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Original Research

Analysis of Determinat Factors Affecting The Junk Food Diet of Adolescents in Jakarta

Analisis Faktor-Faktor Determinan Yang Mempengaruhi Pola Makan Junk Food Remaja Di Jakarta

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Abstract: Overweight among adolescents is multifactorial, including lack of physical activity and an unbalanced diet. Adolescents tend to follow trends such as consuming junk food without paying attention to nutritional content. This study aims to examine the factors associated with junk food consumption among adolescents in the Jakarta area. This Study is an observational analysis using a cross-sectional research design. A total 130 respondents
were obtained using the purposive sampling technique. Data were collected using questionnaires related to respondent characteristics (included gender, age, and pocket money), frequency of junk food consumption was tested using the chi-square test. The results of statistical analysis show that the variables of gender have a p-value (0.03), respondent age (p-value = 0.56), and pocket money (p-value = 0.06). Gender is significantly related to the frequency of junk food consumption, while age and pocket money are not significantly related to the frequency of junk food consumption among respondents in Jakarta. Further research needs to add variables related to the frequency of junk food consumption, including nutritional status, nutrional knowledge and physical activity.

Key word: adolescents, junk food, overweight

1. INTRODUCTION

Changes in eating habits contribute to the increasing rate of obesity among adolescents. Data from the 2023 Indonesian Health Survey (SKI) shows that the prevalence of overweight and obesity among adolescents aged 16-18 years in Indonesia is 8.8% and 3.3%, respectively (1). Overweight among adolescents is multifactorial, including lack of physical activity and an unbalanced diet (2). One of the causes of overnutrition is poor dietary habits and the consumption of high-calorie foods. High-calorie foods are high in sugar, salt, and fat. According to data from the Ministry of Health in 2023, one in two adolescents consume sugary foods and drinks more than once a day, and nine out of ten adolescents do not consume enough fruits and vegetables per day (3).

In general, adolescents have varied eating patterns and eat small amounts of food in terms of both portion size and type at each meal (4). Adolescents tend to follow trends such as consuming junk food without paying attention to nutritional content. Currently, junk food and beverages are easily found in schools and places where adolescents play. Adolescents want to explore more new things without sufficient knowledge about balanced nutrition and are also influenced by junk food eating trends (5). Previous studies on adolescents have shown that consuming junk food more than three times a

week contributes to central obesity (6).Junk food generally has almost no protein, vitamins, or minerals.

As a result of globalization, junk food has become a lifestyle choice that does not provide good nutritional value for health. People living in urban areas are more exposed to fast food restaurants because of easier access to junk food outlets. According to another study, 33% of urban residents who eat junk food stated that lunchtime is the ideal time to eat at a junk food restaurant. Teenagers who had a lot of money in the previous study tended to consume modern foods according to their desires and preferences (7). Factors other than financial resources, such as accessibility and many junk food outlets also influence junk food consumption. Excessive consumption of junk food will have a long-term impact on health. Therefore, this study aims to examine the factors associated with junk food consumption among adolescents in the Jakarta area.

2. METHODS

This Study is an observational analysis using a cross-sectional approach to examine the relationship between variables at the same time. The study was conducted at SMAN 50 East Jakarta from April to June 2025. This research has received ethical approval under the number 022/KEPK/UNPRI/V/2025. The population in this study was student of SMAN 50 Jakarta. The minimum sample required was 130 people based on sample calculations using the Lameshow formula (8). The increased by 10% to prevent drop outs, resulting in 143 people using purposive sampling techniques. The inclusion criteria that have been set include being ≥ 17 years old, in good health, and willing to be a respondent by filling out an informed consent form. The exclusion criteria include being on a specific diet program and having special needs. The data collected in this study was obtained through questionnaire interviews. Respondent characteristics included gender, age, and pocket money. Data on junk food consumption frequency was obtained through the Semi Quantitative Food Frequency Questionnaire (SQ-FFQ), where frequency was divided into rare and frequent. The data obtained was then processed using IBM SPSS Statistics 22 software with univariate and bivariate approaches. Univariate analysis was performed to examine the frequency distribution of each variable, including characteristics and junk food consumption. Meanwhile, bivariate analysis used the Chi-Square statistical test to identify the relationship between the variables of gender, age, and pocket money with junk food consumption. The analysis method used was Pearson Chi-square with a significance level of 5% (0.05) and a confidence level of 95%.

3. RESULTS

Respondent Characteristics

Respondent involved in this study included female and male adolescents enrolled as students at SMAN 50 Jakarta who met the inclusion criteria for the study. There were 72 female respondents (50.3%) and 71 male respondents (49.7%). This shows in Table 1 that the female student population was larger than the male population. The majority of respondents were over 17 years old, numbering 116 (81.1%), which was more than the number of respondents under 17 years old, numbering 27 (18.9%). The age of respondents in this study falls within the transition period from late adolescence to early adulthood (9).

The amount of pocket money was categorized using thresholds obtained from the median value of the research data. The daily allowance amount of respondents in this

study was dominated by the group with a daily allowance of ≥Rp. 20,000, totaling 97 (67.9%), compared to those with a small allowance of only 46 (32.1%). Similar studies provide a similar picture that the majority of students have a relatively high daily allowance amount (10). The frequency of junk food consumption in the study was categorized into rare and frequent using the median value as the cut-off point. The results showed that 84 (58.3%) respondents frequently often consumed junk food, compared to 60 (41.7%) respondents who rarely consumed junk food (Table 1).

Table 1 Characterisctic of Respondent in SMAN 50 Jakarta Timur

Variabel	n (%)
Gender	
Girls	72 (50,3)
Boys	71 (49,7)
Usia (years)	
≤17	27 (18,9)
>17	116 (81,1)
Pocket money	
<IDR 20.000	46 (32,1)
≥IDR 20.000	97 (67,9)
Junk food consumption	
Often– SFFQ score ≥428	84 (58,3)
Rare – SFFQ score <428	60 (41,7)

Frequency of Junk Food Consumption

Junk food is food that has little nutritional content or is considered unhealthy. People living in urban areas, such as Jakarta, have easier access to fast food restaurants, making it convenient to consume fast food. This makes urban teenagers enjoy consuming junk food because it tastes good, fast food restaurants offer fast service, and the prices are affordable (11). The results of the study in Table 2 show that the types of food most frequently consumed by respondents include instant noodles 114 (79.7%), cilok 110 (76.9%), spaghetti 102 (71.3%), pizza 101 (70.6%), ice cream 105 (73.4%), and carbonated drinks 100 (69.9%).

Table 2 Frequency distribution of Respondent's junk food consumption

Pangan	Often	Rare	Mean ± SD
	n (%)	n (%)	
Fried Chiken	96 (67,1)	47 (32,9)	18,9±11,9
French Fries	66 (46,2)	77 (53,8)	9,9 ± 8,2
Beef burger	89 (62,2)	54 (37,8)	8,4 ± 8,5
Nugget	86 (60,1)	57 (39,9)	12,9 ± 9,6
Pizza	101 (70,6)	42 (29,4)	7,8 ± 8,5
Sphaghetti	102 (71,3)	41 (28,7)	7,6 ± 8,2
Donat	79 (55,2)	64 (44,8)	14,5 ± 12,4
Sausages	82 (57,3)	61 (42,7)	14,9 ± 12,2
Instant noodles	114 (79,7)	29 (20,3)	16,2 ± 13,6
Telur gulung	60 (42,0)	83 (58,0)	10,4 ± 9,1
Siomay	93 (65,0)	50 (35,0)	11,7 ± 10,6
Batagor	100 (69,9)	43 (30,1)	13,0 ± 13,8
Cilok	110 (76,9)	33 (23,1)	10,8 ± 12,8
Cimol	79 (55,2)	64 (44,8)	10,0 ± 11,3
Egg Martabak	94 (65,7)	49 (34,3)	13,4 ± 13,3
Ice cream	105 (73,4)	38 (26,6)	16,2 ± 14,5
Pop ice	96 (67,1)	47 (32,9)	11,3 ± 12,2
Bottled drinks	93 (65,0)	50 (35,0)	18,0 ± 13,6
Carbonated drinks	100 (69,9)	43 (30,1)	11,0 ± 11,6

Relationship Between Gender, Age, and Pocket Money on Junk Food Consumption

An analysis of the relationship between gender, age, and pocket money on respondents' junk food consumption is presented in Table 3. Respondents who frequently consumption junk food are female (57.5%) and male (59.2%). Respondents who rarely consume junk food are female (42.5%) and male (40.8%). A p-value of 0.03 indicates a significant relationship between gender and frequency of junk food consumption. Respondents under the age of 17 who frequently consume junk food (53.6%) and those who rarely consume junk food (46.4%). Respondents aged over 17 years old who frequently consumed junk food (59.5%) and rarely consumed junk food (40.5%). The test results showed that there was no significant relationship between age and frequency of junk food consumption (p=0.56). Respondents with pocket money ≤IDR 20,000 showed that 50% often and rarely consumed junk food. Meanwhile, respondents with pocket money ≥IDR 20,000 showed that 62.2% often consumed junk food and 37.8% rarely consumed junk food. The p-value of 0.06 indicates that there is no significant relationship between pocket money and the frequency of junk food consumption.

Table 3 Frequency distribution of respondent's junk food consumption

Variabel		*Junk food consumption*		*P-value*
		Often	Rare	
		n(%)	n(%)	
Gender	Girls	42(57,5)	31(42,5)	0,03*
	Boys	42(59,2)	29(40,8)	
Age (years)	≤17	15(53,6)	13(46,4)	0,56
	≥ 17	69(59,5)	47(40,5)	
Pocket money	≤IDR 20.000	23(50,0)	23(50,0)	0,06
	≥IDR 20.000	61(62,2)	37(37,8)	

* *Chi-square test was performed to find the significance level at p<0.05*

4. DISCUSSION

The results of the study show that most of the adolescents were female and aged over 17 years. In this study, gender was identified as a risk factor for obesity (12). Consistent with the results of other studies on students in Surakarta, there was a significant correlation between gender and junk food consumption. The habit of consuming junk food that is high in sugar, salt, and fat has a negative impact on adolescents, namely obesity, cardiovascular disease, hypertension, and type 2 diabetes mellitus (13). The amount of pocket money that respondents have can increase their potential to access large amounts of food. This is related to an increase in junk food consumption because they have more purchasing power for these foods, which leads to an increased risk of obesity (14). The frequency of junk food consumption is divided into frequent and infrequent consumption based on the SQ-FFQ score. This frequency is used to determine how often respondents consumed junk food in the past month. The current level of junk food consumption among adolescents is relatively high, with a frequency of 3 to 4 times per month (15). Currently, junk food is very easy to find in schools and places where adolescents play.

Based on the data in Table 2, the types of junk food consumed by respondents that fall into the frequent consumption category are, in order, instant noodles (79.7%), cilok (76.9%), ice cream (73.4%), spaghetti (71.3%), pizza (70.6%), batagor (69.9%), and carbonated drinks (69.9%). The majority of respondents rarely consume the following types of junk food: French fries (53.8%), egg rolls (58%), donuts (44.8%), sausages

(42.7%), nuggets (39.9%), and beef burgers (37.8%). Junk food is popular among teenagers due to the influence of modern food trends, the short processing time, ease of availability, and low price, making fast food more appealing than other types of food (16). Consuming excessive amounts of junk food can lead to obesity, because junk food contains saturated fat and is high in salt and sugar(17). Frequent consumption of foods that are sources of saturated fat and sugar can improve nutritional status but can also increase body fat mass (18). This is consistent with a study of high school students in the Jakarta area, which found that adolescents who frequently consume junk food tend to have increased body fat percentages, with 95% of adolescents who consume junk food frequently (>3 times/week) experiencing nutritional excess, while those who rarely consume junk food do not experience nutritional excess (p=0.00)(19). Other studies show that sociodemographic factors play a role in adolescent eating habits, with more frequent consumption of junk food being a stronger predictor of obesity risk (20).

Table 3 shows that the Chi-square test results for the variables of gender have a p-value ($p<0.05$). There are studies that mention that women have a higher risk of obesity than men. This is due to the influence of hormones outside the menstrual cycle. In this research, teenage girls rarely bring lunch to school, so they buy food, including junk food. In addition, the tendency for teenage girls to gather with other teenagers increases their consumption of junk food (21). Based on SKI data from 2023, the prevalence of obesity in adolescent girls and boys has increased. The prevalence in girls is 21%, which is much higher than that in boys at 19%. This is related to excessive consumption of junk food, which has an impact on obesity in adolescents (22).

One factor influencing junk food consumption is the allowance given by parents. In this study, the majority of respondents had pocket money of more than IDR 20,000. The amount of pocket money can affect respondents' consumption expenditure on food. A high amount of pocket money per day can cause changes in food consumption behavior, while limited pocket money restricts food choices (23). Research on high school students shows a significant relationship between the amount of pocket money and the frequency of junk food consumption (21). The more pocket money teenagers have, the easier it is for them to buy junk food. In another study, 60% of teenagers aged 16-18 spent their pocket money on junk food (24). Although previous studies have shown a correlation, this study found no significant relationship between respondents' pocket money and the frequency of junk food consumption. Similarly, research conducted by Palupi (25), found no relationship between pocket money and junk food consumption. Anatoher study show that there are other factors such as nutritional knowledge, eating habits, and parental education (21).

5. CONCLUSION

The majority of respondents were female around 50.3%, over 17 years old around 81.1%, and had a relatively large amount of pocket money around 67.9%. More than half of all respondents, both female and male around 58.3%, fell into the category of frequent junk food consumers. This study identified that gender is significantly related to the frequency of junk food consumption, while no significant relationship was found between other factors such as age and pocket money and the frequency of junk food consumption among students. It is recommended that students pay attention to their intake of risky foods to prevent health problems in the future. In addition, parents should regulate the amount of pocket money so that it is not used to buy junk food excessively by providing healthy food at home. Educational institutions should provide

healthy food in school canteens so that teenagers will consume healthy food more often than junk food. Further research needs to add variables related to the frequency of junk food consumption, including nutritional status, nutrional knowledge and physical activity.

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