



Knowledge and Attitudes about Nutrition related to Snacking Practices in Madrasah Tsanawiyah Students

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Abstract

Background: Snacks in students' social life are a means of socializing students with their friends. Students tend to consume less nutritious food. The practice of this student snack begins with the attitude of the students, which begins with the students' knowledge of nutrition. This study aims to analyze the relationship between knowledge and attitudes about nutrition on students' snacking practice.

Methods: This study is a descriptive study with a cross-sectional research design. The research sample consisted of 133 students, who were students in grade 8 & 9 Mts Darul Ulum.

Results: The results of the Spearman rho test, the relationship between nutritional knowledge and snacking practice ($p = 0.084$), the relationship between nutritional attitudes towards snacking practice ($p = 0.013$).

Conclusion: Nutritional knowledge is not related to nutritional attitudes. Nutritional attitudes are related to snacking practices.

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Introduction

Snacks in the social life of adolescent means of hanging out with their friends. Adolescents tend to consume less nutritious food because school meals are also one of the effects on family culture, such as people who cannot meet the nutritional adequacy of adolescents. Teenagers have the habit of snacking at street vendors or in less hygienic places, causing them to be exposed to foods that are less safe and less nutritious (Aprillia, 2011).

Snacking Practices Students at school tend to be not good, because snacks usually contain high energy fat and sugar, but not nutritious and unhealthy. Consuming a lot of snacks will result in a high intake of energy (Larson N, & Story M, 2013).

Based on data from Balai Besar POM in the PJAS sample tested in 2018, a total of 718 samples were sampled from 67 schools located in 24 districts/cities in Central Java with the test results qualified 99.03% and not qualified 0.97% with details: 3 positive samples containing Rhodamine B, 3 positive samples containing Formalin and 1 positive sample containing Borax. There are still unhealthy snacks that need to be addressed immediately to maintain the health of students (BBPOM, 2019).

Based on observations, students at MTs Darul Ulum tend to have a habit of snacking at street vendors around the school. Snacks served by traders vary widely, ranging from heavy meals, snacks, drinks, and so on. Colorants and preservatives were always present in the snacks served, which can have an adverse effect on nutritional status.

Based on 2018 Riskesdas data, the prevalence of nutritional status (BMI/Age) in adolescents aged 13-15 years in Indonesia were 1.9% very thin; 6.8% thin; 11.2% fat; 4.8% obese. In the province of Central Java, 1.8% were very thin; 6.6% thin; 10.1% fat; 4.5% obese. In Semarang City 0.7% is very thin; 9.7% thin; 5.3% fat; 4.3% obesity.

Adolescents' habit of snacking at school or when hanging out of the house will also affect the health condition of students. (Pakhri, & Chaerunnimah, 2018). Based on other studies there are about 10% of adolescents have health problems in Indonesia. Adolescents have

risky behaviors that lead to negative impact on the future, such as smoking habits, a diet that lacks fiber and lack of physical activity that will contribute to non-communicable diseases in the future. This requires a psychological approach so that adolescents behave in a healthy manner (Isfandari, 2014).

Knowledge of individual nutrition affects the attitude of food selection, which will have an impact on the nutritional status of individuals. Lack of knowledge can cause health problems in individuals (Hasibuan, 2020). Factors that influence food choices can be from individuals and families. These factors are divided into three determinants namely individual characteristics, food and environment (Hasibuan, 2020). The determinant factors of the selection of snacks based on this research were familiarity, characteristics of snacks, environment and social, nutritional content and variance and health. Determinant factors in the form of health and characteristics of snacks have an association with the frequency of snacks (Anggiruling et al, 2019)

The home environment plays an important role in the formation of children's snack habits, because parents are role models for children, and parents who set food rules and food supplies in the household. This affects children's habits (Verloigne et al, 2012). Based on research at factors that influence unhealthy snacks, such as the supply of snacks at home. Snacks will become children's snack preferences (Pearson N, Ball K, & Crawford D, 2011). Things that affect children's snacks also the influence of peers such as friends they hang out with at school (Salvy SJ et al, 2012; Wilke JC et al, 2015).

The habit of snacking outside the home or from parents who are less concerned about the food their children eat outside the home or at school. Even though the food consumed by children often not nutritious, and lack of hygiene and food safety. This unsafe and less nutritious food causes the nutritional adequacy rate not be achieved, so that the nutritional status of adolescents is not optimal. Poor nutritional status, resulting in adolescents more at risk of various diseases (Larson N, & Story M, 2013).

This snacking habit is a tangible form of

one's attitude. Attitude is a predisposing factor after knowledge. Attitude is a determinant of habit, because it is related to perception, personality, and motivation. An attitude is a state of mental attitude, which is learned and organized according to experience, and which causes a special influence on a person's reaction to people, objects, and situations with whom he relates (Notoadmojo, 2010). In this case, the attitude of snacking can be influenced by peers, environment, new ideas, new snacks, and students' knowledge. There were various kinds of knowledge of these students can be good or bad knowledge related to nutrition. Good knowledge is expected to have a positive impact on students' nutritional attitudes.

Nutritional knowledge is knowledge related to selection and daily consumption properly and providing all the nutrients needed for normal body functions. Selection and consumption of food ingredients affect a person's nutritional status. Good nutritional status or optimal nutritional status occurs when the body gets enough nutrients that the body needs. Undernutrition status occurs when the body lacks one or more essential nutrients, while over nutritional status occurs when the body obtains nutrients in excessive amounts, causing harmful effects (Notoatmojo, 2010).

This research has an update on the research target, namely the Madrasah Tsanawiyah (Islamic Private Junior High School) level related to the relationship of knowledge and attitudes about nutrition with students' snacking practices, while previous research was carried out at the Madrasah Ibtidaiyah (Islamic Private Elementary School) level (Febryanto, 2017). This study aim to examine knowledge and attitudes about nutrition with students' snack practices.

Method

This research was quantitative research. The research design was cross sectional to know the association between knowledge and attitudes about nutrition with the snacking practices of 8th & 9th grade students of Mts Darul Ulum. This research was conducted in Semarang with a time span from January to March 2020. The population of this study were all 8th and 9th grade students of Mts

Darul Ulum, which were 149 students and who were successfully interviewed were 133 students, who did not attend school as many as 16 students. The sample of this study were all students who were interviewed as many as 133 students. Inclusion criteria: Adolescents aged 12-16 years. Exclusion criteria: Students are sick at the time of the interview.

Data collected from knowledge of nutrition data, data on snacking attitudes, snack practices, snack habits, snack frequency, pocket money, types of snacks. This data collection was carried out for 2 days using school hours. Knowledge of nutrition consists of: good and bad knowledge. Snacking attitude is divided into good and bad. Snacking practices are divided into good and bad. Snacking habits are divided into Yes, Sometimes, Rarely and No. Snacking frequency is divided into 6x/week, 3-5x/week, <3x/week, never. Snack money is divided into < IDR 5,000; IDR 5,000-10,000; IDR 10,000 - 15,000,-; >IDR 15,000,-. Snacks are divided into portioned food, soft drinks/ drinks, light snacks, and others. This univariate analysis was to describe the characteristics of the research variables.

The description of the data is presented in tables and narration, such as age, gender, class, nutritional knowledge, snacking attitudes, snack habits, snack frequency, pocket money, and types of snacks. Bivariate analysis to assess the association of the independent variable to the dependent variable. The normality test of the data was carried out first. The three variables of this study, namely data on nutritional knowledge, nutritional attitudes, and snacking practices were not normally distributed. The Spearman's rho test was used to examine the association between nutritional knowledge and the practice of snacking by grade 8 & 9 students at Mts Darul Ulum, and to examine the association between snacking attitudes towards the practice of snacking by grade 8 & 9 students at Mts Darul Ulum.

Result and Discussion

There were the results and discussion of this research:

In table 1 below, it can be seen that the majority of respondents were 14 years old (40.6%), the majority were male (54.9%), and

the students more in grade 9 (50.4%).

Table 1 Respondents Characteristic

Variables	N	%
Age (Years old)		
12	3	2,2
13	50	37,6
14	54	40,6
15	23	17,4
16	3	2,2
Gender		
Male	73	54,9
Female	60	45,1
Grade		
8	66	49,6
9	67	50,4

Table 2 showed that the Snack Practice Variables consist of habits, frequency, pocket money and types of snacks. The majority snacking habits of students were 90.9%, the frequency of snacks in the last week was 6x (60.9%), pocket money spent was IDR. 10,000-15,000 (63.2%), and the type of snack was portioned food (61.6%). Based on the interview, the portioned foods such as instant noodles, chicken noodles, meatballs, rames rice, fried rice, yellow rice, batagor, dumplings.

Table 2 Characteristics of Snacking Practice Variables

Variables	N	%
Snacking Practice		
Yes	121	90.9
Sometimes	6	4.5
Rarely	5	3.8
No	1	0.8
Snacking Frequency		
6x	81	60.9
3-5x	37	27.8
<3x	14	10.5
Never	1	0.8
Pocket Money		
<IDR 5.000,-	5	3.7
IDR 5.000-10.000,-	35	26.3
IDR 10.000-15.000,-	84	63.2
>IDR15.000,-	9	6.8
Type of Snack		
Portioned foods	82	61.6
Drinks/softdrink	8	6.1
Light snack	4	3.1
Other	39	29.2

Based on the results of this study, good snacking practices were having a snack habit with a frequency 6x per week with the money that must be spent in the amount of IDR10,000-15,000 and the types of snacks were portioned food, drinks, light snacks, while the practice of bad snacking practices were not having a habit of snacking with a frequency <6x/week, pocket money <IDR 10,000, and other types of snacks. When compared to previous studies related to

students' snack habits. Snacking habits consist of the type of snack food and the frequency of snacking. 50.0% of students buy 2-3 types of main food/week. 46.0% of students buy 6-7 types of snacks/week, and 46.0% of students buy 4-5 types of drinks/week. In this study, the types of snacks were portioned food that can be in the form of a main meal, or an interlude, such as instant noodles, chicken noodles, meatballs, rames rice, fried rice, yellow rice, batagor, dumplings. Drinks/softdrinks such as iced tea, oranges ice, marimas ice, nutrisari ice, floridina, pocari, juice, big cola, dawet. Light snacks such as chiki-chiki, cakes, bread, leker, cilok, Cireng, sausage. Others are foods that have not been mentioned above. The frequency of students snacking on their main meals was 3-5 times/week or 44.0%. As many as 66.0% students have a frequency of snacking >11 times/week, and 30.0% students have a frequency of snacking drinks as much as 6-8 times/week (Syafitri,& Syarif, 2010). In this study, the frequency of snacking was 6x/week, which could be in the form of portioned food, snacks, drinks and others. So students do have a snack habit, with various types of snacks, frequency of snacks and pocket money.

Table 3 Knowledge and attitudes about nutrition related to snacking practices

Variables	snacking practices		P-Value
	Good	Bad	
Knowledge			
Good	76 (57.14%)	44 (33.08%)	0.084
Bad	10 (7.51%)	3 (2.26%)	
Attitudes			
Good	56 (42.11%)	30 (22.56%)	0.013
Bad	30 (22.56%)	17 (12.78%)	

Based on the results of the Spearman's rho test, nutritional knowledge was not associate to the practice of snacking, but nutritional attitudes was associate to the practice of snacking. The results above were supported by the statement that the factors that influence habits are knowledge and attitudes.

Nutritional knowledge relates to attitudes and habits of choosing food, such as choosing the right, nutritious, balanced food that underlies good and correct nutritional habits regarding one's eating habits. Nutrition knowledge relates to attitudes and habits of choosing food purchased, with good nutritional knowledge, students are expected to choose safe and nutritious food (Sediaoetama, 2011).

Based on Notoatmodjo (2010) a person's attitude is an influential component in the selection of snacks. A person's positive attitude towards health may not have a direct impact on a person's habit of being positive, but a person's negative attitude towards health will have an impact on a person's habits. The results of this study also showed that the attitude of snacking was associate to the practice of snacking

Based on other studies, it stated that nutritional knowledge affects eating habits, for example, low nutritional knowledge will result in the habit of consuming unhealthy foods. In this study, nutritional knowledge was not associate to snacking practices, but nutritional attitudes was associate to snacking practices. (El-Kader, Mekhamier, & Hegazy, 2019)

In 2015, there was a study on nutritional knowledge and snacking attitudes, based on the results of the study there was no association between nutritional knowledge and snacking attitudes, as in the results of this study there was no association between students' nutritional knowledge and snacking attitudes (Fitriani LN, & Septian A, 2015).

Knowledge of nutrition will affect a person's food habits. This is based on Grosso (2013) research, so to aim healthy adolescent food habits, it is necessary to increase nutritional knowledge (Grosso et al, 2013).

Another study on the effect of health education on knowledge, attitudes and frequency of snack food consumption, stated that there was a difference in the average knowledge before and after being given health education in the form of audio-visual media, but there was no difference in the average attitude and frequency of snack consumption before and after given health education. This illustrates that in order to provide a change in snacking habits, it is necessary to examine the change in attitude before going into practice,

after the changing in knowledge occurs, the changing in attitude is studied which will lead to a change in practice. The results of this study are also the attitude that affects students' snack habits (Angraini et al, 2019).

Based on other studies, there was positive changes in the knowledge, attitudes and practices of elementary school children after education. This supports the results of this study, namely attitudes related to students' snacking practices. (Dodik B, 2016).

Research conducted in 2016, stated that health counseling can improve students' snacking behavior, this is different from the results of this study which stated that nutritional knowledge was not associate to students' snacking practices. (Nur A, 2016).

Another study also stated that there were differences in the value of students' knowledge, attitudes and practices after nutrition IEC was carried out. This supports the results of this study that attitudes was associate to students' snacking practices. (Nur A, Irwan B, 2010)

Factors that have a major influence on a person's habits are sociopsychological. Sociopsychological factors such as attitudes, emotions, beliefs, habits, and will. Attitude is an important factor in socio-psychological because it is a tendency to act and perceive. A person's attitude will last longer than a person's emotions and thoughts (Notoatmojo, 2010) This is in accordance with the results of this study that attitudes affect students' snack habits.

Conclusion

Nutritional knowledge was not associate to the practice of snacking. Nutritional attitudes was associate to snacking practices. Suggestions for further research can be expanded on the study of nutritional status and nutrition education media.

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