



The Correlation between Breakfast Habits and Nutritional Status in School-Age Children at Adiarsa Barat 1 Elementary School

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A B S T R A C T

The health and development of school-aged children are greatly influenced by their breakfast habits, which provide essential energy and nutrients for daily activities. However, many children often skip breakfast, which can affect their nutritional status. This research is an observational study with a cross-sectional approach conducted at Adiarsa Barat Elementary School 1. The subjects were 66 sixth-grade students selected through purposive sampling. Breakfast habits data were collected using a questionnaire, while nutritional status was measured based on height and weight. The correlation between breakfast habits and nutritional status was analysed using the Spearman Rho test with SPSS version 25.0. About 60.6% of respondents had breakfast 1-3 times a week, while 39.4% had breakfast 4-7 times a week. Most respondents (69.7%) had a normal nutritional status, with 3.0% experiencing malnutrition and 12.1% being obese. The analysis results showed a significant correlation between breakfast habits and nutritional status (p value = 0.000) with a correlation coefficient of -0.568. There is a significant correlation between breakfast habits and nutritional status in schoolchildren, although the negative direction of the correlation suggests that other influencing factors may be present.

INTRODUCTION

The health and development of children at primary school age is key in shaping a healthy and productive future generation. One crucial component of child development is adequate nutrition, which has a significant impact on their intelligence and daily productivity. In school-age children, several nutritional problems such as protein deficiency, iron deficiency, iodine deficiency, and overnutrition are common. A factor that can help overcome nutritional problems in school-age children is to familiarise them with a healthy breakfast (Munawaroh, Muftiana, and Dwirahayu, 2020).

Breakfast, as one of the main meals, plays a role in providing energy and nutrients needed for physical and cognitive activities throughout the day (Syahroni et al., 2021). Breakfast has various significant benefits for children. A regular breakfast can improve concentration, strengthen memory, and enhance learning ability. Children who regularly eat breakfast generally have better academic performance compared to children who skip (Surijati, Hapsari, and Rubai, 2021). In addition, breakfast also plays a role in maintaining a healthy weight. Children who do not eat breakfast tend to consume high-calorie foods during the day and night, which can increase the risk of obesity.

Good breakfast habits depend not only on the child themselves but also on the role of parents and the family environment. Parents have a key role in providing a healthy breakfast and educating children on the importance of breakfast. In addition, support from schools, such as providing healthy breakfast

programmes, can also help improve children's breakfast habits. Many studies have shown the importance of breakfast, but more studies specific to local contexts, such as Indonesia, are needed. This is important because cultural, social and economic factors can influence children's eating habits and nutritional status (Mardihani and Husain, 2021).

Based on surveys, there are still many elementary school-aged children who often skip breakfast. The reasons often cited include lack of time in the morning, lack of appetite in the morning, and lack of awareness of the importance of breakfast for health (Yuwanti, Mulyaningrum and Susanti, 2021). This irregular breakfast can have a negative impact on children's nutritional status. Nutritional status is an important indicator that reflects the state of children's health. Good nutritional status indicates that the child is getting adequate and balanced nutrient intake, which is necessary for optimal growth and development. Conversely, poor nutritional status can lead to various health problems, such as malnutrition, anaemia, and growth disorders (Ufiyah Ramlah, 2021). Nutritional status is also an important parameter in assessing the health of the body, which is determined by the balance between intake and expenditure of nutrients. These nutrients are obtained from food and drinks consumed. When there is a balance between the amount of nutrients entering the body and the nutrients released or used by the body, nutritional status will be in an optimal or normal condition (Anugraheni and Mulyana, 2019).

Data from various surveys shows that the prevalence of malnutrition, including stunting, wasting, and underweight, is still quite high. In addition, the problem of childhood obesity is also on the rise (Rahma et al., 2024). According to Basic Health Research data in 2018, the prevalence of nutritional status in children aged 5-12 years, as measured by body mass index by age, showed that 2.4% of them were categorised as very thin, 6.8% as underweight, 10.8% as overweight, and 9.2% as obese. In West Java province, the prevalence of nutritional status of children aged 5-12 years includes 1.9% very underweight, 5.2% underweight, 11.7% obese, and 19.6% obese, placing West Java at the 12th highest after DKI Jakarta (Depkes RI, 2018).

This study aims to identify the relationship between breakfast habits and the nutritional status of school children. Through this deeper understanding of breakfast habits, it is hoped that appropriate recommendations can be made to improve children's breakfast habits and nutritional status, which in turn can support their health and academic achievement.

METHOD

This study is an observational study using a cross-sectional approach. This study was conducted in April involving students in grades VI A and VI B at SD Negeri Adiarsa Barat 1 Karawang. The population in this study were all grade VI students, totalling 93 people. The inclusion criteria in this study were students who were present and willing to follow the research flow, and the exclusion criteria were students who

were not present when the study was conducted. The sampling technique used in this study was purposive sampling technique with inclusion criteria totalling 66 people in Juding, 33 girls and 33 boys. To find out breakfast habits in school-age children, researchers distributed questionnaires in the form of breakfast habits that had been tested for reliability to 66 respondents with an Alpha Cronbach's value of 0.792. This value is quite high and acceptable because it is greater than the correlation coefficient of 0.300 (Dahlan S, 2014). While nutritional status is obtained through measurement of height and weight. To determine the relationship between breakfast habits and nutritional status in schoolchildren, bivariate tests were carried out with the help of the SPSS version 25.0 application, and statistical tests were analysed using the Spearman Rho test.

RESULT

Table 1. Respondent Characteristics

No	Variables	Total	%
1	Gender		
	Male	33	50
	Female	33	50
2	Age		
	11 Years	6	9,1
	12 Years	50	75,8
	13 Years	8	12,1
	15 Years	1	1,5
	16 Years	1	1,5
3	Nutritional Status		
	Malnutrition	2	3,0
	Undernourished	4	6,1
	Normal	46	69,7
	Overweight	6	9,1
	Obesity	8	12,1
4	Breakfasr Frequency		
	1-3 times a week	40	60,6
	4-7 times a week	26	39,4
5	Breakfast Habits		
	Always	26	39,4
	Sometimes	40	60,6
6	Breakfast Time		
	Before leaving for school	50	75,8
	Before entering the class	10	15,2
	During the first break	6	9,1
7	Breakfast Location		
	Home	50	75,8
	School	16	24,2
8	How to get breakfast		
	Prepared by mom	45	68,2
	Buy outside	6	9,1
	School canteen	15	22,7

Based on Table 1, the age of respondents ranged from 11 to 16 years old; the average age of respondents was 12 years old, with a balanced gender proportion between males (50.0%) and females (50.0%). A total of 26 respondents (39.4%) had the habit of always having breakfast, and 40 respondents (60.6%) had the

habit of sometimes having breakfast. Most of the respondents' nutritional status was normal; as many as 46 respondents (69.7%) were normal, while the minority were malnourished as many as 2 respondents (3.0%) were malnourished. There were 40 respondents (60.6%) who had breakfast 1-3 times a week, which was categorised as sometimes having breakfast. Meanwhile, 26 respondents (39.4%) had breakfast 4-7 times a week, which was categorised as always having breakfast. A total of 50 respondents (75.8%) chose breakfast before leaving for school, 10 respondents (15.2%) chose breakfast before entering class, and 6 respondents (9.1%) chose breakfast during the first break. A total of 50 respondents (75.8%) had breakfast at home. Meanwhile, 16 respondents (24.2%) had breakfast at school. A total of 45 respondents (68.2%) had breakfast prepared by their mothers, 6 respondents (9.1%) had breakfast bought outside, and 15 respondents (22.7%) had breakfast at the school canteen.

Table 2. Correlation between Breakfast Habits and Nutritional Status

No	Variables	Correlations
1	Breakfast Habits	
	Correlation Coefficient	-0,568
	<i>p-value</i>	0,000
2	Nutrition Status	
	Correlation Coefficient	-0,568
	<i>p-value</i>	0,000

Based on Table 2, it is known that the breakfast habit variable is related to the nutritional status variable with a *p-value* of 0.000.

DISCUSSION

The elementary school period is a period that drains a lot of energy because it must be active and is a period of growth and development of the body that requires adequate nutritional intake both in quality and quantity. Breakfast is important for elementary school children so that their nutritional needs are met (Munawaroh, Muftiana, and Dwirahayu, 2020). The study showed that out of 66 respondents, 40 children (60.6%) sometimes had breakfast, while 26 children (39.4%) had breakfast. Respondents who sometimes have breakfast usually have 1-3 breakfasts a week. Breakfast is strongly associated with mental health because breakfast provides positive benefits for the brain that can make it smarter and more sensitive and increase concentration. The habit of eating breakfast has a positive influence on the body's ability to perform activities. Most of the respondents' nutritional status was normal, namely 46 respondents (69.7%), while 2 respondents (39%) were malnourished. In this study, nutritional status assessment was carried out using the BMI z-score according to age.

The results showed that 40 respondents (60.6%) sometimes had breakfast. This can be one of the factors causing nutritional problems in elementary school children. The results of the Spearman's rho test obtained a *p-value* of 0.000 means that there is a relationship between breakfast habits and the nutritional status of

school-age children at SDN Adiarsa Barat 1 Karawang. This is in accordance with the research of Amalia & Adriani in 2019, which found that there is a relationship between breakfast habits and the nutritional status of students at SMP Negeri 5 Banyuwangi, with a p-value of 0.049 (Amalia & Adriani, 2019).

CONCLUSION

Based on the results of research conducted at SD Negeri Adiarsa Barat 1 Karawang, it can be concluded that there is a significant relationship between breakfast habits and nutritional status in school-age children, as indicated by a p-value of 0.000. The measured relationship showed a correlation coefficient of -0.568, indicating a strong relationship. However, the direction of this relationship is negative, meaning that an increase in breakfast habits tends to be followed by a decrease in nutritional status, or vice versa. This result suggests that although the relationship between the two variables is strong, it is possible that other factors influence the relationship so that the direction of the relationship is not unidirectional. Suggestions for future research are expected to use more detailed research instruments related to breakfast composition and the use of more comprehensive nutritional status assessment methods.

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