomplete	56	56
Infectious diseases experiences		
Not	46	46
Yes	54	54
Treatment seeking		
Health services	96	96
Not health Services	4	4
Stunting events		
Normal	37	37
stunting	63	63

In the variable history of exclusive breastfeeding, 45 respondents (45%) fed the exclusive breastfeeding, while 55 respondents (55%) did not fed the exclusive breastfeeding. Based on the variable mother gave breastfeeding > 2 Years old toddlers, it was found that as many as 51 respondents (51%), while the category that did not gave breastfeeding to > 2 years old toddlers was 49 respondents (49%). Based on the Complementary Feeding variable, 45 respondents (45%) were in the category >6 months, while the ≤ 6 months category had 56 respondents (56%). Based on the Basic Immunization variable, the complete category was obtained by 44 respondents (44%), while the incomplete category was 56 respondents (56%). Based on the variable Infectious Diseases, 46 respondents (46%) were not in the category, while the yes category was 54 respondents (54%). Based on the Medical Seeking History variable, 96 respondents (96%) were in the Health Service category, while the non-Health Service category was 4 respondents (4%). Based on the stunting variable in toddlers aged 24-36 months, 63 respondents (63%) were in the category of stunting and in the normal category were 37 respondents (37%).

Bivariate Analysis

Relationship of feeding practices and health care with the stunting toddlers aged 24-36 months who lives in the Percut Sei Tuan District, Deli Serdang Regency.

Table 2. Bivariate Analysis Result

Variable	Stunting events						p. value	RP (95% CI)
	Normal		Stunting		Total			
	n	%	n	%	n	%		
Exclusive breastfeeding								
Exclusive breastfeeding	22	48,9	23	51.1	45	100	0,026	2,551 (1,109-5,867)
Not Exclusive Breastfeeding	15	27,3	40	72,7	55	100		
Breastfeeding for 2 years old toddlers								
Yes	22	43,1	29	56,9	51	100	0,195	1,720 (0,756-3,913)
Not	15	30,6	34	69,4	49	100		
Giving Complementary food								

>6 Months	22	48,9	23	51,1	45	100	0,026	2,551
≤6 Months	15	27,3	40	72,7	55	100		(1,109-5,867)
Basic Immunization								
Complete	22	50	22	50	44	100	0,017	2,733
Not Complete	15	26,8	41	73,2	56	100		(1,185-6,307)
Infectious Diseases								
No	16	34,8	30	65,2	46	100	0,672	0,838
Yes	21	38,9	33	61,1	54	100		(0,370-1,897)
Seeking Treatment								
Health services	34	35,4	62	64,4	96	100	0,108	0,183
Not Health Services	3	75	1	25	4	100		(0,18-1,826)

The results showed that of the 6 independent variables, there were 3 (three) variables that had a relationship with stunting, namely exclusive breastfeeding, complementary breastfeeding and basic immunizations. This is indicated by the sig-p values of the 3 variables which are 0.026, 0.017 and 0.026 where the pvalue is less than 0.05.

Correlation between Exclusive Breastfeeding and Stunting in Toddlers Age 24-36 Months in Deli Serdang Regency

The results proved that the majority sample. They were 55 respondents (55%) didn't give the exclusive breastfeeding and 45 respondents (45%) who give exclusive breastfeeding. So statistically there is a relationship between the exclusive breastfeeding and the stunting case in toddlers aged 24-36 months in Percut Sei Tuan District, Deli Serdang Regency. The odds ratio is 2.551 which is among 1.109 until 5.867 which means that if you give exclusive breastfeeding, the probability that a toddler will not experience stunting is 2.551 times. This can happen because of the 55 respondents who did not provide exclusive breastfeeding, 15 respondents (27.3%) were normal and 40 respondents (72.7%) experienced stunting.

Handayani, et al., (2019) explained that an influence between exclusive breastfeeding and stunting case in toddlers aged 24-36 months is exist. Babies who are exclusively breastfed for 6 months can improve intelligence, immunity and child development, besides that it can avoid infection and reduce the risk of nutritional problems.

Cyntaka and Putri (2019) in their research conducted in Pabean Ilir Village, Pasekan District, Indramayu Regency explained that an influence between exclusive breastfeeding and stunting case in toddlers aged 24-26 months is exist. In addition, Latifah, et al. (2020), in the Bangunsari Posyandu working area, Wagir Kidul Village, Pulung Health Center Working Area, Ponorogo Regency, shows that exclusive breastfeeding has a significant effect on the incidence of stunting in toddlers.

Correlation between of Breastfeeding to 2 Years old toddlers and Stunting Case in 24-36 Months toddlers in Deli Serdang Regency

The results could be described by the majority of the sample gave breastfeeding until >2 years old toddlers namely 51 respondents (51%) and those who did not breastfeed until > 2 years old to children were 49 respondents (49%). So that statistically it can be interpreted that there is no relationship between of breastfeeding until > 2 years old to children and stunting case in 24-36 years old toddlers in the Percut Sei Tuan District, Deli Serdang Regency. The odds ratio is 1.720 which is between 0.756-3.913 which means that if you breastfeed until the age of 2 years, the probability that a toddler will not experience stunting is 1.720 times. This can happen because of the 49 respondents who did not breastfeed until

the age of 2, 15 respondents (30.6%) were normal and 34 respondents (69.4%) experienced stunting.

Asriful, et al. (2018) there was no effect between breastfeeding to > 2 years old toddler on the stunting. This is because the provision of complementary feeding is not optimal for toddlers. Ibrahim, et al. (2019) also said that in Bontongan Village, Baraka District, Enrekang Regency, that there was no significant effect on the history of breastfeeding to > 2 years old toddler with stunting.

However, Wahdah, et al (2017) said that in Silat Hulu District, Kapuas Hulu, West Kalimantan which did not show the correlation between the duration of breastfeeding and stunting case, it is due to the duration of breastfeeding between mothers of stunted toddlers with normal toddlers are almost the same.

Correlation between Complementary Breastfeeding and Stunting in Toddlers Aged 24-36 Months in Deli Serdang Regency

Breastfeeding to ≤ 6 months toddlers, there were 55 respondents (55%) and those who didn't give breastfeeding to >6 months toddlers are respondents (45%). So there is a relationship between a complementary feeding and stunting case in toddlers aged 24-36 month statistically in Percut Sei District, Deli Serdang Regency. Giving Complementary Feeding really supports the baby development, especially if the mother is more concerned about the Complementary Feeding content that her child will consume every day.

Widiastuti and Harleli, (2021) said that there is a significant effect of giving complementary feeding on stunting case in PUSKESMAS or public health center Seropia. Fitri and Elnita (2019) showed that there was an influence between giving Complementary Feeding and stunting in patient at PUSKESMAS or public health center Sidomulyo. In addition, Resti., et al. (2021) found that there is an effect of giving complementary feeding on stunting in at PUSKESMAS or public health center Hanura, Teluk Pandan District, Pesawaran Regency in 2020. Sastria, et al., (2019) that there is a most effect of history of giving complementary feeding on the incidence of stunting. And in line with research conducted by Widaryanti, R., (2019) shows that there is an influence between complementary feeding and stunting in toddlers in Sleman Regency.

Correlation between Completing Basic Immunization and Stunting Incidence in Toddlers Aged 24-36 Months in Deli Serdang Regency

The sample complete basic immunization for their toddlers were 56 respondents (56%) and meanwhile those who did not complete basic immunization for their toddlers were 44 respondents (44%). Statistically, there is a relationship between Basic Immunization and stunting case in toddlers aged 24-36 months in Percut Sei Tuan District, Deli Serdang. The odds ratio is 2.733 which is among 1.185 until 6.307 which means that if you give complete immunization to toddlers, the probability that toddlers will not experience stunting is 2.733 times.

Complete immunization is very important for toddlers. The risk of contracting an infectious disease will be higher in toddlers with incomplete immunization history or who are not immunized at all. When a child's body is infected with a disease, the child often loses his appetite. This causes a reduction in the intake of nutrients in toddlers because of this rejection, which causes stunting.

Correlation between Infectious Diseases and Incidence of Stunting in Toddlers Aged 24-36 Months in Deli Serdang Regency

The results of the descriptive analysis proved that the majority of the sample had experienced an infectious disease, namely 54 respondents (54%) and 46 respondents (46%) had never experienced an infectious disease. Statistically, it can be interpreted that there is no relationship between History of Infectious Diseases and the incidence of stunting in toddlers aged 24-36 months in the Percut Sei Tuan District Deli Serdang Regency. The odds ratio is 0.838 which is between 0.370-1.897 which means that if a toddler does not have a history of infectious diseases, the probability that a toddler will not experience stunting is 0.838 times.

Toddlers suffered infection for a long time are more vulnerable to be stunting. As well as being more likely to experience sequelae due to general infections which will weaken the child's physical condition. Conditions like this will later have bad implications for the growth of toddlers. Subroto., et al (2021) showing an infection make stunting case in toddlers which was carried out at PUSKESMAS or public health center Rama Indra Health Center, Kec. As white as Raman.

Correlation between Medical Seeking History and Stunting Case in Toddlers Aged 24-36 Months in Deli Serdang Regency

The respondents went to Health services were 96 respondents (96%) and those who did not go to health services were 4 respondents (4%). Statistically it can be interpreted that there is no relationship between Treatment Seeking and stunting case in toddlers aged 24-36 months. The odds ratio is 0.183 which is among 0.018-1.826 that if a toddler seeks treatment from a health service, the probability that a toddler will not experience stunting is 0.183 times.

This happens because the community's access to health services is very easy to obtain due to the close distance between the village and the district capital, the existence of smooth transportation facilities, the existence of health workers who are responsible for the village, most of them live in the assisted villages and the existence of BPJS services, causing the officers to improve health services to remote areas.

Yudianti and Saeni (2017) in their research, there was no most effect of treatment seeking on stunting case in toddlers. In line with that, the results of the research put forward by Hasrul et al (2022) explained that there was no most effect between treatment seeking and the incidence of stunting in toddlers in the working area of the UPT PUSKESMAS Lawawoi, namely Batu Lappa Village, Watang Pulu District, Kab. Sidrap.

CONCLUSIONS

Some indicator had correlation concretely or not each other in some cases about parent pattern and stunting in toddler age 24-36 month had happened in Percut Sei Tuan District Deli Serdang Regency. Parent patterns in this study discussed were exclusive breastfeeding, breastfeeding for > 2 years old to toddlers, giving complementary food, completing basic immunization, infection disease experiences, and seeking treatment with using the value of $\text{sig-p} = 0.026 < 0.05$. So in this research could be concluded that there are three indicators in parent pattern had correlation with stunting case in 24-36 months toddler concretely are; 1). Mothers or respondents fed exclusive breastfeeding; 2) giving complementary food; 3) Completing Basic Immunization whereas there are also three indicator in parent pattern didn't have correlation with stunting case in 24-36 months toddler concretely are; 1) Breastfeeding to > 2 years old toddlers; 2) Infectious diseases experiences; and 3) seeking treatment.

Suggestion

Make input for mothers to provide exclusive breastfeeding and nutritious food for complimentary food for toddlers and carry out complete immunization. Based on the results and discussion, the researchers suggest that health promotion related to the prevention of infectious diseases in toddlers needs to be increased again to overcome the problem of stunting toddlers in the Percut Sei Tuan District, Deli Serdang Regency.

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