ANALYSIS OF THE RELATIONSHIP BETWEEN FACTORS OF PROVIDING COMPLEMENTARY FOODS, EXCLUSIVE BREASTFEEDING, AND IMMUNIZATION WITH STUNTING

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ABSTRAK : ANALISIS HUBUNGAN FAKTOR PEMBERIAN MAKANAN PENDAMPING ASI, ASI EKSLUSIF, DAN IMUNISASI DENGAN STUNTING

Latar Belakang: Stunting merupakan kondisi tinggi badan anak lebih pendek dari standar usianya. Prevalensi stunting di Kota Metro tahun 2021 sebesar 7,29% dan meningkat menjadi 10,4% pada tahun 2022. Di Puskesmas Yosomulyo, prevalensi stunting mencapai 11% pada tahun 2021 dan tetap sama pada tahun 2022. Penelitian ini bertujuan untuk mengetahui hubungan antara pemberian MP-ASI, ASI Eksklusif, dan imunisasi lengkap dengan stunting.

Metode: Penelitian ini menggunakan desain case-control dengan total sampel 66 responden, terdiri dari 33 kasus stunting dan 33 kontrol. Pengambilan sampel dilakukan dengan accidental sampling, dan data dikumpulkan melalui wawancara dan dokumentasi. Analisis data menggunakan uji Chi-Square.

Hasil: Hasil penelitian menunjukkan ada hubungan signifikan antara MP-ASI dengan nilai p=0,047), ASI Eksklusif dengan nilai p=0,013, dan imunisasi dengan nilai p=0,023 dengan kejadian stunting. Simpulan: ada hubungan antara pemberian MP-ASI tidak sesuai, ASI Eksklusif, dan imunisasi tidak lengkap dengan stunting.

Saran: Health workers, especially midwives, can increase the role of mothers by increasing the provision of breast milk, complementary feeding, and complete immunization according to age.

Kata kunci: ASI Eksklusif, Imunisasi, Makanan Pendamping ASI, dan Stunting.

ABSTRACT

Background: Stunting is a condition where a child's height is shorter than the standard for their age. The prevalence of stunting in Metro City in 2021 was 7.29% and increased to 10.4% in 2022. At the Yosomulyo Health Center, the prevalence of stunting reached 11% in 2021 and remained the same in 2022. This study aims to determine the relationship between the provision of complementary feeding, exclusive breastfeeding, and complete immunization with stunting. This study used a case-control design with a total sample of 66 respondents, consisting of 33 stunting cases and 33 controls. Sampling was carried out by accidental sampling, and data were collected through interviews and documentation.

Method: This study used a case-control design with a total sample of 66 respondents, consisting of 33 stunting cases and 33 controls. Sampling was done by accidental sampling. Data analysis used the Chi-Square test.Data analysis used the Chi-Square test.

Results: The results showed a significant relationship between complementary feeding with a p value = 0.047), exclusive breastfeeding with a p value = 0.013, and immunization with a p value = 0.023 with the incidence of stunting.

Conclusion: There is a relationship between the provision of inappropriate complementary feeding, exclusive breastfeeding, and incomplete immunization with stunting

Keywords: Exclusive Breastfeeding, Immunization, Complementary Foods, and Stunting.

INTRODUCTION

Stunting is a serious public health problem in Indonesia, especially in children under the age of two. Stunting is a condition in which a child's height is lower than the growth standards of children of the same age, caused by chronic malnutrition and repeated infections in the early period of life (Pujiastuti, 2022). Based on global data, Indonesia is one of the countries with a high prevalence of stunting. In 2021, the prevalence of stunting in

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Indonesia reached 24.4% and decreased to 21.6% in 2022 (Kemenkes RI, 2023). In Lampung Province, the prevalence of stunting also showed a decrease from 18.5% in 2021 to 15.2% in 2022, but the provincial target to reduce stunting to 10.8% has not been achieved (Djunaidi, 2023; Kemenkes RI, 2023). Metro City experienced an increase in stunting prevalence from 7.29% in 2021 to 10.4% in 2022. The Yosomulyo Health Center working area is one of the areas with a fairly high stunting rate, which is 11% in 2021 and remains at 11% in 2022. This figure is higher than the Metro City stunting reduction target of 9.5% (Metro City Health Office, 2023). This condition is influenced by various factors, such as the provision of Complementary Foods (MP-ASI) that are not age-appropriate, not being given exclusive breastfeeding, and incomplete immunization in toddlers (Afrilda, 2023; Agustina, 2022; Supariasa & Purwaningsih, 2019). Previous studies have shown that inappropriate provision of MP-ASI and lack of exclusive breastfeeding can affect children's nutritional status and contribute to stunting. In addition, incomplete immunization in children increases the risk of infection, which can interfere with the child's growth process and cause stunting. Research by Fitri & Ernita (2019) revealed that children who do not receive age-appropriate complementary feeding are more susceptible to stunting compared to children who are given the right complementary feeding. Another study by Khoiriyah et al., (2024) showed that incomplete immunization also has a close relationship with the incidence of stunting.

The novelty of this study is the focus on the simultaneous relationship between the provision of complementary feeding, exclusive breastfeeding, and immunization with the incidence of stunting, which has not been widely studied in the Metro City area, especially at the Yosomulyo Health Center. Thus, this study is expected to contribute to understanding the main factors that influence stunting in the area and become the basis for more effective interventions in reducing stunting rates in the future.

The problem in this study is whether there is a significant relationship between the provision of inappropriate complementary feeding, not being given exclusive breastfeeding, and incomplete immunization with the incidence of stunting in toddlers at the Yosomulyo Health Center, Metro City. The purpose of this study was to determine the relationship between the provision of complementary feeding, exclusive breastfeeding, and complete immunization according to age with the incidence of stunting in toddlers in the working area of the Yosomulyo Health Center, Metro City.

RESEARCH METHODS

The research design used was case control. A case control study is an epidemiological study design that studies the relationship between exposure (research factors) and disease by observing case and control groups and then tracing their exposure status/exposure in the past (retrospective). This design was chosen to analyze the relationship between risk factors, namely the provision of complementary feeding, exclusive breastfeeding, and immunization with the incidence of stunting in toddlers. The study population was all toddlers in the Yosomulyo Health Center working area totaling 665 children. Sampling was carried out using the accidental sampling technique, with the inclusion criteria of toddlers aged 6-24 months who were present at the Health Center during the study period. Based on the unpaired categorical comparative analytical formula, a case sample (stunting children) of 33 children and a control sample (non-stunting children) of 33 children were obtained. Data collection used a structured questionnaire and documentation study. The questionnaire was used to collect data on the history of providing complementary feeding,
exclusive breastfeeding status, and immunization status in toddlers. Meanwhile, anthropometric data, such as children's height and nutritional status, were obtained through documentation from the Maternal and Child Health (KIA) book. Interviews were conducted with parents or caregivers of toddlers to ensure the accuracy of the data collected. The analysis was carried out using the Chi-Square test to determine the relationship between independent variables including: provision of complementary feeding, exclusive breastfeeding, and immunization with the dependent variable, namely stunting. In addition, to measure the strength of the relationship, the Odds Ratio (OR) analysis was used. The results of the analysis were interpreted with a significance level of 0.95 and an alpha of 0.05.

RESEARCH RESULTS

Relationship between Provision of MP-ASI and Stunting

The results of the statistical test of the relationship between the provision of MP-ASI and stunting obtained a p value = <0.05 (0.047), meaning that there is a significant relationship between the provision of MP-ASI and stunting, for more details can be seen in the table 1.

Table 1
Relationship between Providing Complementary Feeding According to Age and Stunting

MP ASI	Case (Stunting)		Control (No Stunting)		Total		OR 95% CI	p *value*
	n	%	n	%	n	%		
Not Age Appropriate	19	57,6	10	30,3	29	43,9	3,1 (1,3 -8,6)	0,047
Age Appropriate	14	42,4	23	69,7	37	56,1		
Number	33	100	33	100	66	100		

Relationship between Exclusive Breastfeeding and Stunting

The results of the statistical test of the relationship between exclusive breastfeeding and stunting obtained a p value = <0.05 (0.013), meaning that there is a significant relationship between the provision of MP-ASI and stunting, for more details can be seen in table 2.

Table 2
Relationship between Exclusive Breastfeeding and Stunting

Exclusive Breastfeeding	Case (Stunting)		Control (No Stunting)		Total		OR 95% CI	Nilai p *value*
	n	%	n	%	n	%		
Not Exclusive Breastfeeding	20	60,6	9	27,3	29	43,9	4,1 (1,4 – 11,5)	0,013
Exclusive Breastfeeding	13	39,4	24	72,7	37	56,1		
Number	33	100	33	100	66	100		

Relationship between mmunization and Stunting

Table 3
Relationship between Immunization and Stunting

Immunization	Case (Stunting)		Control (No Stunting)		Total		OR 95% CI	p *value*
	n	%	n	%	n	%		
Incomplete according to age	18	54,5	8	24,2	26	39,4	3,7 (1,3 – 10,7)	0,023
Complete according to age	15	45,5	25	75,8	40	60,6		
Number	33	100	33	100	66	100		

The results of the statistical test of the relationship between immunization and stunting obtained a p value = <0.05 (0.023), meaning that there is a significant relationship between the provision of MP-ASI and stunting, as in table 3.

DISCUSSION

Relationship between Complementary Foods and Stunting

Complementary Foods are foods given to children together with breast milk. Complementary foods are intended to complement breast milk, not replace breast milk. Children must still be given breast milk until the age of 2 years (Hasanah et al., 2020). Providing complementary foods too early can cause digestive disorders in infants. Physiologically, the baby's digestive tract is not ready for solid foods, but complementary foods should not be given too late. Delays in providing complementary foods will have an impact on the child's nutritional needs not being met (Septicasari, 2018).

Provision of complementary foods must meet the requirements, including timely, adequate, and safe in terms of texture and frequency of providing complementary foods (Wangiyana et al., 2021). Good practices in providing complementary foods can also prevent micronutrient deficiencies and diseases in the future (IDAI, 2018). Mothers who give their children the wrong complementary foods will

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cause the child's nutritional intake to not be met. Insufficient nutritional intake will disrupt the child's metabolic state and affect the child's growth and development, which can result in slow growth (Darmawan et al., 2022).

Relationship between Exclusive Breastfeeding and Stunting

Exclusive breastfeeding also plays an important role in preventing stunting. Low levels of exclusive breastfeeding have been shown to be one of the main triggers for stunting in children. This is because exclusive breastfeeding is the best source of nutrition for babies during the first six months of their lives. Exclusive breastfeeding not only provides the nutrients needed for growth and development, but also helps protect babies from infections and diseases that can interfere with the absorption of nutrients. The results of this study are in accordance with the theory that states that low levels of exclusive breastfeeding are one of the triggers for stunting in children. This can be caused by past events and will have an impact on the future of toddlers. On the other hand, good breastfeeding will help maintain the child's nutritional balance so that normal and optimal child growth is achieved (Ministry of State Secretariat of the Republic of Indonesia, 2022).

Exclusive breastfeeding can increase the bond between mother and baby, which can provide good psychosocial stimulation. This stimulation affects growth hormones, metabolism, and immune function, which affect body growth. Exclusive breastfeeding can protect babies from infections, allergies, and digestive disorders, which can interfere with nutrient absorption and cause chronic inflammation. This can inhibit body growth (Rahayu et al., 2018). The magnitude of the influence of exclusive breastfeeding on nutritional status is such that WHO recommends implementing interventions to increase exclusive breastfeeding for the first 6 months. This is implemented as one of the steps to achieve the WHO Global Nutrition Targets 2025 regarding reducing the number of stunting in children under five years of age (WHO, UNICEF, 2021). In addition to providing optimal nutritional benefits, exclusive breastfeeding also plays a role in strengthening the child's immune system. However, in order for protection against infection to be more optimal, basic immunization is also very important.

Relationship between Immunization and Stunting

Every child aged 0-9 months should have been given complete basic immunization. This is very useful for forming the baby's immunity so that it can be protected from various types of infectious diseases. Infectious diseases suffered by children can inhibit optimal absorption of nutrients in the body. The results of the study are in accordance with the theory that states that children who do not receive basic immunization are more susceptible to disease, causing decreased appetite (Berawi, 2021)

Factors that can increase the risk of stunting in the 1000 HPK period are not immunized. This is because children who do not receive this passive immunity will increase the risk of infection (Mitra et al., 2022). This was proven in a study in Moramanga and Morondava in Madagascar that stunting was more common in children who were infected than those who were not. This infectious disease can then cause growth failure in children and contribute to experiencing (WHO, 2021).

CONCLUSION

Based on the results of research and discussion on the relationship between the provision of MP-ASI, Exclusive Breastfeeding and Immunization on stunting as follows: There is a relationship between the provision of Exclusive Breastfeeding and stunting with a p value of 0.013 and OR = 4.1. There is a relationship between the provision of Immunization and stunting with a p value of 0.023 and OR = 3.7

SUGGESTIONS

Health workers, especially midwives, can increase the role of mothers by increasing the promotion of exclusive breastfeeding for 6 months, MP-ASI according to age after children aged 6 months to 2 years, and providing complete immunization according to age to their children, as well as monitoring child growth and development. This is one of the efforts that can be made by health workers to prevent and overcome stunting. The results of this study can be used as material to provide interventions such as counseling on various matters related to stunting incidents.

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