



## THE RELATIONSHIP OF CHILDREN'S KNOWLEDGE ABOUT CONSUMING CARIOGENIC FOODS WITH THE STATUS OF DENTAL CARRIES IN CLASS V STUDENTS OF SDN LAMPEUDAYA ACEH BESAR

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### Abstract

*Cariogenic foods are foods that contain carbohydrates that can cause tooth decay if consumed continuously. Lack of knowledge about dental and oral hygiene can also cause various diseases in the oral cavity, one of which is dental caries. Dental caries is a disease that destroys tooth structure starting from the tooth surface extending to the pulp. The purpose of this study was to determine the relationship between children's knowledge about consuming cariogenic foods and dental caries status in fifth grade students at SDN Lampeudaya Aceh Besar. This research is analytic with cross sectional design. The sampling technique used was Total Sampling, namely all students of class V at SDN Lampeudaya Aceh Besar, totaling 31 people. The results showed that of the 31 fifth grade students at SDN Lampeudaya Aceh Besar, who had knowledge about consuming cariogenic foods in the unfavorable category were 19 respondents (61.3%), with dental caries status in the moderate category as many as 9 respondents (29.0 %), then the obtained value ( $P$  value = 0.018). Data analysis used is univariate analysis and bivariate analysis using chi-square statistical test with 0.05. Based on the results of the study, it can be concluded that there is a relationship between children's knowledge about consuming cariogenic foods and dental caries status in fifth grade students at SDN Lampeudaya Aceh Besar. It is expected for students to reduce the consumption of cariogenic foods that are sweet and sticky which can damage teeth, for parents and teachers to be able to monitor the type of food consumed by children, and for health workers to be able to provide counseling about the impact and influence of cariogenic foods on dental caries .*

**Keywords:** Knowledge, Children, Cariogenic food, Dental caries.

## **A. Introduction**

Health development is essentially an effort carried out by all components of the Indonesian nation which aims to increase awareness, willingness, and ability to live healthy for everyone in order to realize the highest degree of public health ( Permenkes RI, 2015) .

Oral health is a healthy state of the hard and soft tissues of the teeth and related elements in the oral cavity that enable individuals to eat, talk and interact socially without dysfunction, aesthetic disturbances, and discomfort due to disease, occlusion deviations and tooth loss. able to live productively socially and economically (Ministry of Health, 2019) .

Knowledge or knowledge is the result of human sensing or the result of knowing someone about an object through the five senses they have. The five human senses for sensing objects are sight, hearing, smell, taste and touch (Artanti et al., 2020) .

School-age children generally have a high caries risk, because at this age children like to eat snacks like sweet and sticky foods. The problem of high caries rates in children is also strongly influenced by the role of parents (Worotitjan et al., 2013) .

Cariogenic foods are foods that can cause dental caries if someone ignores dental and oral hygiene. The nature of cariogenic foods is that they contain lots of carbohydrates, are sticky and break easily in the mouth (Farizah et al., 2021) .

Dental caries is a disease of dental tissue which is characterized by damage to the hard tissues of the teeth, starting from the tooth surface starting from the enamel, dentin, and extending towards the pulp. Dental caries can be caused by various factors including carbohydrates and glucose, microorganisms and saliva, tooth surface and shape, and the two bacteria most commonly responsible for cavities are *Streptococcus mutas* and *Lactobacillus* . (Tulangow et al., 2013) .

Based on Riskesdas (2018) the percentage of Indonesian population who have dental and oral health problems in 2013 and 2018 increased from 25.9% to 57.6%. The prevalence of active caries in the Indonesian population in 2018 was 45.3%. At the age of 10-14 years by 73.4%. The province of Aceh shows the prevalence of dental and oral problems in the

population of 56%, and the prevalence of active caries in the Aceh population in 2018 is 47%. At the age of 10-14 years by 44.23%.

## **B. Method**

This study aims to determine the relationship between children's knowledge about consuming cariogenic food and dental caries status in fifth grade students at SDN Lampeudaya Aceh Besar.

## **C. Result and Discussion**

This type of research is analytic with cross sectional . The target in this research is the fifth grade students at SDN Lampeudaya Aceh Besar, totaling 31 people. This research was conducted on January 19-20, 2022. The instruments used to support this research were questionnaire sheets, patient status cards (KSP), and diagnostic tools sets.

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Table 1 Distribution of Respondents Frequency by Gender in Class V Students at SDN Lampeudaya Aceh Besar in 2022

No	Gender	Frequency	Percentage
1	Man	10	32.3
2	Woman	21	67.7
	Total	31	100

Based on table 1 above, it can be seen that the majority of students in SD Negeri Lampeudaya Aceh Besar are female as many as 21 respondents (67.7%).

Table 2. Frequency Distribution of Respondents by Age in Students of SDN Lampeudaya Aceh Besar in 2022

No	Age	Frequency	Percentage
1	10 years	3	9.7
2	11 years old	28	90.3
	Total	31	100

Based on table 2 above, it can be seen that the most students of SD Negeri Lampeudaya Aceh Besar are 11 years old as many as 28 respondents (90.3%).

Table 3 Frequency Distribution of Respondents Based on Knowledge About Consuming Cariogenic Foods in Class V Students at SDN Lampeudaya Aceh Besar in 2022

No	Knowledge About Consuming Cariogenic Food	Frequency	Percentage
1	Good (> 50%)	12	38.7
2	Poor (≤ 50%)	19	61.3
	Total	31	100

Based on table 3 above, it can be seen that students at SD Negeri Lampeudaya Aceh Besar who have the most knowledge about consuming cariogenic foods are in the poor category as many as 19 respondents (61.3%).

Table 4 Frequency Distribution of Respondents Based on Dental Caries Status in Class V Students at SDN Lampeudaya Aceh Besar in 2022

No	Dental Caries Status	Frequency	Percentage
1	Very good	4	12.9
2	Low	8	25.8
3	Currently	9	29.0
4	Tall	8	25.8
5	Very high	2	6.5
	Total	31	100

Based on table 4 above, it can be seen that the students who have the most dental caries status are in the moderate category as many as 9 respondents (29.0%).

#### Dental Caries Status

No	Knowledge About Consuming cariogenic food						S. Low
	%	Low	%	Currently	%	Tall	%
	S. Height	%	Total	P value			
1	3	25.0	6	50.0	1	8.3	1
	8.3	1	8.3	100	0.018		
2	1	5.3	2	10.5	8	42.1	7
	36.8	1	5.3	100			
	Total	4	12.9	8	25.8	9	29.0
		25.8	2	6.5	100		

Table 5 Distribution of Respondents Based on the Relationship of Children's Knowledge About Consuming Cariogenic Foods with Dental Caries Status in Class V Students at SDN Lampeudaya Aceh Besar in 2022

Based on table 5 above, from 31 students at SD Negeri Lampeudaya Aceh Besar who have knowledge about consuming cariogenic foods in the good category with dental caries status in the low category, 6 respondents (50.0%). Meanwhile, those who have knowledge about consuming cariogenic food in the poor category with dental caries status obtained a moderate category, namely 8 respondents (42.1%). Based on the results of statistical tests: Chi-square results obtained P Value of 0.018, indicating that there is a relationship between children's knowledge about consuming cariogenic foods with dental caries status in fifth grade students at SDN Lampeudaya Aceh Besar in 2022 .

#### **D. Conclusion**

Based on the research results from the discussion, the following conclusions can be drawn:

1. There is a relationship between children's knowledge about consuming cariogenic food and dental caries status in fifth grade students at SDN Lampeudaya Aceh Besar in 2022 ( $p=0.018$ ) 0.05.
2. The level of knowledge of children about consuming cariogenic foods with dental caries status in the good category was found in the low category, namely 6 respondents (50.0%). Meanwhile, those who have knowledge about consuming cariogenic food in the poor category, obtained the moderate category, namely 8 respondents (42.1%).
3. The average dental caries in fifth grade students at SDN Lampeudaya Aceh Besar was 3.5 in the medium category.

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