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The relationship between the level of knowledge regarding fast food and the dietary habits among adolescents in Jakarta, Indonesia☆

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Abstract
Objective: This study analyses the relationship between the level of knowledge about junk food and the dietary habits among adolescents.
Method: As a descriptive correlative study, this research used a cross-sectional design. A total of 190 students in Grades 7 and 8 in a junior high school in Jakarta were recruited using a stratified random sampling technique. The study instrument was a questionnaire that contained 10 questions about the adolescents' knowledge level regarding junk food and 20 statements about their dietary habits.
Results: The chi-square analysis shows that there is no correlation between the knowledge level regarding junk food and the dietary habits of adolescents at the school (p 0.543; α 0.05).
Conclusion: This research is expected to provide information to community nurses, parents, especially those who have teenagers, and to the community.

Introduction

According to the Ministry of Health's Regulation Number 25 of 2014, adolescents are residents between the ages of 10 and 18 years; according to the Population and Family Planning Agency (BKKBN), the adolescent age range is the single population between 10 and 24 years old. According to the 2010 Population Census, the number of the population in

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Table 1 Respondents' characteristics overview (Grades 7 and 8) based on their age ($n = 190$).

Variable	Mean	Median	Modus	SD	Min–max	CI 95%
Age	13.57	14	13	0.722	12–16	13.47–13.68

the 10–19 years age group in Indonesia is 43.5 million, or about 18% of the total population. The teen population is estimated at approximately 1.2 billion, or 18% of the world population.[1]

Globalization has seriously affected people's eating habits and forced many people to consume fast food and high-calorie foods, known as junk food.[2] Studies show that the increasing density of fast food restaurants is associated with increased consumption of fast food itself.[3]

According to Deni and Dwiriani's research (2009), 40% of school-aged children have low nutritional knowledge, 43.8% of children have moderate nutritional knowledge, and only 16.2% of children have high levels of nutritional knowledge.[4] Children generally have a habit of eating high-calorie foods that are low in fiber. This habit can occur because of inadequate knowledge of nutrition, including knowledge regarding healthy and unhealthy foods. In modern times, the existence of many fast food restaurants, mass media influences and the impact of a tremendous variety of junk food makes it easy for children to get and eat fast food.[4]

Adolescence is characterized by struggles for autonomy from parents, the development of more friendships and peer exposure, which can all influence eating habits.[5] Parents have an important role for teenagers in consuming fruits, vegetables, and foods such as milk for the needs of their body.[6] When children go through adolescence, adolescent eating habits will be influenced more by external factors and adolescents can develop and have different eating habits from those of their parents.[6] Although parents are already aware of their ability to influence their children's diet, they can affect it by purchasing healthier foods or by limiting the number of unhealthy foods and by providing healthy food at home.[5] However, they also feel that other social factors persuade teenagers to consume unhealthy foods as well; these other factors include fast food ads, the lack of knowledge about healthy snacks and friends persuading them to eat unhealthy foods.[5]

The purpose of this study was to examine the relationship between the level of knowledge about junk food and the dietary habits of adolescents in Jakarta.

Methods

This research used a descriptive correlative design. The study sample was made up of 190 adolescents in Jakarta. The sample criteria were that they attended the class during the period of data collection, were in Grades 7 and 8, males and females and they were willing to be a respondent. Samples were taken by probability sampling using a stratified random sampling type.

The level of knowledge about fast food was measured by an instrument, which included 10 questions, contained in Wulansari's research. Consisting of 20 statements, the Sari Dietary Instrument, which the researchers developed and modified themselves, was the second instrument used to measure the diet formed in this study.

Table 2 Respondents' distribution based on their gender and grade ($n = 190$).

Variable	Frequency (F)	Percentage (%)
Gender		
Male	84	44.2
Female	106	55.8
Grade		
7	95	50
8	95	50

Both of these instruments have good validity and reliability. The validity and reliability of the instrument used to measure the level of knowledge about fast food was tested as at 0.819. The validity and reliability instrument used to measure the diet was also tested, with those results at 0.705.

Data analyses were performed on univariate and bivariate data. The univariate analysis was performed using the central tendency for numerical data (age) and the percentage and frequency for categorical data (gender, knowledge level of fast food and diet). The bivariate analysis used a chi-square test to analyze the level of knowledge about the fast food associated with the diet in adolescents.

Results

Overview of respondents characteristics. The characteristics of the respondents studied in this investigation included age, sex, and grade. Table 1 shows that the age of the adolescents in the school, from Grades 7 and 8, had an average age of 13.57 years with a minimum age of 12 and a maximum of 16 years. Table 2 shows that the female sex was about 55.8% of the respondents and had a grade category of about 50%.

Knowledge level of fast foods overview. Based on the research results, the level of knowledge possessed by adolescents regarding fast food is good, with a 73.2% knowledge level (see Table 3).

Adolescent dietary habits overview. This study shows that most of the adolescents have good dietary habits (91.1%) (see Table 4).

The relationship between the knowledge level regarding fast food and the dietary habits in adolescents. The results of the analyses of the relationship between the knowledge level regarding fast food and dietary habits show that there is no correlation between the knowledge level regarding fast food and the dietary habits in adolescents ($p = 0.543$; $\alpha = 0.05$) (see Table 5).

Table 3 Respondents' distribution based on their knowledge about fast food ($n = 190$).

Variable	Frequency (F)	Percentage (%)
Level of knowledge about fast food		
Good level of knowledge	139	73.2
Moderate level of knowledge	48	25.3
Low level of knowledge	3	1.6

Table 4 Respondents' distribution based on their dietary habits ($n = 190$).

Variable	Frequency (F)	Percentage (%)
Dietary habit		
Good	173	91.1
Bad	17	8.9

Discussion

Characteristics of the respondents. The results show that the age of the majority of the respondents was 13 years. The result corresponds with the theory that the age of 13 years is the age of early adolescence, which is the stage in which adolescents want to be mature and free from parental control to perform risky behavior.[7] This age period allows them to make a healthy lifestyle a habit that will be beneficial for them as teenagers, not only during adolescence but also throughout the teenage life span.[7]

Based on the results of the study, the frequency distribution of female respondents was more dominant than that of males, because, in the school there is a larger number of female than male students. Therefore, the chance of female teenagers to dominate is greater. The girls are more active than the boys are in their behavior, which can be seen from girls who are more often outdoors, in comparison to boys. Since girls also receive a lot of influence on food selection, they are more likely to try new types of food.[8]

Level of knowledge about fast food. This study found that most of the students have a good level of knowledge about fast food. This likely happens with support from the family environment, the school environment and information that can be obtained easily by the adolescents to increase their knowledge about fast food. The results of this study are in line with research conducted by Syarifahin Pekanbaru; at that school, the respondents' knowledge of fast food was mostly good.[8]

Formal education is one of the main factors that will affect an individual's knowledge, such as nutrition and health.[8] The higher the level of education of a person, the easier they are at absorbing information so that the knowledge will be improved as well.

Dietary habits. The results of the data analysis showed that the percentage of respondents who have good dietary habits is larger in comparison to the respondents who have bad dietary habits. These results are in line with research conducted by Yuli (2013), which said that most school-age children have good dietary habits.[9]

Parents have a significant role in providing food intake in adolescents. A poor diet will increase the risk of being overweight or obese.[9] Environmental and socio-economic factors can influence poor diet. Genetic factors can also influence an unhealthy diet.[9] Nonetheless, many factors remain that can affect eating patterns; these include such things as taste, comfort, food costs, cultural and religious beliefs, educational level and the education aimed at improving the knowledge that affects diet.

The relationship between the knowledge level regarding fast food and the dietary habits in adolescents. The results obtained in this study show that there is no relationship between the level of knowledge regarding fast food and the dietary habits in adolescents at the school The finding can be regarded as in line with research conducted by Budi Santoso (2017), which shows no significant relationship between the level of knowledge regarding fast food and the fast food consumption patterns of second-year college students in Surakarta.[10]

The results of this study can also be said to be in line with research by Syarifah (2015), who found no relationship between the knowledge of fast food on the nutritional status in adolescents.[8] This situation can be caused by the presence of internal and external factors that exist in the respondent; it can also occur because of the influence of others such as friends or their happiness.[8] There are other factors, such as advertisements in mass media, as well. Currently, the media affects the fast food consumption of adolescents tremendously. The more ads that teenagers see, the more fast food they purchase.

Table 5 The relationship between the level of knowledge regarding fast food in the dietary habits in adolescents at the school ($n = 190$).

Variable	Dietary habit				Total		*P* value
	Good		Bad		F	%	
	F	%	F	%			
Level of knowledge on fast food							0.543
Good	128	92.1	11	7.9	139	100	
Moderate	42	87.5	6	12.5	48	100	
Low	3	100	0	0	3	100	
Total	173	91.1	17	8.9	190	100	

Notoatmodjo (2010) says that a person should be able to absorb, process and understand the information received as a stimulus.[8] One of the factors that can cause nutritional problems is low nutritional knowledge and incorrect eating habits. An example of low nutritional knowledge and behavior is deviant behavior in choosing food. The support of the parents is another factor that can influence the diet. The family's ability to make decisions will have a broad impact on the lives of all family members, including the basis for providing appropriate and quality parenting patterns and in the fulfillment of nutritional intake.[4]

The results of this study indicate that a majority of the adolescents in the school were female and in the early adolescent stage. Most teenagers possess a good level of knowledge about fast food.

The results showed no correlation between the level of knowledge about fast food and the dietary habits in adolescents at the school. Although there is no relationship, this research can be used as basic data for further research. It can also be used as data to help nurses, families, and communities in supervising, preventing and improving teen health status, particularly in increasing knowledge about fast food and healthy eating behavior. Other factors related to healthy dietary habits need to be investigated further.

Conflict of interests

The authors declare no conflict of interest.

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