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Original Article

The Correlation of Fast Food Intake, Breakfast Habits, Vegetable and Fruit Intake, Physical Activity, and Nutritional Status in Students of SMP Negeri 7 Jambi City

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ABSTRACT

Background: Based on the 2018 Riskesdas in Jambi Province, the prevalence of obesity in the 13-15 year age group was 8.13%. Data from the Jambi City Health Office from 2016 to 2018 showed that cases of obesity consistently increased every year. This study aimed to determine the relationship between fast food intake, breakfast habits, vegetable and fruit intake, physical activity, and nutritional status in SMP Negeri 7 Jambi students.

Methods: This research is a categorical comparative analytic observational study with a cross-sectional approach. Data were obtained by anthropometric examination; intake of fast food, vegetables, and fruit was obtained from the FFQ, data on breakfast habits were obtained from a questionnaire, and physical activity data were obtained from the IPAQ questionnaire.

Results: Most of the 101 respondents were aged 13 years (41.6%), male-dominated by gender (52.5%), and the majority of them were norm weight (54.5%). The frequency of fast food intake is mainly classified as rare, and the type often consumed is chicken nuggets (31.7%). The majority of students never breakfast (33.4%). Most of the respondents rarely consumed vegetables and fruit, and the types of vegetables and fruit that were often consumed were oranges (27.7%) and spinach (24%). Most students have moderate physical activity (48.5%). The results of statistical analysis of fast food (p-value 0.001), breakfast habits (p-value 0.002), physical activity (p-value 0.001), and nutritional status have a significant relationship. In contrast, vegetables and fruit and nutritional status do not have a significant relationship (p-value 0.441)

Conclusion: There is a significant relationship between fast food, breakfast habits, and physical activity with nutritional status, and no significant relationship is found between vegetables and fruit and nutritional status.

INTRODUCTION

According to the World Health Organization (WHO), over 340 million children and adolescents aged 5-19 years were overweight and obese in 2016[1]. From the 2018 Basic Health Research (RISKESDAS) data, overweight and obesity continue to increase in Indonesia, where in 2013, overweight was 11.5%, and obesity was 14.8%, then increased in 2018 to 13.6% and 21.8%[2]. Based on the 2018 Riskesdas data in Jambi Province, the prevalence of obesity in

the age group 13-15 years was 8.13%, and in the age group 16-18 years, it was 4.25%[3]. Data from the Jambi City Health Office in 2016 obesity cases were in fifth place with a total of 5%; in 2017, it increased to third place at 7.1%, then increased to 10% in 20184[4]. Several factors cause the increase in the prevalence of obesity, namely changes in eating patterns such as increased fast food consumption in adolescents[5'6]. The habit of skipping breakfast that often occurs in adolescents, lack of intake of vegetables and fruit, and lifestyle factors such as lack of physical activity contribute to changes in energy balance resulting in obesity[7'8'9] Based on research data, there are differences in results in previous studies and reviewing overweight. Obesity increases yearly due to diet and physical activity, affecting nutritional status. Therefore, researchers are interested in researching "The Relationship Between Fast Food Intake, Breakfast Habits, Vegetable, and Fruit Intake, Physical Activity and Nutritional Status in Students of SMP Negeri 7 Jambi City".

METHOD

This research is a categorical comparative analytic observational study with a cross-sectional approach. The population in this study were students of SMPN 7 Jambi City. The number of samples was 101 SMPN 7 Jambi City students who met the inclusion criteria and excluded subjects which included the exclusion criteria. Fast food frequency data, vegetable and fruit intake, were obtained by filling out the FFQ (Food Frequency Questionnaire) questionnaire. Breakfast habits were obtained from a questionnaire, and physical activity was obtained by IPAQ (International Physical Activity Questionnaire). Data is processed using Chi-Square. As well as performed ordinal logistic regression multivariate analysis.

RESULT AND DISCUSSION

From **Table 1**, the results showed that out of 101 respondents, the number of respondents aged 13 years was more, namely 42 respondents with a percentage of 41.6%. The gender of respondents to SMPN 7 Jambi City students was dominated by 53 male respondents, with a percentage of 52.5%.

Table 1. Subject Characteristics And Distribution Result

Characteristics	N	(%)
Age (years old)		
13	42	41.6
14	34	33.7
15	25	24.8
Gender		
Female	48	47.5
Male	53	52.5
Nutritional Status		
Normoweight	55	54.5
Overweight	46	46.5
Breakfast Habits		
Never had breakfast	34	33.4
Rarely (1-2 times/weeks)	12	11.9
Sometimes (3-4 times/weeks)	24	23.8
Physical Activity		
Sedentary	43	42.6
Moderate	49	48.5
Heavy	9	8.9

Most of the respondents with normal nutritional status were 55, with a percentage of 54.5%**.** Students never had breakfast, with as many as 34 respondents, with a percentage of 33.4%. Some respondents had breakfast often, with a total of 31 with a percentage of 30.7% of respondents, sometimes 24 (23.8%), and rarely 12 respondents (11.9%) respondents.

The majority of SMPN 7 Jambi City students have a moderate activity level, namely 49 respondents with a percentage of 48.5%, then with a light (sedentary) activity level of 43 respondents (42.6%), while the least is the level of strenuous(heavy) activity only nine respondents (8.9%).

Table 2 analyzes the relationship between fast food intake, it was found that adolescents with overweight and obese nutritional status consumed fast food more often, namely 36 (35.6) and 10 (9.9%) adolescents who rarely consumed fast food. In normal nutritional status, frequent consumption of fast food 47 (46.5) and often 8 (7.9%) obtained the results of the chi-square test with a P value of 0.001 which fulfilled a P-Value <0.05, which indicated that there was a significant relationship between the frequency of consumption of fast food and nutritional status in students of SMPN 7 Jambi City.

Adolescents who often have breakfast in the morning have normal nutritional status 20 (19.8%), sometimes norm weight 19 (18.8%), and adolescents overweight and the majority of obese never eat breakfast 22 (21.8%). Results (P Value 0.002) This result proves that there is a significant relationship between breakfast habits and the Nutritional Status.

About 80 respondents rarely consume vegetables and fruit, and adolescents with normal nutritional status rarely consume fruits and vegetables 42 (41.6%). In contrast, adolescents with overweight and obese nutritional status rarely consume vegetables and fruit 38 (37.6%). The analysis results (P-Value 0.441) prove no relationship between vegetable and fruit intake and the nutritional status.

Table 2. Correlation and Bivariat Analysis Result

Variabel	Nutritional stataus		Total	P value
	Normoweight	Overweight		
Fast Food Consumption Frequency				
Rarely	47 (46.5%)	10 (9.9%)	57 (56.4%)	0.001
Often	8 (7.9%)	36 (35.6%)	44 (43.6%)	
Breakfast Habits				
Never had breakfast	12 (11.9%)	22 (21.8%)	34 (33.7%)	
Rarely	4 (4%)	8 (7.9%)	12 (11.9%)	0.002
Sometimes	19 (18.8%)	5 (5%)	24 (23.8%)	
Often	20 (19.8%)	11 (10.9%)	31 (30.7%)	
Frequency of Vegetable and Fruit Consumption Rarely	42 (41.6%)	38 (37.6%)	80 (79.2%)	0.441
Often	13 (12.9%)	8 (7.9%)	21 (20.8%)	
Physical Activity				
Sedentary	5 (5%)	38 (37.6%)	43 (42.6%)	
Moderat	43 (42.6%)	6 (5.9%)	49 (48.5%)	0.001
Heavy	7 (6.9%)	2 (2%)	9 (8.9%)	

Adolescents at SMPN 7 Jambi City with the light physical activity category who are overweight and obese are known to be 37.6%. The results of the bivariate analysis showed that there was a tendency for adolescents who carried out strenuous

activities to have a norm weight nutritional status, which was significantly proven with (P Value 0.001) that there was a relationship between physical activity and the nutritional status.

Table 3 shows that the independent variable fast food has an estimated value of 2,692, breakfast habits -0,189, and physical activity has an estimated value of -2,227. Thus it can be concluded that the dominant risk factor that can cause changes in the nutritional status of students at SMP Negeri 7 Jambi City, namely fast food intake, where if they frequently consume fast food, there will be 2.69 times the risk of causing changes to nutritional status. Meanwhile, doing moderate-severe physical activity will reduce the risk of obesity by 2.22 times**.**

Table 3. Dominant Risk Factors on Nutritional Status

Variable	Estimate (95% CI)	P value
Fast food	2.692 (1.550-3.835)	0.000
Breakfast Habits	-0.189 (-0.591-0.212)	0.355
Physical Activity	-2.227 (-3.208- -1.245)	0.000

Characteristics of Research Subject

Based on the research conducted, it was found that most research subjects were at the age of 13, namely 42 respondents (41.6%); this is because the age of 13 years is the most common age category found in class VII and VIII in junior high school (SMP) students. According to data from the Ministry of Education and Culture, Indonesian research in 2021 found the number of public junior high school students in Jambi Province with a maximum age of 13-15 years with a total of 77,511 people.[10] The results of this study are in line with the research conducted by Wahyuni, where the most age range is 13-14 years (85.8%)[11] and the research conducted by Juniartha is dominated by the most age, namely 13 years as many as 94 people from 185 respondents[12]. However, this is different from the research conducted by Ali; the most common age was 16 years old because, in this study, the inclusion criteria were 13-20 years[13], while in this study, the inclusion criteria were 13-16 years. Gender characteristics obtained the most samples with males 53 (52.5%). This is because the number of male respondents met more of the inclusion criteria for this study, and the difference in respondents based on gender was not too significant; namely, only four respondents differed. This is in line with the research conducted by Ali, which showed that the dominant in the study was male, with 434 respondents[13]. According to data from the Ministry of Education and Culture, Indonesian Research in 2021, it was found that the number of public junior high school students according to gender in Jambi Province mainly consisted of boys, with a total of 54,029 people10. However, this study is different from the research conducted by Amalia in that there were more female respondents than male[14].

In this study, the results showed that most respondents were in the category of norm weight, 55 people (54.5%) out of 101 respondents. These results support the research conducted by Arzha et al[15]. It was also proven in Nuryani et al.'s research that out of 134 student respondents who were involved, as many as 67.9% had a normweight[16]. However, it is different from the results of this study, where the results of a study conducted by Febriyanti on students of SMP Hang Tuah 2 South Jakarta found that the majority of respondents had Overweight 40 (57.2%) nutritional status out of 70 respondents[17]. This difference can be caused by the influence of the sample size conducted in the study. This study also found that 24 students (23.8%) were overweight, and 22 (21.8%) were obese. In connection with the large number of 13-year-olds in this study where this age is school age with the

characteristics of an appetite that tends to increase, and it is necessary to pay more attention to diet in younger groups, adolescents have a risk of obesity because respondents who tend to be younger still do not pay attention to the appearance of their body[12,17]. In line with research conducted by Dya et al., who also found that 28.6% of the youth involved in their research were obese[18].

The study found that male respondents tended to be more overweight/obese. This is in line with existing research which states that male adolescents aged 13-15 years are at risk of experiencing obesity 2.3 times more than women due to genetic factors and habits; namely, men tend to like fast food, skip breakfast, and eat habits outside the main meal hours and less selective in choosing food[19]. This was also explained in Susanti et al.'s research that males are more obese than females because, according to females, they limit the amount of food intake to maintain their appearance at the age of 13-15 years (junior high school students) and are in the puberty phase which One of them is a speedy growth, namely weight gain, and height. According to him, men and women have the same risk of obesity[20].

Description of Fast Food Types in Research Subjects

The types of fast food that are most often consumed in the frequent category with a frequency of one daily are chicken nuggets, fried chicken, fried foods, chips, and instant noodles. For a frequency of 3-6/week, the types of fast food most often consumed are siomay and batagor, meatballs, and The types of drinks most often consumed are Thai tea, ice cream, and boba milk. The average respondent consumes fast food during breaks and after school hours. The type of fast food most often consumed by respondents is the type of fast food that contains high calories, high saturated fat, high sodium, and low nutritional content. The high level of consumption of this type of food among school students is because it tastes delicious and can be enjoyed together during recess with friends. As well as these foods, which are often found in school canteens, and vendors in front of the school gate, the price is low and is the reason that causes high interest in consumption among students of SMPN 7 Jambi City. This also aligns with research conducted by Septiana et al., where teenagers often consume fried chicken, fried foods, meatballs, siomay, and instant noodles[21]. If you frequently consume fast food, it can increase body fat levels and increase the risk of obesity. Respondents in this study also often consumed drinks with high sugar content, such as Thai tea, ice cream, and boba milk. This is in line with research conducted by Ruiz-Roso et al[23], which said there was an increase in the consumption of sugary drinks in adolescents. Excessive sugar consumption will have an impact on weight gain. The high consumption of drinks with high sugar content, low consumption of fruit, and high consumption of fast food can impact poor nutritional status for adolescents in the future. Irregular eating patterns that are currently developing, namely eating patterns that are high in carbohydrates, low in fiber, and high in fat and sugar intake, can impact the nutritional intake that the body receives, not following the principles of balanced nutrition.[22]

Description of Vegetable and Fruit Types in Research Subjects

The results of this study indicate that the average frequency of fiber consumption in the form of vegetables and fruit among respondents is still relatively rare, where most respondents consume fruit or vegetables on average less than two times/week. The types of vegetables most consumed by respondents were spinach, kale, and carrots. At the same time, consuming fruits in adolescents was still relatively rare. The types of fruit most often consumed by respondents were oranges, watermelon, and guava. The types of vegetables and fruit that dominate adolescents' consumption in this study tend to be easily accessible and relatively

inexpensive. Some types of vegetables that respondents most often consume are not available in the school canteen. Similarly, the types of fruit often consumed are available in the school canteen as juice. Teenagers still rarely consume fruit and vegetables because more school canteens provide fast food. In addition, the factor that becomes an obstacle to consuming vegetables and fruit in adolescents is the lack of food availability in the family. This is in line with the research conducted by Septiana et al., where teenagers rarely consume vegetables due to limited food sources of vegetables in the family or the community, this dramatically affects the eating habits of these teenagers[21], and this was also revealed in Gustiara's research in the school canteen. Chicken noodles and the availability of vegetables at home show that many student families still need to provide fruit every day, and it is available sometimes [24].

Correlation of Fast Food Intake and Nutritional Status

Results of this research, analysis of fast food intake, it was found that in adolescents with overweight and obese nutritional status, 36 respondents often consumed fast food, and only 10 respondents rarely consumed fast food. In norm weight, 47 respondents frequently consumed fast food. Often 8 of these results obtained the results of the chi-square test with a P value of 0.001 which fulfilled a P value <0.05, which indicated that there was a significant relationship between the frequency of fast food consumption and the nutritional status of students/I SMPN 7 Jambi City so that the hypothesis in the study can be accepted. This proves that students of SMPN 7 Jambi City have proven that frequently consuming fast food in the category >2/week can impact nutritional status. These results were supported by research conducted by Marianigrum on Kartini Junior High School; the results showed that the percentage frequency of fast food consumption in the frequent category was found to be more frequent in the obese nutritional status, 42.2% and thin nutritional status, the percentage of fast food frequency was 13.9%, there was a relationship with a P-value of 0.030 (<0.05)[25]. The frequency of fast food consumption increases the risk of obesity 2.47 times compared to those who rarely consume fast food[26]. The results of another study showed that there was a significant relationship between the frequency of fast food consumption and obesity from 272 respondents (98.9%) who were in the category of frequently consuming fast food and three respondents who rarely consumed fast food with a chi-square P value test result of 0.002 (<0.05) which proved that there was a significant relationship between fast food and the incidence of obesity[27]. Like other studies, Faruq et al.'s research stated a significant relationship between fast food and being overweight in adolescents with a P-value of 0.002[28].

Eating fast food is positively related to overweight and obesity because fast food has a very high energy density, high sugar, lots of fat, and low fiber. Excess energy will be stored as glycogen by the process of glycogenesis. However, the process of glycogenesis is limited so that this excess energy in the body will be converted into fat, and this change occurs in the liver, which is called the process of lipogenesis. Similarly, foods that contain lots of fat will also affect the occurrence of obesity through high energy density, so excess energy resulting from consuming fatty foods will also be stored in adipose tissue. Excess fat accumulation will lead to obesity[29]. Rohmah et al. stated that fast food is related to school children, where students will always buy snacks at school. Students who consume excessive fast food also cause excess energy intake in the body. Fast food contributes great energy if consumed in excess, such as fried foods and other types of fast food. Excessive energy intake will have an impact on the nutritional status of students where which will lead to overweight and obesity. The more frequently students consume fast food, the more energy they enter into their bodies. If this

habit continues, it will have an impact on nutritional status[30]. The frequency of fast food can affect nutritional status, the type of fast food consumed, and the number of servings consumed[31]. So if a person often consumes fast food, it can cause obesity, but if he rarely or does not, it can reduce the risk of obesity[32]. In this study at SMPN 7 Jambi City, there were also obese students with a rare frequency of fast food consumption, but respondents were still overweight and obese. Because even though respondents rarely eat fast food, they consume a more significant portion every time they eat it because a diet has three components: type, frequency, and amount of food. In addition, various other factors cause overweight and obesity in each individual.

The results of this study which was conducted on SMPN 7 Jambi City students, were different from the results of research conducted by Indrawati et al. on junior high school children with a P-Value> 0.05[33], which proved that there was no relationship between the frequency of fast food and nutritional status. risk for obesity. This difference may be because what is more influential on obesity is the number of calories consumed, not just the type or frequency of food.

Correlation of Breakfast Habits and Nutritional Status

The results of this research, are significant results with a P-value of 0.002. These results prove that breakfast habits can affect the nutritional status of students at SMPN 7 Jambi City, where adolescents with norm weight nutritional status more often have breakfast in the morning and sometimes with a frequency of 3-4/week. Sixteen respondents with norm weight nutritional status rarely had breakfast. It was clear to see the difference in breakfast habits between the norm weight, overweight, and obese groups, where the nutritional status of overweight and obese respondents did not have breakfast 22 respondents. The results of the study are supported by Faruq et al. The research was conducted on adolescents, with 148 respondents showing significant results with a P-value of 0.027. There was a relationship between breakfast habits and nutritional status.[28] Moreover, other studies have shown results similar to this study; in a study conducted by Rohmah et al. on students of SMPN 14 Jember, there was a significant relationship between breakfast habits and nutritional status with a P-Value of 0.00130. Ma et al. revealed that skipping breakfast can increase the risk of obesity.[34]

In this study, most respondents with overweight and obese nutritional status never had breakfast; the respondents started eating their first meal at 10 a.m, similar to Aini's study on overweight 47 respondents did not have breakfast where the respondents had their first meal at above 10 a.m.[35] Guyton stated that skipping breakfast can impact reducing blood glucose levels so that the body sends impulses to the brain and causes hunger to arise. Because this stimulation causes the desire to eat in large quantities, it makes the body consume more food at lunchtime and night. If intake is eaten in excessive amounts, it can increase insulin secretion. Insulin secretion can inhibit the lipase enzyme; the impact is that more fat is stored in the body; if this habit continues, it will impact weight gain.[36] Sila et al. also pointed out that when skipping breakfast, a person tends to overeat and has difficulty controlling it at lunch, so the body's metabolism will slow down and be unable to burn calories resulting in obesity.[37] In this study, 11 respondents often had breakfast but were overweight/obese, and 12 respondents rarely had breakfast with norm weight nutritional status; this was due to being overweight and obese due to several factors such as gender, genetics, physical activity, and other factors. The results of this study were not in line with Fahrizal et al., who stated that there was no relationship between breakfast habits and being overweight in adolescents with a P-value of 1.000 = > 0.05. However, in this study, it was known that respondents who always had breakfast had normal nutritional conditions. Meanwhile, most of those who never had more nutritional status. prove that if you always have breakfast daily, you can reduce the risk of obesity[38].

Suhaeni et al. stated that regular breakfast intake is one of the key indicators of a healthy lifestyle. Breakfast consumption is believed to be related to nutritional fulfillment, optimal body weight, and educational performance in adolescents and children. Several other studies also state that breakfast affects the presentation of school children's output. Skipping breakfast increases obesity, and body mass index and reduces activity and performance during the day[39].

Correlation of Vegetable and Fruit intake and Nutritional Status

It is known that from 101 respondents, as many as 80 respondents were in the category of rarely consuming vegetables and fruit, and only 21 respondents often consumed fruits and vegetables. From these results, statistical tests obtained a P-value of 0.441 (> 0.05), proving no relationship between vegetable and fruit intake and status nutrition in SMPN 7 Jambi City students. Suha et al. found no relationship between vegetable and fruit consumption and nutritional status in adolescents aged 13-15 years, with a P-value of 0.596. obese and non-obese nutritional status are relatively rare for vegetable consumption. Furthermore, fruit, some never eat vegetables and fruit19. Likewise, a study conducted by Yuliah et al. with statistical test results proved no relationship between consuming vegetables and fruit in adolescents[40]

This study's results differed from Arza et al., who proved that there was a relationship between the consumption of vegetables and fruit and the nutritional status of students at SMPN Pesisir Selatan[15]. Research conducted by Heratama said that there was a relationship between vegetable and fruit consumption and the nutritional status of adolescents[41]. The difference between the results of this study with other studies that say there is a relationship between the frequency of vegetables and fruit is that in this study, the respondents were aged 16-18 years. At that age, the respondents already knew the importance of consuming vegetables and fruit. Alberta et al. said that a person's knowledge is influenced by internal factors, namely from an individual himself, such as age, gender, interest, and level of education. In contrast, external factors come from economic, environmental, and cultural factors. Almost all respondents aged 16-18 know the importance of consuming vegetables and fruit[42]. The higher the fiber consumed, the lower the possibility of excess nutrition; the lack of consumption of vegetables and fruit is not a single factor but is multifactorial, meaning that other factors influence overnutrition status, including nutritional knowledge, food

intake, physical activity, and gender. Although based on the results of statistical tests proved that there was no relationship between vegetable and fruit intake and the nutritional status of students at SMPN 7 Jambi City, from the table above, 13 respondents with norm weight nutritional status often consumed vegetables and fruit compared to the overweight/obese nutritional status of only eight respondents. Often eat fruit and vegetables.

Correlation of Physical Activity with Nutritional Status

The statistical test in Table 7 obtained a P-value of 0.001 (<0.05). These results proved a significant relationship between physical activity and nutritional status in SMPN 7 Jambi City students. The results of this study are similar to existing studies where adolescents who tend to do less activity or do light activities more often have a risk of obesity due to a lack of energy expenditure. If this happens continuously, it will cause fat accumulation9. the study showed only nine students with strenuous activity, while moderate activity dominated 49 students. This was because the respondents sat for quite a long time all day at school or home; only a few attended physical activities such as playing soccer and active activities during class hours. Sports, walking to school, and back from school. This is also similar to the results of previous research, which stated that students do more light and moderate physical activity

compared to vigorous physical activity because of their status as students where their main activities are spent studying. Some students have tutoring activities and relax at home while watching TV, and not a few of the students choose to play with gadgets to fill their free time at home.[43] Seema et al. said that adolescents who use vehicles every day when they go to school and watch television for more than 2 hours/day have a risk of being overweight compared to adolescents who do not make this habit. These results were proven statistically, proving a relationship with the incidence of overweight/obesity in adolescents. Low activity has been shown to increase BMI in the adolescent group[44]. Sari et al., and this study was not proven to be significant with a P-Value of 0.480 because most of the activities carried out by these SMPN students tend to be the same from morning to evening which have been scheduled, such as being obliged to take part in available lesson hours where to spend time like sitting in every hour of class.[16]

The Correlation between Fast Food Intake, Breakfast Habits, Physical Activity, and Nutritional Status

The results of the multivariate test study were analyzed using ordinal logistic regression showing that the independent variable fast food has an estimated value of 2,692, a significant value of p-value 0.001, and physical activity has an estimated value of -2,227, a significant value of 0.001. Thus it can be concluded that the most dominant risk factor that can cause The change in the nutritional status of students at SMP Negeri 7 Jambi City is fast food intake. If you frequently consume fast food, there will be a 2.69 times chance of causing a change in nutritional status. Meanwhile, doing moderate-severe physical activity will reduce the risk of obesity 2.22 times. These two factors are related to energy balance; the frequency of fast food consumption and the level of physical activity are interrelated with energy use, where if excess energy intake and insufficient energy expenditure cause energy imbalance if energy intake exceeds the energy used, it will cause excess energy, which will be stored in adipose tissue which then becomes obese[6]

CONCLUSION

The age of most of the respondents was 13 years, men dominated the respondents, and the majority of the subjects had a norm weight nutritional status. The majority of respondents rarely eat fast food and often eat chicken nuggets. The majority of respondents never eat breakfast. On average, the respondents rarely consumed fruits and vegetables, and the types of fruits and vegetables often consumed oranges and spinach, the most physical activity was found to be in the category of moderate activity. There is a relationship between fast food intake, breakfast habits, and physical activity with the nutritional status of SMPN 7 Jambi City, and there is no relationship between vegetable and fruit intake and the nutritional status of SMPN 7 Jambi City. Fast food is the most dominant risk factor affecting nutritional status. In the aspect of fast food consumption, vegetables, and fruit are only assessed in terms of frequency, not considering the amount consumed, and reviewing breakfast habits in more detail so that it is hoped that future research will consider these aspects to identify the effect with nutritional status

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