The Correlation between Junk Food Consumptive Behavior and the Nutritional Statuses of Primary School Learners

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ABSTRACT

The nutritional status of elementary school children is very important to improve because it will determine the quality of life of children and also affect the nation's future development process. Abnormal nutrition in children will inhibit growth, lower intelligence levels, and weaken the immune system. Most of the behavior of millennial generation children is the habit of eating unbalanced food such as fast food (junk food) which will have an impact on children's nutritional status. This study head to determine the correlation between junk food consumption behavior and nutritional status at SDN Pati Kidul 05. Method this research is Observational analytics with cross-sectional research design, and quantitative research type. The population used was all students in grades IV and V with a sample of 50 students taken using a saturated sampling technique. The research instrument was a questionnaire of knowledge, attitudes, practices, body scales, and microtoise. The statistical analysis used is the chi-square test. The study showed that there was no significant correlation between knowledge and the nutritional status of children at SDN Pati Kidul 05 using the chi-square test to obtain a p-value = 0.459. There was no significant correlation between attitude and nutritional status of children at SDN Pati Kidul 05 using the chi-square test to obtain a p-value = 0.375. There is no significant correlation between practice and the nutritional status of children at SDN Pati Kidul 05 using the chi-square test to obtain a p-value = 0.706. The results of the study show that there is no significant correlation between knowledge, attitude, and practice with the nutritional status of children.

I. Introduction

School-aged children are valuable investments for the nation because they are the future generations of the nation. The quality of a nation in the future relies on the quality of the children since early childhood. Thus, they must receive excellent quality improvement. The primary objective of national development is - to improve human resource quality. In this case, children as the human resources play an important role in promoting national development.

The quality of Indonesian children determines the human resource quality in the future. The children also become the future generation to develop the country and as the excellent investment of Indonesia to develop the advancement and win the global competition. A qualified human resource requires some conditions, such as normal, brilliant, and productive development and growth of the children. One of them is - to fulfill the nutritious food necessity. The other matter is to realize optimal nutritional status (Firdayanti, 2023).

The millennial generation's behaviors, specifically the children, include the freedom of consuming unbalanced meals, such as junk food or fast food. This matter may interrupt the normal nutritional status (Rofiony, 2015).

Junk food is processed fast food with immediate processing time. Junk food also has low nutrition and negative effects if frequently consumed. The impacts of consuming junk food include high-fat amounts, high obesity risk, and high possibility of suffering from various diseases. The consumptive junk food behavior receives various influences from the environment, genetics, personal behavior, and nutritional status (Munasiroh, 2019).

Nutritional status refers to the body's descriptions after consuming meals and other nutritional substances from the meals inside the body (Budiman et al., 2021). WHO (2020) explains that nutritional status becomes the standard to measure the children's growth and to determine the required nutritional intake. Every child requires different nutrition depending on the sex type, age, weight, and height. Permenkes (2020) determines the nutritional status of children based on the table of anthropometry standards for children and the graphic of child growth. However, the graphic describes the tendency of the children's development from both labels and graphics with the same threshold.

The data of Kemenkes RI (2018), the Health Ministry of Indonesia, found that school-aged children (5-12 years old), based on their weight and height, were under the standards. For primary school learners, a percentage of 6.7% of learners were categorized as 'extremely short,' while the other 16.9% with the 'short' category. These statuses were highly observable in children in village areas. Based on the nutritional statuses of children, the Body Mass Indexes (BMT) of the children indicated a percentage of 2.4% with 'extremely thin,' 6.8% in the 'thin' category, and 9.2% in the obesity category. Based on the nutritional status determination in Central Java, the prevalence of nutritional statuses in children aged 5 and 12 years old was 2.1% in the 'extremely thin' category, 6.5% in the 'thin' category, 71.3% in the normal category, 11.1% with overweight category, and 9.1% with obesity category (Riskesdas, 2018). The survey results of Indonesia's Nutritional Status in 2022 found 21.6% of children in the stunting category, 2.7% in the wasting category, 17.1% in the underweight category, and 3.5% in the overweight category. Based on the report data about the health activity of school-aged children and teenagers at Primary School or Islamic Primary School in 2021, the prevalence of nutritional status in Pati was 7.6% (Dinas Kesehatan Kabupaten Pati, 2021).

The preliminary research results on February 22, 2023, from the survey sheet for 10 primary school learners aged between 9 and 11 years old at Public Primary School Pati Kidul 05, found 90% of learners frequently consumed fast food or junk food. The remaining percentage, 10%, rarely consumed junk food or fast food.

II. Methods

Explain in detail about the research design, timing, variables, population, sample, sampling, instrument, data analysis, and information on passing the ethical test. This analytic observational research applied a cross-sectional approach. The researchers conducted the research in February 2023. The current research population was all fourth and fifth graders at Public Primary School Pati Kidul 05, consisting of 50 respondents. The researchers took the respondents with total sampling. The sample was 50 respondents. The researchers analyzed the data with univariate and bivariate analyses with the Chi-square test. The applied research instrument was a questionnaire with some questions about cognition, attitude, and frequency of consuming fast food or junk food. The applied tools for measuring the nutritional statuses were scale and microtome.

III. Results and Discussion

The results presented must be sequential from the main results to the supporting results. Use units of measurement based on applicable international standards. You can add diagrams, tables, pictures, and graphs by completing them with narration.

1. The Respondent Characteristics

The following table, table 1, shows the frequency distribution of the learner characteristics based on the age and sex types.

Table 1. The Characteristics based on the Age and Sex Types

Characteristics	Frequency	Percentage
Age		
10 years	19	38%
11 years	28	56%
12 years	3	6%
Sex types		
Males	25	50%
Females	25	50%
Total	**50**	**100%**

Source: The primary data, 2023

Table 1 shows the respondent characteristics based on age. Most learners are aged 11 years old, 28 individuals (56%); 19 learners aged 10 years old (38%), and 3 learners aged 12 years old (6%). Then, the respondents are males, 25 respondents (50%); and females, 25 respondents (50%). From the data, the researchers found that most respondents were aged 10, 11, and 12 years old. For primary school-aged children, their physical growth and development are extremely excellent. Thus, these children require a balanced nutritional intake.

2. The Univariate Analysis

The researchers conducted the univariate analysis on cognition, attitude, practice, and nutritional status. Table 2 shows the results.

a. Cognition

Table 2. The frequency distribution of cognition and attitude

Cognition	Frequency	Percentage
Excellent	39	78%
Bad	11	22%
Total	**50**	**100%**

Source: The primary data, 2023

Table 2 shows that most learners have an excellent understanding of junk food or fast food, 39 learners (78%); while the others, 11 learners or 22%, have a bad understanding. The researchers measured the respondent's cognition with a questionnaire consisting of 10 questions about junk food. The type of question was a multiple-choice question. The results found that the public primary school learners of Public Primary School Pati Kidul had an excellent understanding of junk food, 39 learners (78%); while 11 learners had a bad understanding category, 22%. The results proved that the learners understood the classification of fast food or junk food based on the types, nutritional contents, and negative impacts. They had an excellent understanding category because they received various socializations from the local health officers, teachers, and social media.

Excellent cognition influenced the learners' health. Notoatmodjo (2014) explains that an individual with excellent knowledge will make them aware of selecting the consumed meal types. Aulia (2022) found that individuals with excellent nutritional cognition could apply the information to their behaviors and attitudes toward consuming. This matter influenced the nutritional status. Individuals with nutritional awareness would be selective in choosing the consumed meals. This matter shows the significant roles of cognition toward consumptive behavior and attitude.

Diajeng Hemas Devi Irawan (2021) also found that the learners at Public Senior High School 1 Salaman had excellent nutrition, with 53 respondents (81.5%). Nur Rahmi et al (2022) also found that 86 students of Universitas Malikussaleh or 81.9% had an excellent understanding of nutritional status.

b. Attitude

Table 3. The frequency distribution of learner attitude

Attitude	Frequency	Percentage
Excellent	37	74%
Bad	13	26%
Total	**50**	**100%**

Source: The primary data, 2023

Table 3 shows that the learners at Public Primary School Pati Kidul 05 have an excellent attitude, 37 learners (74%); while 13 learners have a poor attitude category, 26%.

The table also shows that 37 learners, 74%, have excellent attitudes; while 13 learners, 26%, with poor attitude category. From the results, the researchers found most learners have an excellent understanding of junk food.

Learners with excellent cognition would have excellent behaviors and attitudes (Notoatmodjo, 2007). However, some respondents with excellent cognitive levels did not have an adequate attitude toward consuming balanced nutrition.

Fajriani et al (2020) researched the correlation between cognition, attitude, and action of nutritional status for families with toddlers aged 2 and 5 years old toward the fast food consumptive behavior of high-school-aged adolescents. The result found most respondents had positive attitudes, 68 respondents out of 70.8%.

c. Practical

Table 4. The frequency distribution of the learner practices

Practical	Frequency	Percentage
Rarely	26	52%
Frequently	24	48%
Total	**50**	**100%**

Source: The primary data, 2023

Table 4 shows that 26 learners, 58%, rarely consume fast food or junk food while the other learners, 24 learners or 48%, frequently consume fast food or junk food.

Table 5. The distribution of the learner's nutritional status

Nutritional status	Frequency	Percentage
Normal	32	30%
Abnormal	18	70%
Total	**50**	**100%**

Source: The primary data, 2023

The table shows that 32 learners, 64%, have normal status. The remaining number, 18 learners or 36%, have abnormal nutritional status.

The results showed that 26 learners, 52%, rarely consume fast food or junk food while the other 24 learners, 48%, frequently consume junk food or fast food. The data also show that the learners have the habit of consuming junk food. This finding contradicted the distribution of excellent cognition and excellent attitude.

The influential factors of the children to consume fast food or junk food were the price, flavor, practice, and social media advertisement. Diajeng Hemas Devi Irawan (2021) also found that the learners of Senior High School 1 Salaman frequently consumed fast food or junk food, 34 respondents (52.3%).

3. The Bivariate Analysis

The bivariate analysis found a correlation between cognition and nutritional status, a correlation between attitude and nutritional status, and a correlation between the practice and the nutritional status. The following table, table 6, shows the results.

a.

Table 6. The Correlation distribution between cognition and nutritional status

Cognition	Nutritional status	Total	*P Value*

	Abnormal		Normal				
	n	f	n	f	n	f	
Excellent	13	33,3 %	25	66,7 %	39	100 %	
Bad	5	45,5%	6	54,5 %	11	100 %	0,459
Total	18	36 %	32	64 %	50	100 %	

Source: The primary data, 2023

Table 6 shows no correlation between nutritional status and nutritional status. Twenty-five learners with excellent cognition have normal nutritional statuses, 66.7%; on the other hand, the table shows only 13 learners with excellent cognition have abnormal nutritional status. Six learners with poor or bad cognition have abnormal nutritional status, 54.4%; on the other hand, five learners with poor or bad cognition have normal nutritional status, 45.5%.

The Chi-square result obtains a p-value of 0.459 lower than 0.05, indicating no correlation between the cognitive level and the nutritional statuses of the learners.

The results showed that fifty respondents from Public Primary School Pati Kidul 05 mostly had excellent cognition. Twenty-five learners with excellent cognition also have normal nutritional status, 66.7%; while the other fourteen learners with excellent cognition did not have normal nutritional status, 33.3%. Six learners with poor cognition also had normal nutritional statuses, 54.5%; the other five learners with poor cognition did not have normal nutritional status, 45.5%.

After examining the statistical test with the Chi-square test, the researchers found a correlation between cognition and nutritional status with a p-value of 0.459 higher than 0.05. The result indicates no significant correlation between the cognition and the nutritional status of the learners.

Sinulingga (2021) also found no significant correlation between the cognition of the medicine faculty students and the nutritional statuses of the students at Universitas Sumatera Utara with a p-value of 0.778. Maria Selviana Charina (2022) also found the same results with the respondents from Universitas Nusa Cendana. The researchers took 158 students from the years 2018, 2019, and 2020 with active-college status. The researchers found no significant correlation between cognition and nutritional status with a p-value of 0.595. Annisa Wulandari (2021) also found no correlation between the cognitive levels of nutritional status and the nutritional statuses of the students at Universitas Ibnu Khaldun Bogor. The researchers took 66 PBI students. The researcher examined the data with Spearman rank and found a p-value of 0.319. The result indicates no correlation between the cognitive level of nutrition and the nutritional status of the students. Gita Ayuningtyas (2021) found a significant correlation between the cognitive level of mothers and the nutritional status of toddlers. The researchers examined the data with univariate and bivariate analyses. The Chi-square test obtained a p-value of 0.00. The value indicates a significant correlation between the cognitive levels of mothers and the nutritional statuses of the toddlers.

b. The correlation between attitude and nutritional status

Table 7. The correlation distribution between attitude and nutritional status

Attitude	Nutritional status				Total		*P Value*
	Abnormal		Normal				
	n	f	n	f	n	f	
Excellent	12	32,4 %	25	67,6 %	37	100 %	
Bad	6	46,2%	7	53,8%	13	100 %	0,375
Total	18	36 %	32	64%	50	100 %	

Source: The primary data, 2023

Table 7 shows the correlation between attitude and the nutritional status of the learners. Twenty-five learners with excellent attitudes also have normal nutritional statuses, 67.6%; on the other hand, 12 learners with excellent attitudes do not have normal nutritional statuses, 32.4%. Seven learners with poor attitudes have normal nutritional statuses, 53.8% while six learners with poor attitudes have abnormal nutritional statuses, 46.2%.

The Chi-square test obtains a p-value of 0.375 higher than 0.05. The value indicates no significant correlation between the attitude and the nutritional status of the learners.

The results explain that twenty-five learners with excellent attitudes have normal nutritional status, 67.6%. On the other hand, twelve learners with excellent attitudes do not have normal nutritional statuses, 32.4%. Seven learners with poor attitudes have normal nutritional statuses, 53.8%. On the other hand, six learners with poor attitudes have abnormal nutritional statuses, 46.2%.

The Chi-square test obtained a p-value of 0.375 higher than 0.05. Thus, the result denies Ho. This decision indicates no significant correlation between the attitude and nutritional status of the learners at Public Primary School Pati Kidul 05.

Mentari Olivia Fatharani (2019) also found no significant correlation between the attitudes and the nutritional status of fertile women in Terbanggi Besar district, Lampung Tengah regency. The obtained p-value from the research was 0.378. Septo Tepriandy (2021) also found a similar result from 60 learners at MAN 2 and MAN 1 Medan. The researcher found no significant correlation between attitude and nutritional status with a p-value of 0.378. Rissa Nurdiana (2021) also found no significant correlation between the attitudes of mothers and the nutritional status of toddlers. The researcher took 80 respondents based on the case and contract populations. The obtained p-value of the research was 0.176 higher than 0.05. Noval Ichsan Casando (2020) found a significant correlation between the attitudes of mothers and the nutritional statuses of children aged between 12 and 59 months at Pal Merah II Public Health Care in Jambi. The researcher involved 90 respondents. The obtained p-value, based on the Chi-square test, was 0.033.

c. The correlation between the practice and the nutritional status

Table 8. The Distributions of the practices and the nutritional statuses

Practical	Nutritional status				Total		P Value
	Abnormal		Normal				
	n	f	n	f	n	f	
Rarely	10	38,5 %	16	61,5 %	26	100 %	
Frequently	8	33,3 %	16	66,7 %	24	100 %	0,706
Total	18	36 %	32	64 %	50	100 %	

Source: The primary data, 2023

Table 8 shows the correlation between the practices and the nutritional statuses of the learners. Learners with rare practices of consuming junk food or fast food may also have normal nutritional statuses. This result was observable in 16 learners, 61.5%. On the other hand, the table shows that 10 learners with rare junk food consumption habits have abnormal nutritional statuses, 38.5%. Learners with frequent junk food consumptive practices may also have normal nutritional statuses. The result is observable in 16 learners, 66.7%. On the other hand, eight learners with frequent junk-food consumption practices have abnormal nutritional statuses, 33.3%.

The Chi-square obtained a p-value of 0.706 higher than 0.05. The value indicates no significant correlation between the practices and the nutritional statuses of the learners at Public Primary School Pati Kidul 05.

The results showed that fifty respondents from Public Primary School Pati Kidul 05 frequently consumed junk food. Sixteen learners with frequently junk-food consumptive practices had normal nutritional status, 66.7%; while the other fourteen learners with frequently junk-food

consumptive practices did not have normal nutritional status, 31.4%. On the other hand, sixteen learners with rarely junk-food consumptive practices had normal nutritional status, 61.5%. Then, ten learners with rarely junk-food consumptive practices had abnormal nutritional status, 38.5%.
After examining the statistical test with the Chi-square test, the researchers found a correlation between the practices and the nutritional status with a p-value of 0.706 higher than 0.05. The result indicates no significant correlation between the practice and the nutritional status of the learners.

Ni Luh Agustini Purnama (2020) also found significant behavior or practice and nutritional statuses. The obtained p-value was 0.56. On the other hand, Nasriyah (2021) found a significant correlation between the snacking consumptive behaviors of 69 primary school learners at Tumpangkrasan Public Primary School and the nutritional statuses of the learners. The obtained p-value was 0.000. Nur Rahmi (2022) also found a significant correlation between the behavior of consuming Western fast food and the nutritional status of Universitas Malikussaleh students. The researcher took 105 students. The obtained p-value was 0.017 based on the Chi-square test, indicating the correlation between the consumptive behavior and the nutritional status of the students. Nailil Asma Hani (2022) also found a significant correlation between fast-food consumptive behaviors and the nutritional statuses of 95 children aged between 6 and 12 years old. The obtained p-value was 0.000 based on the Spearman Rank test. The result accepts Ha, indicating a significant correlation between the fast-food consumptive behavior and the nutritional statuses of 95 children aged between 6 and 12 years old .

IV. Conclusion

The results about the correlation between junk food or fast-food consumption behaviors and the nutritional statuses of primary school learners at Public Primary School Pati Kidul 05 found most primary school learners at Public Primary School Pati Kidul 05 had excellent cognitive levels; most learners had excellent attitudes; and most learners rarely consumed fast food or junk food. On the other hand, based on the nutritional status variable, most learners had normal nutritional statuses. The results also found no significant correlation between the cognition and the nutritional status of the learners (p-value of 0.459); no significant correlation between the attitude and the nutritional status of the learners (p-value of 0.375); and no significant correlation between the consumptive practice and the nutritional status of the learners (p-value of 0.706).

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