

FAST FOOD CONTRIBUTION TOWARD OBESITY IN THE STUDENTS OF JUNIOR HIGH SCHOOL

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Abstract: An imbalance between nutrient intake and the recommended nutritional adequacy causes the emergence of nutritional problems in adolescents. One of the causes of obesity in adolescents is an increased frequency of consumption of fast food that contains high calories, fat, sodium, and low fiber. The effect of obesity is degenerative diseases. The research aims to determine the relationship of knowledge, pocket money, frequency of fast food consumption against obesity on the students in SMP N 1 Bengkulu. The design of this research was *cross sectional study*. The sample was conducted *purposive sampling method* with total sample is 267 respondents aged 12-14 years old. Knowledge data, pocket money, motivation, and characteristics of respondents were carried out by filling out questionnaires, while the data from the daily food habits were obtained through the FFQ (*Food Frequency Questionnaires*). Data analysis performed was univariate analysis, bivariate, and multivariate with *chi-square test* and *logistic regression test*. obtained by the variables associated with the incidence of obesity are the contribution of fast food.

While the variables that are not related to the incidence of obesity are age, gender, knowledge, pocket money, parent's motivation, friend's motivation, and parent's job. The most variable contribution to obesity is fast food consumption ($p = 0,006$). Conclusion is the fast food can increase body weight in SMP N 1 Bengkulu.

Keywords: *fast food, knowledge, pocket money, motivation, obesity, adolescents*

I. INTRODUCTION

The emergence of nutritional problems in adolescents due to wrong nutritional behavior and an imbalance between nutritional consumption and recommended nutritional adequacy. If a person consumes foods and drinks more than enough, he will be obese. The problem of obesity-related to nutritional status has received attention because it is associated with degenerative diseases such as cardiovascular disease, diabetes, and cancer.¹ Fast food contains high calories, fat, sugar, sodium (Na), but low in fiber, ascorbic acid, calcium, and folate. This imbalanced nutrient content will

have a negative impact on the nutritional status of adolescents.²

Research conducted by Virgianto 2006 showed that students with 6% of their energy came from fast food 4.2 times more likely to be fat than students whose <6% of energy came from fast food.³ Research in Yogyakarta found that urban junior high school teenagers who consume Western-style fast food 4 times a month will have a 4.11 times risk of suffering from obesity, while junior high schools in the city have a 3.61 risk of becoming obese for junior high school in cities that consume local fast food as much as 71 times a month will have a risk of 4.64 to become obese while junior high school students in the village have a risk of 2.97 to become obese.⁴

Based on the 2013 Riskesdas data nationally, 10.8% of adolescents aged 13-15 years were overweight. The percentage of overweight in adolescents aged 13-15 years in Bengkulu Province is above the national figure of 14.5%.

Adolescence is an age that is very easily attracted to new things, including food products advertised, friends' motivation in consuming fast food is also influential.⁵ Besides that, the factors that influence the formation of eating patterns in adolescents are economic, social-cultural, educational and environmental factors.⁶ The reason for choosing SMP N 1 is that the school is located in the city center, so it has very young access to fast food. Based on this background, the authors are interested in knowing the contribution of fast food to obesity students of SMP N. 1 Kota Bengkulu. The research objective is to find out the contribution of fast food to obesity students of Junior High School 1, Bengkulu City.

II. METHOD

This study used a cross-sectional study design. Sampling was done by purposive sampling with a total sample of 267 respondents aged 12-14 years. It was held in August-October 2015 at the Junior High School 1, Bengkulu city. Knowledge data, pocket money, motivation and characteristics of respondents were carried out by filling out questionnaires, while data on daily food habits were obtained through the FFQ (Food Frequency Questionnaire). Data analysis performed was univariate and bivariate analysis with chi-square test.⁷

III. RESULTS

A. Characteristics of Respondents

The research sample of the students of Junior High School 1 fulfilled the inclusion and exclusion criteria, and the sample size was 267 students. Frequency distribution of VIII grade students based on age can be seen in table 1:

Table 1 Characteristic of respondents

Characteristic of respondents	f	%
Gender		
1. Female	158	59.2
2. Male	109	40.8
Age		
1. ≤ 13 years old	55	20.6
2. >14years old	212	79.4

Based on Table 1, it can be seen that respondents with female gender types were 158 (59.2%) and based on the age of less than 14 were 212 (79.4%).

Table 2: Distribution of Respondents Frequency Based on Variables examined in Junior High School 1, Bengkulu City

Variables	f	%
Pocket money		
Little	100	37.5
Much	167	62.5
Knowledge		
Less	97	36.3
Good	170	63.7
Motivation		
Support	88	33.0
Does not support	179	67.0
Consumption of fast food		
Often	159	58.4
Rarely	111	41.6
Obesity		
Normal	174	65.2
Abnormal	93	34.8
Total	267	100

Based on Table 2 it can be seen that respondents with high pocket money were 167 (62.5%), respondents with good knowledge of 170 (63.77%), respondents who did not receive support from their parents 179 (67.0%), respondents who consumed fast food often as much 159 (58.4%), while respondents whose nutritional status was abnormal were 93 (34.8%)

B. Relationship of Fast Food Consumption Habits to Obesity Students

Table 3: Relationship of Fast Food Consumption Habits to Obesity Students of Junior High School 1, Bengkulu City

Consumption Habits	Obesity				Total	
	Abnormal		Normal		f	%
	f	%	f	%		
Often	65	41.7	91	58.3	156	100
Rarely	28	25.2	83	74.8	111	100
Total	93	34.8	174	65.2	267	100

The statistical test results obtained $p = 0.008$. It can be concluded that there is a significant relationship between the pattern of consumption of fast food and nutritional status

Table 4: Relationship of Knowledge and Obesity of Students at Junior High School 1, Bengkulu City

Knowledge	Obesity				Total	
	Abnormal		Normal		f	%
	f	%	f	%		
Good	56	32.9	114	67.1	170	100
Less	37	38.1	60	61.9	97	100
Total	93	34.8	174	65.2	267	100

The results of statistical tests obtained $p = 0.469$, it can be concluded that there is no relationship between knowledge and nutritional status

Table 5: Relationship between Money and Obesity of Students at Junior High School 1 in Bengkulu City

Pocket Money	Obesity				Total	
	Abnormal		Normal		f	%
	f	%	f	%		
Little	38	38.0	62	62.0	100	100
Much	55	32.9	112	67.1	167	100
Total	93	34.8	174	65.2	267	100

The statistical test results obtained $p = 0.479$, it can be concluded that there is no relationship between pocket money and nutritional status

Table 6: Relationship of Motivation to Obesity of Students at Junior High School 1 in Bengkulu City

Motivation	Obesity				Obesity	
	Abnormal		Normal		f	%
	f	%	f	%		
Support	25	28.4	63	71.6	88.0	100
does not support	68	38.0	111	62.0	179	100
Total	93	34.8	174	65.2	267	100

The statistical test results obtained $p = 0.159$, it can be concluded that there is no relationship between motivation and nutritional status

IV. DISCUSSION

A. The relationship between the contribution of fast food with obesity

Based on the results of research conducted at Junior High School 1, Bengkulu city, there was a significant relationship between fast food consumption patterns and obesity (p-value 0.005). Fast food contains high calories, fat, sugar, sodium (Na), but low in fiber, ascorbic acid, calcium, and folate. This imbalanced nutrient content will have a negative impact on the nutritional status of adolescents.⁸ Consuming fast food frequently and excessively will lead to obesity, the consequences of obesity will cause various diseases such as obesity, high blood pressure, coronary heart disease, and diabetes mellitus. However, consumption of fast food will not be detrimental if accompanied by a balanced menu and regular exercise.⁴

The results of this study are consistent with research conducted by Bowman and Vinyard (2004) showing a positive relationship between the consumption of fast food with the incidence of obesity.⁹ Likewise, the results of Kartika Suryaputra research showed that there were significant differences in fast food consumption patterns, between obesity groups and non-obese groups.¹⁰ The more consumption of fast food the higher the incidence of obesity, because the calorie and fat content in fast food are very high. with only a portion of fast food, it can meet half of a person's calorie needs in a day. In addition, the many types of fast food consumed also increase the incidence of nutritional problems in adolescents, because fast food does not include balanced nutrients.⁸

Based on research conducted in Bengkulu City at the Junior High School 1, the percentage of fast food consumption habits with often category is more than rare.

A total of 156 students (58.4%) adolescents often consume fast food. It could be due to increased activity, social life and busyness in adolescents will affect teenage eating habits. (Sayogo, 2006). The most frequently consumed menus of students based on FFQ are 191 students (71.5%), twisty 180 students (67.41%), 178 wing buckets (66.6%) and 157 sticks (58.8%), where the composition of food ingredients contained in fried chicken is (chicken and wheat flour), twisty (potatoes and bread flour), and skewers (tuna fish and wheat).

Previous research about relationship between fast-food consumption and body mass index in children and adolescents in Auckland Reported fast-food consumption is high in childhood and increases in adolescence. Compared with infrequent fast-food consumption, frequent and very frequent consumption is associated with a higher BMI in children. Owing to residual confounding, reverse causation and likely misreporting, the reverse association observed in adolescents should be interpreted with caution (Braithwaite I, 2014).

B. Knowledge Relationship with Fast Food Eating with Obesity

Based on research conducted by more than 50% of students in Junior High School 1, Bengkulu city who have good fast food knowledge. They only know that fast food is food that is instant and easy to get and tasty without knowing the impact of fast food itself.

The results showed that there was no correlation between knowledge with obesity students of Junior High School 1, Bengkulu city (p-value 0.469). The results of this study were not in line with Oktaviani (2012) who found a relationship between nutritional knowledge and Body Mass Index (BMI).¹² It is not in accordance with the Lawrence Green theory where traditional knowledge is

a factor that facilitates the behavior.⁶ It can be caused despite having high knowledge of fast food, but the presence of fast food affects the diet of teenagers in the city. Factors that make students prefer to consume fast food include busy parents, the presentation is fast and practical, tasty, and the frequent consumption of fast food can increase the social status of adolescents, increase prestige and not miss globality.³

The absence of a relationship between nutritional knowledge and nutritional status is because nutritional status is not only influenced by the knowledge which is an indirect factor but also influenced by direct factors such as infection and consumption.

C. The Relationship of Pocket Money and Obesity

The results show that most of the respondents, namely 167 (62.5%) have a high amount of pocket money. In Endromono, 2006 stated that giving pocket money to adolescents can also be a trigger for them to buy fast food, because the greater the allo

wance they get, the more likely they are to buy or eat fast food because the price of fast food in the market tends to high. Actually, without realizing it, parents also contribute to a student's habit of consuming fast food, by giving pocket money and letting their children consuming the snack. As a result, children became more frequent and accustomed to consuming fast food.

The results of this study indicate that there is no relationship between the pocket money and obesity. The results of research conducted by Kartika showed that in the group of adolescents with obesity, the amount of expenditure for snacks per meal is classified as moderate. Whereas in the non-obese group classified as lacking. The results of the statistical analysis show that there is a difference in monthly expenditures between groups of obese and non-obese

adolescents. An epidemiological study states that the prevalence of obesity in adolescents in developing countries is increasing in high socioeconomic groups. One indicator of economic conditions is the expenditure of money on food each month which can be seen from adolescent pocket money spent on food.

Results in Riyadh City found that obesity among children in Riyadh City was significantly associated with fast.¹³

D. The relationship between Fast Food Consuming Motivation and the nutritional status

This study shows that 68 (38.0%) students who have poor nutritional status in choosing fast food do not get support from their parents. Parental support is a reinforcing factor; reinforcing factors are factors that strengthen the occurrence of behavior, One of them is the support of the family. The most intensive and earliest human relations occur in family. In the era of progress like today, parents have indeed become busy human beings because of affairs outside the household. Therefore, family joint eating habits eventually fade because of lack of time.¹⁴ The analysis also found that there is no significant relationship between the motivation of parents with the obesity in the respondents. However, the results of research conducted by Merna show motivation, attitudes have a significant effect on consumer purchasing decisions both partially and simultaneously.

V. CONCLUSION

There were fast food contribution toward obesity In the students of junior high school.

ACKNOWLEDGMENT

We thank the participants for their contiuouse support with interest for the study. The author is very thankful to the authorities of Poltekkes Kemenkes

Bengkulu for granting the permission to carry out the study.

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