

Description of Knowledge, School Snack Consumption Behavior and Nutritional Status of Elementary School Latukan, Lamongan Regency

Farikha Fidinilla Trias Prinanta¹, Annas Buanasita², Taufiqurrahman³, Nuning Marina Pengge⁴

^{1,2,3,4}Department of Nutrition, Politeknik Kesehatan Kemenkes Surabaya, Surabaya, Indonesia

Email: anasita@poltekkesdepkes-sby.ac.id

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ABSTRACT

The growth and development of elementary school-aged children require adequate nutrition. A preliminary study conducted on 10 students of Latukan Elementary School revealed that 20% of them were overweight, 60% had good nutritional status, and 20% were underweight. However, this preliminary study failed to provide a comprehensive understanding of the knowledge, snack consumption behavior, and nutritional status of students at Latukan Public Elementary School in Lamongan Regency. To address this gap, a descriptive study was conducted to determine the knowledge, consumption behavior of school snacks, and nutritional status of elementary school students in Latukan, Lamongan Regency. The study population comprised 66 students, with a sample size of 40 students selected through proportional random sampling. Data were collected through interviews using questionnaires and food frequency questionnaires. The findings revealed that 55% of the students had good knowledge, 55% exhibited moderate behavior, 57.5% consumed school snacks frequently, and 62.5% had good nutritional status. Moreover, 22.5% of the students were categorized as having more nutritional needs. This research aims to raise awareness among the community regarding the importance of nutritional knowledge and healthy snack consumption habits among school-aged children.

INTRODUCTION

Currently, Indonesian children in particular still bear two burdens, namely malnutrition and overnutrition. The nutritional status in Indonesia is broken down according to BMI/Age indicators, namely 2.4% are in the very thin category, 6.8% are in the thin category, 10.8% are in the fat category, and 9.2% are in the obese category, according to data from the Basic Health Research Agency in 2018. Nutritional status indicators of East Java Province show 5.8% of the population of underweight nutritional status, 13.2% of the population of obese nutritional status, and 11.1% of the population of obese nutritional status. The nutritional status of fat in Lamongan City reached 16.95%, while the prevalence of underweight reached 5.37% and the nutritional status of obesity reached 8.97%.¹

Hawker food serves as a nutritional intake for school children, including to regulate blood sugar levels so that school children remain concentrated and able to maintain physical activity of school children.² This can be done with the availability of healthy and nutritious snacks to meet the needs of the child's body while in the environment around school. Most people eat for reasons other than to satisfy hunger, school-age children really need nutrients for growth.

The basic educational institution located in Karanggeneng District; Lamongan Regency is Latukan State Elementary School. There is a wide variety of learning styles among students today, and some students prefer to eat snacks at school instead of bringing their own lunch from home. Therefore, researchers at SDN Latukan are interested in knowing more about knowledge, snack consumption habits, and health related to nutritional status. Early research results show that even though the school has a canteen, there are still snack vendors who offer chiki snacks, fried foods, and so on. Furthermore, it showed that two students had more nutritional status, six students had good nutritional status, and two students had less nutritional status after measuring the nutritional status of ten students. Based on these figures, the results are 60% of students with good nutritional status, 20% of students have more nutritional status while the remaining 20% have less nutrition. However, preliminary studies did not adequately characterize SDN Latukan students in terms of knowledge, consumption behavior, or nutritional status. So, it is necessary to carry out research to better know the picture of this.

MATERIAL AND METHODS

This type of research is descriptive, starting in October 2022 and continuing until March 2023. SDN Latukan in Karanggeneng District, Lamongan Regency is the location of this research. The population consists of all human participants in scientific studies. Students in grades 4, 5, and 6 of Public Elementary School for the 2022/2023 academic year (total 66 students) as a population. The sample in this study amounted to 40 students who were determined using the Slovin formula. In this study, the method used in sampling is proportional random sampling.

The survey method is a data collection method used in this study, namely by filling out the consent sheet to become a respondent (informed consent) first as a form of willingness and without any coercion to become a respondent, then the researcher weighed BB and measured TB and conducted interviews to fill out the form of questionnaire and FFQ for respondents.

Measuring knowledge levels, researchers interviewed students and asked 10 questions from questionnaires related to snack foods at school. There are three possible responses to each question. After a series of questions were asked, respondents' knowledge was evaluated using a 1-point scale if the answer was correct as well as a 0-point scale if the answer was incorrect.

Measurement of school snack consumption behavior was carried out to find out how often they consumed snacks, so interviews were conducted using the FFQ form. The procedure for conducting interviews is to provide FFQ forms related to school children's snacks, then from the list of preferred snacks, respondents are asked to identify how many times the snacks are consumed so that it can be known whether or not respondents consume each type of snack in the week (the list of snacks that have been listed is snacks available around the school environment which is

useful to help respondents' memory to minimize bias or not validity of data), then the frequency of snacks available there are 5 categories, respondents are asked to choose these categories with the frequency of consumption of each type of snack, then the enumerator gives a check mark (√) in the column according to the respondent's statement.

Body Mass Index (BMI) measurement or commonly known as BMI is carried out by measuring the BB and TB of respondents. A digital scale with an accuracy of 1 gram is a tool used to measure the respondent's BB. The classification uses PMK No. 2 of 2020.

When information has been collected, cleaned, and tabulated using software on the computer. After collecting the data, the next step is to display the frequency distribution for each metric. In particular, the study authors were interested in elementary school students in the area of Latukan Village, Karanggeneng District, Lamongan Regency, and their perspectives and snack consumption habits at school.

RESULTS

The following are the results of a study conducted on 40 students of SD Negeri Latukan, the results of the characteristics of respondents based on gender, namely::

Table 1. Frequency Distribution of Respondents According to Gender for Grade 4, 5 and 6 at SDN Latukan

Gender	n	%
Male	24	60.0
Female	16	40.0
Total	40	100.0

Source : Primary data, 2023

It can be seen that respondents with male sex 24 children (60%) and female sex 16 children (40%).

The following are the results of research conducted on 40 students of SD Negeri Latukan, so the frequency distribution of respondents' characteristics according to age was obtained as follows:

Table 2. Frequency Distribution of Respondents according to age for Grade 4, 5 and 6 at SDN Latukan

Age (years)	n	%
10	4	10.0
11	19	47.5
12	16	40.0
13	1	2.5
Total	40	100.0

Source : Primary data, 2023

Based on the table above, the results of 40 respondents on average, namely 11-year-old students as many as 19 children with a percentage of 47.5%.

The following are the results of research conducted on 40 students of SD Negeri Latukan so that the frequency distribution was obtained according to the level of knowledge of school snack consumption:

Table 3. Frequency Distribution of Respondents According to Knowledge Level of School Snack Consumption for grade 4, 5 and 6 at SDN Latukan

Knowledge level	n	%
Good	22	55.0
Enough	17	42.5
Poor	1	2.5
Total	40	100.0

Source : Primary data, 2023

Based on the table above, it can be seen that most students show a good level of knowledge, which is as many as 22 students with a percentage of 55%.

The following are the results of research conducted on 40 students of SD Negeri Latukan, so the frequency distribution was obtained according to the level of school snack consumption behavior, namely:

Table 4. Frequency Distribution of Respondents According to Behavior Level of School Snack Consumption for Grade 4, 5 and 6 at SDN Latukan

Behavior level	n	%
Often	23	57.5
Rarely	17	42.5
Total	40	100.0

Source : Primary data, 2023

Based on the frequency distribution table according to the level of school snack consumption behavior above, it is known that most students have a frequent category behavior level of 23 students with a percentage of 57.5%.

In this study, respondents also mentioned the types of school snacks that are often consumed and rarely consumed. The 5 types of snacks that are often consumed are::

Table 5. Frequency Distribution of Most Frequently Consumed School Snacks for Grade 4, 5 and 6 at SDN Latukan

No.	Food item	n	%
1	Ice sachet powder	39	97.5
2	Meatballs	36	90.0
3	Sausages	34	85.0
4	Fried meatball	31	77.5
5	Papeda	30	75.0

Source : Primary data, 2023

Based on the frequency distribution table, the list of school snacks most often consumed by grade 4, 5 and 6 students at SDN Latukan shows ice sachet powder as many as 39 students with a percentage of 97.5%.

Meanwhile, 5 types of snacks that are rarely consumed can be seen from the following table:

Table 6. Frequency Distribution of Least Frequently Consumed School Snacks for Grade 4, 5 and 6 at SDN Latukan

No.	Food item	N	%
1	Bakwan	1	2,5
2	Hamburger	1	2,5
3	Kebab	1	2,5
4	Macaroni	1	2,5
5	Fried Noodles	1	2,5

Source : Primary data, 2023

Based on the table of the list of school snacks that are least consumed in grade 4, 5 and 6 students at SDN Latukan, it shows bakwan, hamburger, kebab, macaroni and fried noodles as many as 1 student each with a percentage of 2.5%.

The following are the results of research conducted on 40 students of SD Negeri Latukan, so the frequency distribution according to nutritional status was obtained, namely:

Table 7. Frequency Distribution of Respondents According to Nutritional Status for Grade 4, 5 and 6 at SDN Latukan

Nutritional Status	n	%
Underweight	2	5,0
Normal	24	60,0
Overweight	9	22,5
Obesity	5	12,5
Total	40	100,0

Source : Primary data, 2023

Based on the table above, it can be seen that most students have good nutritional status, namely 24 children with a percentage of 60.0%, more nutritional status of 9 children with a percentage of 22.5% and those who have obese nutritional status of 5 children with a percentage of 12.5%.

The following are the results of a study conducted on 40 students of SD Negeri Latukan, the level of knowledge of school snack consumption based on nutritional status showed the following results:

Table 8. Cross Tabulation of Knowledge Level of School Snack Consumption with Nutritional Status for Grade 4, 5 and 6 at SDN Latukan

Knowledge Leve	Status Gizi								Total	
	Underweight		Normal		Overweight		Obesity			
	n	%	n	%	n	%	n	%		
Good	2	9.1	12	54.5	6	27.3	2	9.1	22	100.0
Enough	0	0.0	12	70.6	2	11.8	3	17.6	17	100.0

Poor	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0
Total	2	5.0	24	60.0	9	22.5	5	12.5	40	100.0

Source : Primary data, 2023

From the data above, it can be seen that the knowledge of school snack consumption with good categories has a good nutritional status of 12 murriids (54.5%) and classified as more nutritional status of 6 students (27.3%).

The following are the results of a study conducted on 40 students of SD Negeri Latukan, the level of snack consumption behavior based on nutritional status showed the following results:

Table 9. Cross Tabulation of Behavior Level of School Snack Consumption with Nutritional Status for Grade 4, 5 and 6 at SDN Latukan

Behavior Level	Nutritional Status								Total	
	Underweight		Normal		Overweight		Obesity			
	n	%	n	%	n	%	n	%		
Often	1	4.3	12	52.2	5	21.7	5	21.7	23	100.0
Rarely	1	5.9	12	70.6	4	23.5	0	0.0	17	100.0
Total	2	5.0	24	60.0	9	22.5	5	12.5	40	100.0

Source : Primary data, 2023

Based on the table above, it can be seen that the behavior of snack consumption in the category is often classified as the nutritional status of obesity as many as 5 students with a percentage of 21.7%.

DISCUSSION

1. Knowledge Level of Grade 4, 5 and 6 Students of SDN Latukan

This indicator of the level of knowledge is measured using questionnaires, which are carried out by the interview method. The results of research conducted by researchers on knowledge show that most of the levels of knowledge classified as good categories are as many as twenty-two students with a percentage of 55%, classified as sufficient categories as many as seventeen students with a percentage of 42.5% and those classified as less than one student with a percentage of 2.5%. With a small number of students whose level of knowledge is less category, it is a good result, because the more students who are well knowledgeable, there will also be many students who understand the level of safety of snacks they will consume. The level of knowledge is an important factor for a person, even children cannot be allowed to grow just like that without good care and guidance.³

One way to increase the value of knowledge in school-age children is through health education. The way for knowledge in school-age children to increase is through health education.⁴ According to researchers, children's snack choices are strongly influenced by their level of nutritional literacy. There are internal and external sources of knowledge for children. Experience in

his own life is the source of this kind of "internal knowledge". In order for children to learn more about nutrition, apart from internal, children also need to get information from outside to expand their knowledge.

1. Level of School Food Consumption Behavior of Grade 4, 5 and 6 Students of SDN Latukan

Researchers conducted interviews with the Food Frequency Questionnaire (FFQ) on respondents. The results of the study found that of the 40 students as respondents, most had snack consumption behavior classified as frequent 23 students (57.5%), while for the level of behavior classified as rare 17 students (42.5%).

This method is focused on frequent consumption of food, where frequent consumption will provide information on the number of repetitions in various types of food in a period of 1 week. Health and food are very closely related.⁵ The frequency of student snacks is often influenced by the presence of hawker vendors selling in school cooperatives and outside the school environment, so it is likely that in addition to playing, students also use their free time or breaks to buy and consume school snacks. The colors, tastes, low prices and attractive packaging sold in the school environment are usually much liked by children.⁶

The availability and safety of a type of food includes the basic rights of every human being.⁷ For the selection of snacks is a determining part of snack habits.⁸ The frequency of children's snacks is related to the amount of pocket money given to them. In line with research conducted by Rahman (2016), both parental and peer income have a significant effect in influencing children's food consumption habits.⁹ An additional study confirms that snack consumption occurs more often as a function of the amount of pocket money. Children who are not used to eating breakfast and bringing provisions will automatically give pocket money as a way that is considered not troublesome.¹⁰ However, the habit of snacking food at school is not always caused because students have not had breakfast or do not bring lunch from home.¹¹ The higher the snack budget, the more variety of snacks purchased. School-age children will tend to choose types of snacks that are relatively cheap.¹² The availability of food in schools sells varied snacks so that there is an increase in children's snack habits at school.¹³ The availability of healthy and unhealthy snacks in schools is very influential on the choice of snack food in children.¹⁴

The existence of the canteen gives an important role related to the size of the intake of snack food consumed.¹⁵ Because of the psychological influence, if children do not buy snacks in the school environment, they will feel they have no friends and also feel ashamed. Other reasons include the fact that children often skip breakfast at home due to their mother's busy schedule or because school is too far away or they are in a hurry to go there. It is very important for a child to have an understanding of snacks that are suitable or not to be consumed by him.¹⁶

2. Status Gizi Murid Kelas 4, 5 and 6 SDN Latukan

The nutritional status indicator observed in elementary school students is BMI according to age (BMI / U). The results of research conducted on grade 4, 5 and 6 students of SD Negeri Latukan regarding nutritional status showed that students with good nutritional status had the highest frequency, namely 24 students with a percentage of 60%, nutritional status was lacking there were 2 students with a percentage of 5%. The nutritional status of more than 9 students (22.5%) and the nutritional status of obesity as many as 5 students with a percentage of 12.5%. If the results of this study are compared with the incidence of obesity according to (Risikesdas, 2018) in Lamongan Regency of 8.97%, this shows that the incidence of obesity in the results of the study is greater than the incidence of obesity in Lamongan Regency. Hawker food is also an alternative as a source of nutrients that are less than daily consumption.¹⁷

Optimal growth and development of school-age children depends on providing good and correct nutrition or intake.¹⁸ Overnutrition and obesity can occur due to improper eating schedules or meal times, so that children are unable to control their appetite and consumption of snacks. Elementary age children spend a lot of time with their friends. This can cause a small number of respondents to have more nutritional status to obesity, this incidence will continue to increase if not immediately overcome by paying attention to food intake and balanced with physical activity. Reducing energy intake at snacks can reduce the level of obesity in a person.¹⁹

A person's nutritional status has a significant impact on his standard of living. Balanced nutrition is key in supporting children's growth and development, but poor snacking habits at school make the risk of obesity and malnutrition.²⁰ According to research, a person's nutritional status improves when their food intake meets or exceeds their metabolic needs for nutrients. Everyone has a unique nutritional status because the intake and need for various nutrients are different. A good diet can achieve good nutritional status.

1. Knowledge Level Based on Nutritional Status of Grade 4, 5 and 6 Students of SDN Latukan

It is known that knowledge with good categories has a good nutritional status. The following is evidenced by the most results, namely as many as 12 children (54.5%). It is clear that if knowledge related to nutrition is low, the greater the possibility of problematic nutritional status. Knowledge of nutrition is crucial to determine human behavior when determining the type of food. The better the nutritional knowledge, the better it is when determining the type and amount of food for human needs. As the opinion of researcher Florence (2017) that if nutritional needs are met, it will be more likely to achieve good nutritional status.²¹

Nutrition is a balanced state between nutrient intake and needs in order to run metabolism.²² Behavior can be influenced by a person's knowledge. Correct nutritional behavior regarding food habits consumed is based on having a solid foundation of knowledge, which in turn has a significant impact on one's attitudes and actions in determining food choices.

1. Behavioral Level Based on Nutritional Status of Grade 4, 5 and 6 Students of SDN Latukan

From the results of this study showed that most of the behavior levels were rarely categorized based on good nutritional status, which was as many as 12 students with a percentage of 70.6%. At the behavioral level, the category is often with obese nutritional status as many as 5 students with a percentage of 21.7%.

The results showed that students with more nutritional status or obesity had frequent snack consumption behavior, this is because the frequency or type of food consumed exceeds the recommended needs of each individual. Some parents control overeating in children.²³ Accustomed to skipping breakfast will have a three times higher risk for snacking and difficult to control appetite so that it can cause obesity.²⁴

Based on the results of Florence's research (2017) between nutritional status and eating frequency, it is known that if the consumption pattern is not good, the more likely the nutritional status becomes thin. Food service, especially access to ready-to-eat food, is the main influence on a person's diet which will be at risk of obesity.²⁵ The level of consumption of unbalanced eating will result in more nutrition if the level of consumption exceeds individual needs so that it causes toxic or harmful effects, and vice versa if the level of consumption is less than individual needs will result in less nutrition.

CONCLUSION

Several things can be concluded about the picture of knowledge, school snack consumption behavior and nutritional status in students of SD Negeri Latukan based on research that has been conducted, namely the ratio of male respondents to the number of women, and the average age of respondents is 11 years. The level of knowledge about school snacks of SD Negeri Latukan students is mostly in the good category as many as 22 students with a percentage of 55%. The level of school snack consumption behavior of SD Negeri Latukan students who are included in the category is quite twenty-two students, namely with a percentage of 55%, and the frequency of snack consumption in the category is often twenty-three students with a percentage of 57.5%.

In the nutritional status of grade 4, 5 and 6 students of SDN Latukan, most of them are included in the category of good nutrition as much as 25 with a percentage of 62.5% but there are also students in the category of obesity nutrition as many as 4 students with a percentage of 10%.

Five types of snacks are most often consumed by grade 4, 5 and 6 students of SD Negeri Latukan namely ice sachet powder, pentol, sausage, papeda and sempol. While the 5 types of snacks that are least consumed are bakwan, hamburgers, kebabs, macaroni and fried noodles. This has something to do with the taste of respondents and the price of these snacks. The conclusion contains a summary of the results and discussion based on the research objectives, while the

suggestions are guided by the continuation in developing theories that are written concisely and clearly.

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