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THE RELATIONSHIP OF THE HISTORY OF EXCLUSIVE BREASFEEDING AND COMPLEMENTERY FEEDING (MP-ASI) WITH THE INCIDENT *OF STUNTING* IN TODDLER CHILDREN 24-59 MONTH

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Abstract

The World Health Organization 2021 estimates the prevalence of *stunting* worldwide at 22% or as many as 149.2 million. In Indonesia, the prevalence of *stunting* is 21.6%. Padang City in 2022 has a *stunting* incidence rate of 19.5%, Ikur Koto Health Center has the highest percentage of stunting toddlers at 16%. Exclusive breastfeeding and appropriate complementary foods (MP-ASI) can contribute to supporting the health of children under five who can help in *stunting prevention*. The purpose of this study was to determine the relationship between the history of exclusive breastfeeding and complementary foods (MP-ASI) with the incidence of *stunting* in children under 24-59 months old in Koto Pulai Village, Ikur Koto Padang Health Center Working Area. This type of research is analytical with *a cross sectional design*. The population in this study was all mothers who had children under five 24-59 months in Koto Pulai Village, Ikur Koto Padang Health Center Working Area, totaling 40 children under five. The study sample amounted to 40 children under five 24-59 months with *cluster ramdom sampling technique.* The research instrument used was a questionnaire with a *Chi-square* test used for data analysis. The results of this study showed that 65.0% of children under 24-59 months old *were stunted, 67.5% were not given* exclusive

breastfeeding and 62.5% were not given complementary milk. The results of statistical tests showed that there was no relationship between the history of exclusive breastfeeding *p-value (0.480) and complementary foods (MP-ASI*) p-value *(0.864) with the incidence of* stunting in children under five 24-59 months. The conclusion of this study, there are many factors that cause stunting in children under five, such as nutritional intake of toddlers, infectious diseases, food availability, socioeconomic factors, knowledge of maternal nutrition and others. It is expected for mothers to further increase full exclusive breastfeeding and provide complementary feeding appropriately.

Keywords: *stunting,* exclusive breastfeeding, complementary feeding (MP-ASI)

Introduction

Data *from World Health Organization* (WHO) in 2021 estimates that the prevalence of stunted children *worldwide* will be 22% or 149.2 million. 45.4 million are underweight, and 38.9 million are overweight. In the Southeast Asia and Africa region, 41% or as many as 51 million children under the age of 5 are underweight (thin), another 53% or as many as 151 million children under the age of 5 experience *stunting* , with three quarters of these children live in Asia and Africa (*Joint Child Malnutrition Estimates* , 2021).

From Basic Health Research (2018), the prevalence of *stunting* in 2018 was 30.8%, a decrease from 2013 of 37.2% and in 2007 it was 36.8%, a decrease from 2013. The prevalence of *stunting* in 2018 was even higher when compared with other nutritional problems in toddlers, such as malnutrition (13.8%) and malnutrition (3.9%) (Riskesdas, 2018).

Based on data from the Indonesian Toddler Nutrition Status Survey (SSGBI) in 2022, the prevalence *of stunting* in Indonesia is 21.6% , with details of 19% being short and 2.6% being very short, e-PPGBM data shows that 2.7% of children aged under 2 years (Baduta) are very short and 6.5% of children under 2 years of age (Baduta) are short (Ministry of Health of the Republic of Indonesia, 2022).

Data from the West Sumatra Provincial Health Service records that the prevalence of *stunting* in 2022 is 25.2%. According to data from the Padang City Health Service,

the incidence of *stunting* in Padang City in 2022 is 19.5%. This figure has not yet reached the target of reducing *stunting prevalence* by 2024, namely below 14%. The Padang City Government (Pemkot) is still working to reduce the incidence of *stunting* in accordance with the target of the National Medium Term Development Plan (RPJMN), which targets the *stunting rate* in 2024 to be below 14% (Ministry of Health of the Republic of Indonesia, 2022).

Based on data from the Padang City Health Service Report for 2021, the Ikur Koto Health Center is in first place with the highest percentage of *stunted toddlers in Padang City, namely 16%, in second place is the Seberang Padang Health Center which has a percentage of stunted* toddlers of 15.3% and in third place is the Andalas Health Center with the percentage of *stunted toddlers* amounting to 13.9% (DKK Padang 2021).

Stunting according to the Ministry of Health (Kemenkes) is a child under five with a *z-score value* of less than -2 SD and less than -3 SD or in other words nutritional status based on the parameter Body Length according to Age (PB/U) or Height according to age (TB/U), where the results of anthropometric measurements are based on these parameters to determine whether a child is classified as short (-2 SD) or very short (-3 SD). *Stunting* is a chronic nutritional problem caused by insufficient nutritional intake over a long period of time due to providing food that is not in accordance with nutritional needs (Ministry of Health of the Republic of Indonesia, 2022).

One of the factors causing *stunting* is problems in breastfeeding and inadequate provision of MP-ASI. Exclusive breastfeeding is recommended for the first 6 months and continued breastfeeding until the child is 2 years old to improve the child's immune system and reduce the risk of food/drink contamination. Apart from that, early life is vulnerable to various nutritional problems that occur in the first 2 years of life, so it is necessary to pay attention to follow-up food after breast milk, namely MP-ASI (Yulia, 2022).

Handayani et al (2019), found that 36.4% of children with a history of non-exclusive breastfeeding tended to experience *stunting* with a total study population of 63 children aged 24-36 months. The results of this study show that most of the children who were given exclusive breast milk had normal nutritional status compared to children who were not given exclusive breast milk(Handayani et al., 2019).

Virginia (2020) also found that there was a significant relationship between giving

MP-ASI and the incidence of *stunting* (Gizi et al., 2020). MP-ASI should be given after the baby is 6 months old. MP-ASI given to babies less than 6 months old can cause babies to suffer from diarrhea and constipation. Improper provision of MP-ASI can cause children not to get enough nutrition needed, which can increase the risk of *stunting* (Nababan, 2018) .

The impact of *stunting* causes stunted growth problems and brain development problems related to intelligence, intelligence and competitive abilities in the future. Nutritional problems are not only about inhibiting height growth in children, but can cause intelligence barriers, create vulnerability to infectious and non-communicable diseases, and reduce productivity in adulthood (Rahmadhita, 2020; Rangki et al., 2020).

Various programs have been carried out by the government regarding efforts to reduce and handle the prevalence of *stunting* in *the Sustainable Development Goals* (SDG's) in Indonesia until 2025. One of the programs is through Presidential Regulation (Perpres) no. 42/2013 concerning the National Movement for the Acceleration of Nutrition Improvement which focuses on the First Thousand Days of Life (1,000 HPK Movement), Decree of the Minister of Health (Kepmenkes) No. 450/Menkes/SK/IV/2004 concerning the exclusive provision of breast milk (ASI) to babies in Indonesia (TNP2K, 2017) .

The programs and policies that have been implemented, the prevalence of *stunting* is still quite high in Indonesia, the cause of the ineffectiveness of existing and implemented *stunting intervention policies and programs is that the policies and regulations related to stunting intervention* have not been optimally used as a common basis for dealing with *stunting* , Ministry/Institution (K/ L) implementing each program without sufficient coordination and the *stunting intervention programs* that have been planned have not been fully implemented (TNP2K, 2017) .

Initial survey data conducted on January 24 2023 obtained secondary data from the Ikur Koto Health Center. The number of *stunted toddlers* in the Ikur Koto Health Center Working Area was 98 toddlers, with details of 79 short toddlers (80.6%) and 19 very short toddlers (19, 3%) where it was found that the Ikur Koto Community Health Center area needs to increase education regarding how to prevent *stunting* , such as regarding exclusive breastfeeding and Complementary Foods for Breast Milk. Based on the data above, this research aims to analyze Correlation between the history of giving exclusive

breastfeeding and complementary foods for breast milk (MP-ASI) with the incidence of *stunting* in children under five 24-59 months in Koto Pulai Village, Ikur Koto Padang Health Center Working Area.

Method

Method should be structured as follows:

1. *Research design*

Describe the specific research design used, cross-sectional.

2. *Setting and samples*

The population in this study were all mothers who had children under five 24-59 months in the Koto Pulai Village, Ikur Koto Padang Health Center Working Area with a research sample of 40 children under five 24-59 months using the *cluster ramdom sampling techniqu* This research was conducted in Koto Pulai Village, Ikur Koto Padang Health Center Working Area.

3. *Measurement and data collection*

Data collection for this research used a questionnaire sheet containing data, namely the identity of the respondent, anthropometric measurements (BB and TB), history of exclusive breastfeeding and history of giving MP-ASI, meter and *Z-score table*. A questionnaire was used to determine the level of exclusive breastfeeding and MP-ASI. The TB/U *Z-score* meter and table are used to measure the body length of toddlers and to determine the *stunting status of toddlers* .

4. *Data analysis;*

Data processing was carried out using a computer with the Statistical for Social Science (SPSS) application.

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Results

Table 4. 1 Frequency Distribution of *Stunting Events* in Children Under Five Years 24-59 Months

Stunting	**n**	**%**
Stunting	26	65.0
Not *stunting*	14	35.0
Total	40	100

Based on table 4.1, it was found that the majority of toddlers aged 24-59 months were in the *stunting category* , 26 respondents (65.0%).

Table 4. 2 Frequency Distribution of History of Exclusive Breastfeeding in Toddlers 24-59 Months

Exclusive breastfeeding	**n**	**%**
Not given	27	67.5
Given	13	32.5
Total	40	100

Based on table 4.2, it was found that the majority of toddlers aged 24-59 months, namely 27 respondents (67.5%) were not given exclusive breast milk.

Table 4. 3 Frequency Distribution of History of Giving MP-ASI to Toddlers 24-59 Months

Early MP-ASI	**n**	**%**
Not given	25	62.5
Given	15	37.5
Total	40	100

Based on table 4.3, it was found that the majority of toddlers aged 24-59 months, namely 25 respondents (62.5%) were not given complementary foods for breast milk (MP-ASI).

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Table 4. 4 Relationship between a history of exclusive breastfeeding and the incidence of *stunting* in children under five 24-59 months

History of Exclusive Breastfeeding	*Stunting* events				Total		*p-value*
	Stunting		Not *Stunting*				
	n	%	n	%	n	%	
Not given	19	70.4	8	29.6	27	100	0.480
Given	7	53.8	6	46.2	13	100	
Total	26	65.0	14	35.0	40	100	

7 respondents (53.8%) of toddlers who were given exclusive breast milk experienced *stunting and* 6 respondents (46.2%) who did not experience *stunting , while* 19 respondents who were not given exclusive breast milk experienced *stunting* . respondents (70.4%) and toddlers who did not experience *stunting* as many as 8 respondents (29.6%). The results of statistical tests in this study showed *a p-value of* 0.480, which means there is no relationship between a history of exclusive breastfeeding and the incidence *of stunting* .

Table 4. 5 Relationship between history of giving MP-ASI and incidence of *stunting* in children under five 24-59 months

History of Giving MP-ASI	*Stunting* events				Total		*p-value*
	Stunting		Not *Stunting*				
	n	%	n	%	n	%	
Not given	17	68.0	8	32.0	25	100	0.864
Given	9	60.0	6	40.0	15	100	
Total	26	65.0	14	35.0	40	100	

Based on table 4.10, it can be seen that 9 respondents (60.0%) of toddlers who were given MP-ASI experienced *stunting* and 6 respondents (40.0%) of toddlers who did not experience *stunting* , while 6 respondents who were not given MP-ASI experienced stunting. 17 respondents (68.0%) experienced *stunting and* 8 respondents (32.0%) did not experience *stunting* . The results of statistical tests in this study showed *a p-value of* 0.864, which means there is no relationship between the history of giving MP-ASI and the incidence of *stunting* .

Discussion

The results of this research show that more children experience *stunting* than those who do not. The research results show that of the 40 respondents, 26 respondents (65.0%) were found to be children under five who experienced *stunting* .

Based on table 4.9, the relationship between the history of exclusive breastfeeding can be seen that the majority of toddlers with a history of exclusive breastfeeding do not experience *stunting* , namely 46.2% and the majority of toddlers with a history of not exclusive breastfeeding also do not experience *stunting* , namely 29.6%. This could be caused by the number of toddlers, most of whom had a history of exclusive breastfeeding, experiencing *stunting* , namely 53.8%. These results are in accordance with the *chi-square test* which shows a value of p=0.480 (p>0.05) so it can be concluded that a history of exclusive breastfeeding has no significant relationship with the incidence of *stunting* in toddlers aged 24-59 months in Koto Pulai Village, Work Area. Ikur Koto Health Center.

Results of this research supported by research conducted by Fitriani and Rohmah (2020), which found that a history of exclusive breastfeeding is not related to the level of *stunting* , because even though exclusive breastfeeding is given optimally, children who do not receive appropriate MP-ASI and sufficient breast milk are still at risk of experiencing *stunting* . A study conducted by Seipalla et al. (2020) found that, using the anthropometric index of height for age (TB/U) or body length for age (PB/U), there was no significant correlation between a history of exclusive breastfeeding and the nutritional status of toddlers.

The results of this study also contradict research conducted by Beal et al. (2018), which states that there is evidence that breastfeeding in the first 6 months after birth consistently causes *stunting* and is an important factor in the number of stunting cases that occur in Indonesia. Although there is no correlation between a history of exclusive breastfeeding and *stunting* in this study, it can be seen that children who do not have a history of exclusive breastfeeding are more likely to be classified as *stunted* , namely 70.4%.

According to researchers' analysis, babies need exclusive breast milk because it has the amount of protein, fat and carbohydrates and fluids which can reduce infant morbidity and mortality. However, in this study, the reason why mothers did not give

exclusive breast milk to their babies was because the mother's nutritional knowledge was lacking about exclusive breast milk so that the mother did not know that exclusive breast milk had an important role in her child's development. Apart from that, most mothers do not provide full breast milk for 6 months, where mothers in Koto Pulai Village before the time of giving MP-ASI have given their children additional drinks such as formula milk.

It is hoped that mothers in Koto Pulai Village will provide exclusive breast milk for the first 6 months of life without interfering with other food or drink, so that by providing exclusive breast milk correctly, their children will meet their nutritional and nutritional needs, and mothers will be diligent in coming to the posyandu. or come to counseling conducted by the community health center. Apart from that, because there is still a lack of knowledge among mothers about the benefits of exclusive breastfeeding, it is hoped that health workers in Koto Pulai Village, Ikur Koto Health Center Working Area can provide education or counseling to mothers in Koto Pulai Village about preventing *stunting* , one of which is providing exclusive breastfeeding. during the first 6 months of a child's life.

chi-square test show a value of p=0.864 (p>0.05) which can be concluded that the history of giving MP-ASI is not significantly related to the incidence of *stunting* in toddlers aged 24-59 months, but this research also shows that the majority of toddlers who experiencing *stunting* had a history of not giving MP-ASI, namely 68.0%.

The results of this study contradict theory, perhaps because other factors, such as social and cultural factors related to food in the family, can influence the determination of parenting and eating patterns. This is in line with research by Dewi & Mu'minah (2020), which found that there was no significant relationship between MP-ASI consumption and cases of *stunting* . This finding is also in line with research by Dwitama (2018), which found that there was no significant relationship between the pattern of giving MP-ASI based on type and cases of short toddlers (Dwitama, 2018).

The determinants or factors that influence *stunting* in children are not only exclusive breastfeeding and MP-ASI, but there are also other factors that can cause *stunting* in children. Some of these factors include birth length, birth weight, health and sanitation, and others (Ni'mah and Muniroh, Sawitri et al., 2021) . The results of this research are in accordance with the theory according to the Ministry of National

Development Planning/Bappenas (2018), that *stunting* in children is caused by many factors , consisting of direct and indirect factors. The factors that cause *stunting* are the nutritional intake of toddlers, infectious diseases , maternal factors, genetic factors , food availability, socio-economic factors , education level , maternal nutritional knowledge , and environmental factors.

According to the researchers' analysis, there are many mothers who do not give MP-ASI to their children and the high incidence of *stunting* , but in this study there was no relationship between giving MP-ASI and the incidence of *stunting* , this could be due to some mothers not giving their children MP-ASI appropriately. time, there are also some mothers who give MP-ASI before it is time for the child to get MP-ASI, apart from that, MP-ASI is given inadequately which does not provide sufficient nutrition for the child, mothers on average only provide one or two types of ingredients. basics in MP-ASI.

From the questionnaire data, it was found that 36 mothers only gave 2 types of basic ingredients in MP-ASI, 33 mothers only gave their children 1-2 meals a day, and 27 mothers only gave their children half a small bowl of food at each meal, so the results From the questionnaire questions it was found that children do not get enough nutrition according to their needs. 9 respondents (60.0%) of children under five who were given MP-ASI also experienced stunting due to inappropriate provision of MP-ASI. Apart from that, the determining cause of *stunting* is not only MP-ASI but there are other factors that can also influence the incidence of *stunting* .

It is hoped that health workers will provide education or counseling about giving MP-ASI correctly so that mothers understand the correct way to give MP-ASI, by giving MP-ASI correctly and adequately, the MP-ASI given by mothers to their children can be sufficient. nutritional and nutritional needs of children.

Limitation

In the process of collecting data, the information provided by respondents through questionnaires sometimes does not show the respondents' actual opinions, this happens because sometimes there are differences in thoughts, assumptions and understandings for each respondent, as well as other factors such as the honesty factor in filling in the respondents' opinions in the questionnaire.

Conclusion

The conclusion of this research is that there is no relationship between the history of exclusive breastfeeding and the incidence of stunting in children under five 24-59 months in Koto Pulai Village, Ikur Koto Padang Health Center Working Area. There is no relationship between the history of giving MP-ASI and the incidence of stunting in children under five 24-59 months in Koto Pulai Village, Ikur Koto Padang Health Center Working Area, *p-value* .

Ethical Considerations

The researcher guarantees the confidentiality of research results, or other information or questions. All information collected must be kept confidential by the researcher. The ethics of this research are designed to maintain the confidentiality of respondents' identities, protect and respect respondents' rights by submitting a consent form (explanation and agreement). Before signing the informed consent form, the researcher explains the title of the research, the purpose of the research, the benefits of the research and explains to the respondent that the research will not be dangerous for the respondent, because the data obtained is for research purposes, when the data is complete it will be destroyed. In this research, after data collection, all confidentiality and personal data of respondents have been guaranteed and will not be shared widely.Acknowledgment

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