

ANALYSIS OF RISK FACTORS STUNTING IN CHILDREN AGED 0-24 MONTHS IN BANYUMAS REGENCY

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ABSTRACT

Stunting is a chronic malnutrition problem. Stunting mainly occurs in the first 1000 days of life (from the time the fetus until 0-24 months) and continues until the age of five. The purpose of the study was to analyze the risk factors for stunting in children aged 0 – 24 months in Banyumas Regency. Observational research design with cross sectional design, 8 months research duration. One hundred children between the ages of 0 and 24 months made up the study's sample, using cluster random sampling technique. Research variables included gender, history of breastfeeding, history of infectious disease, parenting, number of family members, mother's age, parenting, education and nutritional knowledge of the mother. Bivariate test to determine the relationship between risk factors chi square test. data analysis using chi square test to determine the relationship of risk factors. According to the study's findings, 42.0% of children between the ages of 0 and 24 months had stunting. Male gender (p: 0.017), breastfeeding (p: 0.036), a history of viral infections within the previous month (p: 0.047), and a high size of the family (p: 0.019) are risk factors for stunting. In an attempt to lower the prevalence of stunting in children aged of 6 - 24 months, it is necessary to increase breastfeeding until 24 months of age and prevent children from suffering from infectious diseases, especially diarrhea and acute respiratory infections.

Keywords: Age 0-24 months, Risk Factors, Stunting,

INTRODUCTION

Currently, stunting is a global public health priority, World Health Organization (WHO) has set a target to reduce the prevalence of stunting among children under five years of age by 40% between 2010 and 2025 (World Health Organization (WHO), 2018). Reduced stunting prevalence in Indonesia is intended to reach 14.0% by 2024 (Sekretariat Negara Republik Indonesia, 2021). Stunting occurs during the first 1000 days of life, more commonly occurring in children aged 6-24 months (45.5%). (Chirande et al., 2015)

Based to the Indonesian nutritional status study, the prevalence of stunting was 24.4% in Indonesian, 20,9% in Central Java, and 21,6% in Banyumas Regency (Kementerian Kesehatan RI, 2021), According to WHO guidelines, a prevalence of more than 20% is considered a public health issue. Stunting is a condition of short and very short body that exceeds a deficit of -2 SD below the median length or height. Nutritional problems that food intake and disease are two direct causes of stunting, indirect factors are food availability and access,

parenting patterns of mothers and children, health services, environmental sanitation, which are related to basic causes such as the quality and quantity of potential resources in the community such as education, human resources, economy, environment, organization and technology (BKKBN, 2021). Research in Bangladesh shows that rural children who have access to cleaner water, better toilets, and handwashing facilities are less likely to develop environmental enteropathy and have better linear growth. Factors related to stunting include maternal education, income, socio-economic status, prenatal consultation or antenatal care (Ramos et al., 2015)

Researchers are interested in studying the risk factors for stunting in children ages 0–24 months in Banyumas Regency because there is still an issue with nutritional status in this age group. In previous studies, there was no relationship between maternal age, birth spacing, nutritional status and the incidence of stunting, and there was a significant relationship between maternal parenting patterns and the incidence

of stunting. stunting.(Wati et al., 2022)

METHODS

This research employed an observational study with cross sectional design conducted over an 8 month period. The study involved 100 mothers of children 0-24 months, selected using a cluster random sampling technique. Sampling will be carried out using the cluster random sampling technique by taking data from children aged 0-24 months in each village (8 villages), then the randomization process will be

carried out at the individual level in each village. Data collection was carried out through direct completion of questionnaires by the mothers, supplemented by observations as the primary data source. Secondary data from health profile and other available sources were also utilized. Data analysis consisted of univariate analysis and bivariate analysis using the Chi-Square test. The study received ethical approval from the Ethics Commission of the Faculty of Health Sciences, Jenderal Soedirman University (Approval No. 1128/EC/KEPK/V/2023).

RESULTH AND DISCUSSION

Table 1. Distribution of characteristics of children aged 0-24 months in Banyumas Regency

Variabel	n	%
Sex		
Man	40	40,0
Female	60	60,0
Breastfeeding History		
No	73	73,0
Yes	27	27,0
History of infectious		
Yes	71	71,0
No	29	29,0
Parenting Patterns		
Less	60	60,0
Both	40	40,0
Houshold family size		
Large (> 4 person)	23	23,0
Small (\leq 4 person)	77	77,0
Mothers Age		
Risk (<20 and >35 years)	39	39,0
Not at Risk (20-35 years)	61	61,0
Mother's Education		
Primary	93	93,0

Variabel	n	%
Mother's Knowledge		
Higher	7	7
Less	36	36,0
Good	64	64,0
Nutrional Status		
Stunting	43	43,0
Normal	57	57,0
Total	100	100,0

Sumber : Data Primer Tahun 2023

Based on Table 1, it is known that the incidence of stunting in children aged 0-24 months in this study was 43.0%, the gender was mostly 60% female, not breastfed until the age of 24 months as much as 73%, children who had a history of disease were 71.0%. Parenting

patterns of the under-five children were mostly 60.0%, and the number of family members was 77.0%. Maternal characteristics include maternal age, most of which 61.0% are not at risk, the majority of maternal education is elementary (93.0%).

Table 2. Analysis of risk factors for stunting among children aged 0-24 months in Banyumas Regency

Variabel	Nutrional Status				Total		P-Value
	Stunting		Normal		n	%	
	n	%	n	%			
Sex							
Man	23	57,5	17	42,5	40	100,0	0,017*
Female	20	33,3	40	67,7	60	100,0	
Breastfeeding History							
No	36	49,3	37	50,7	40	100,0	0,036*
Yes	7	25,9	20	74,1	60	100,0	
History of infectious							
Yes	35	49,3	36	50,7	40	100,0	0,047*
No	8	27,6	21	72,4	60	100,0	
Parenting Patterns							
Less	26	42,3	34	56,7	40	100,0	0,934
Both	17	42,5	23	57,5	60	100,0	
Household family size							
Large (> 4 person)	5	21,7	18	78,3	40	100,0	0,019*
Small (≤ 4 person)	38	49,4	39	50,6	60	100,0	
Mother's Age							
Risk (<20 and >35 years)	15	38,5	24	61,5	40	100,0	0,464
Not at Risk (20-35 years)	28	45,9	33	54,1	60	100,0	
Mother's Education							
Primary	42	45,2	51	54,8	40	100,0	0,112
Higher	1	14,3	6	85,7	60	100,0	
Mother's Knowledge							
Less	15	41,7	21	58,3	40	100,0	0,840
Good	28	43,8	36	56,2	60	100,0	

Bivariate analysis based on Table 2 indicates that the variables of gender, number of family members, history of infectious diseases, and breastfeeding history are risk factors for stunting in children ages 0–24 months in Banyumas Regency. The study found that male children ages 0–24 months had stunting rates of up to 57.55 with a p-value of 0.017. According to earlier studies, the gender component is strongly linked to both the risk of chronic malnutrition and stunting (AOR: 1.67; 95% CI: 1.07; 2.62 for boys compared to girls) (Vonaesch et al., 2017). There was a statistically significant correlation between breastfeeding and stunting (p value 0.036) among the 49.3% of stunted children aged 0–24 months in this study who had not been nursed. During the first two years of life, inadequate nursing increases the risk of

stunting and death (Black et al., 2013).

Several studies have shown that even though mothers have a high level of education and good knowledge about nutrition, low family economic conditions can hinder access to nutritious food, health services, and adequate sanitation. Education and knowledge are not always directly proportional to practices in everyday life. Many mothers already know the importance of exclusive breastfeeding or good complementary feeding, but still follow family habits or myths that are less appropriate (Tamir et al., 2024). Mother's parenting plays an important role in child growth, not always found a significant relationship between parenting and stunting. Other factors such as nutritional intake and children's health conditions

also play an important role (Rahmayana et al., 2008)

Diarrhea and acute respiratory infections were the most prevalent infectious illnesses among children ages 0–24 months in this survey over the previous month. Malnutrition and infections typically coexist because they have an impact on one another. Poor nutritional status decreases the body's immunity to infection, which can increase the severity and duration of infection. Infections cause loss of appetite and decreased absorption of nutrients by the body, which can lead to continuous weight loss and increase the severity of malnutrition (Black & Heidkamp, 2018).

Stunting describes chronic malnutrition, a growth failure characterized by linear growth retardation resulting from inadequate nutrient intake and recurrent infections and chronic diseases that last from

pregnancy to two years of age (Fleeson et al., 2017).

Previous research states that the number of large family members increases the risk 1.07 times greater than families with small family members. Families with a large number of family members will have an impact on food intake and distribution in the family, reducing the nutritional adequacy of children, causing stunting (Muche et al., 2021). Family size, socioeconomics, and illiterate parents are factors associated with stunting (Birhanu et al., 2017; Kofuor et al., 2014)

CONCLUSION

According to this study, 42.0% of children aged 0-24 months were stunted. Male gender (p: 0.017), breastfeeding (p: 0.036), history of infectious disease within the previous month (p: 0.047), and having a large number of family

members (p: 0.019) are risk factors for stunting in children aged 0-24 months. To lower the incidence of stunting in children aged 6-24 months, breastfeeding should be increased until the child is 24 months old. Avoiding infectious diseases, particularly diarrhea and acute respiratory infections, is also important.

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