FOOD FAMILIARITY INFLUENCE FOOD PREFERENCES AMONG HIGH SCHOOL STUDENT IN OGAN ILIR DISTRICT

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ABSTRACT

Food preferences are the level of the likes and dislikes of food, and these preferences will affect food consumption that represents the selection of a person's diet frequency, nutrient intake and dietary adequacy. Based on previous research, food preferences in adolescents as a whole are not in line with a healthy diet, and food preferences of adolescents are a critical point that determines food preferences of adults. The purpose of this study is to analyze food preferences of adolescence and the various factors which influence it. This research was an analytical study with cross-sectional design. The samples were High school students at Senior High School 1 Inderalaya and Senior High School 1 South Inderalaya with the total number 167 ,and people. Samples were taken by simple random sampling. The food preferences data were obtained by using food checklist and hedonic scale of 1-5. Procedure of data analysis used was univariate and bivariate analysis with chi-square. Bivariate analysis showed that 61.1% of the respondent have good food preferences. Analysis of the relationship between variables showed a significant relationship between food familiarity with food preferences (p-value = 0.000) with PR= 3.459 (95% CI: 2.284-5.239) while other variables Such as the influence of peers, food neophobia, body image perception, gender, allowance, nutritional knowledge, and food taboo did not have any relationship with food preferences. The higher someone's food familiarity level is, the higher the preference is. We suggest the school to increase food preferences for students to learn about a variety of nutritious foods balanced through a variety of activities, such as scientific discussions, a competition to create a menu of balanced nutrition, healthy food promotion.

Keywords : Food preferences, adolescence

ABSTRAK

Preferensi makanan adalah tingkat suka dan tidak suka makanan dan preferensi ini akan mempengaruhi konsumsi makanan yang mewakili pemilihan frekuensi diet seseorang, asupan nutrisi dan kecukupan makanan. Berdasarkan penelitian sebelumnya, preferensi makanan pada remaja secara keseluruhan tidak sejalan dengan diet sehat, dan preferensi makanan pada remaja adalah titik kritis yang menentukan preferensi makanan orang dewasa. Tujuan dari penelitian ini adalah untuk menganalisis preferensi makanan remaja dan berbagai faktor yang mempengaruhinya. Penelitian ini merupakan penelitian analitik dengan desain cross sectional. Sampel adalah siswa sekolah menengah atas di SMA Negeri 1 Inderalaya dan SMA Negeri 1 Inderalaya dengan jumlah total 167 orang. Sampel diambil dengan simple random sampling. Data preferensi makanan diperoleh dengan menggunakan daftar periksa makanan dan skala hedonis 1-5. Prosedur analisis data yang digunakan adalah analisis univariat dan bivariat dengan chi-square. Analisis bivariat menunjukkan bahwa 61,1% responden memiliki preferensi makanan yang baik. Analisis hubungan antar variabel menunjukkan hubungan yang signifikan antara keakraban makanan dengan preferensi makanan (p-value = 0,000) dengan PR = 3,459 (95% CI: 2.284-5.239) sedangkan variabel lain seperti pengaruh teman sebaya, neophobia makanan, tubuh persepsi gambar, jenis kelamin, uang saku, pengetahuan gizi dan tabu makanan tidak memiliki hubungan dengan preferensi makanan. Semakin tinggi tingkat keakraban makanan seseorang, semakin tinggi preferensi. Untuk meningkatkan preferensi makanan bagi siswa, sebuah kelompok studi dapat dibentuk untuk mengenal berbagai makanan bergizi seimbang melalui berbagai kegiatan, seperti diskusi ilmiah, kompetisi untuk menciptakan menu gizi seimbang, promosi makanan sehat.

Kata Kunci : Preferensi, makanan, remaja

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Introduction

Consumption of food variety is one of the important recommendations in realizing balanced nutrition. To consume diverse foods is to consume five groups of food every day or every meal. The five food groups are staple foods, side dishes, vegetables, fruits and drinks. Community food Consumption is not in accordance with the concept of balanced nutrition. Balanced nutrition means daily food arrangements containing nutrients in types and quantities that are proportional to body needs with regard to the principle of food diversity.[1]

The achievement of national Desirable Dietary Pattern (DDP) score in 2013 reached 81.4 or only 89% of target based on Perpres no 22 Tahun 2009. Susenas data 2015 shows energy and protein consumption in Ogan Ilir population is above *Recommended Dietary Allowance* (RDA). The average energy consumption of Ogan Ilir population is 2106 kcal/cap/day and the average consumption of protein is 55.54 g/cap/day. Ogan Ilir District has a prevalence of malnutrition status of 16-18 years old, with 11.9% in which 2.8% severely wasted and 9.1% wasted. This rate is equivalent to the provincial prevalence and higher than national prevalence. Prevalence of overweight status of 16-18 years old is 0.6%. This indicates that the pattern of adolescent food consumption in Ogan Ilir does not fulfill the standards recommended in the quality and quantity of food.[2]

Overall, food preferences in adolescence are not based on their needs on each group of nutrients.[3] Most of the food preferences are determined ins early life and will remain stable until a change of preference occurs in the group. Food choices have been formed since adolescence and will keep influence their food preferences as adults. In other words, adolescent food preferences are a critical point that determines the food preferences of adults.[4] High school students are the productive age group included in the middle adolescence period. In their development, they need a diverse and balanced nutritional intake to avoid a variety of degenerative diseases that have an impact on decreasing productivity.[5]

Food selection is a complex behavior of a person, which is influenced by various interrelated factors. Khan (1981) described a Model of Food Preference describing interrelated factors and influencing one's food preferences. The greater or higher the level of familiarity with food products, a person's preference for these food products will also be high and vice versa. The purpose of this study was to analyze the effect of food familiarity on food preferences among High school student in Ogan Ilir District.

Method

This research was an analytical study with a cross-sectional design. The population in this research was all students of Senior High School in Ogan Ilir District. The sample was students at

Senior High School 1 Inderalaya and Senior High School South Inderalaya, with the total number of 167 people. The sample size in the study was calculated using Lameshow's formula (1990) for the two proportion hypothesis test. The sample was taken by simple random sampling with inclusion criteria aged 15-17 years. Primary data sources were obtained through a questionnaire. Food preferences (using a hedonic scale from 1- 5), food familiarity (uses a questionnaire adapted from the food familiarity scale), pocket money and nutritional knowledge (basic principles of nutrition consisting of the understanding of nutritious food, balanced menus, the content of nutrients in food, the function of nutrients and the impact of nutrient deficiencies) the low category if the total score is less than the mean and high if the total score is more than the mean. Perception of body image using The Questionnaire Figure Rating Scale (FRS) with a negative category if the BID score = <0 or> 0 and positive if the score BID = 0. The secondary data were in the form of the number of female students in each class and the total number of female students in each Senior High School. The procedure of data analysis used was univariate and bivariate analysis using chi-square.

Results

Tabel 1 illustrates regarding univariate analysis of personal, socio-economic, knowledge and cultural characteristics.

Table 1. Univariate Analysis of personal, socio-economic, knowledge and cultural characteristics

Variables	Total Respondents	
	n	%
Food Preference		
Low	65	38,9
High	102	61.1
Food Familiarity		
Low	63	37.7
High	104	62.3
Peer Group		
Strong	74	44.3
Weak	93	55.7
Food Neophobia		
Yes	81	48.5
No	86	51.5
Body Image Perception		
Negative	116	69.5
Positive	51	30.5
Sex		
Female	101	60.5
Male	66	39.5
Pocket Money per Day		
Low (< IDR 9000)	95	56.9
High (≥ IDR 9000)	52	43.1
Nutrition Knowledge		
Low	66	39.5
High	101	60.5
Food Taboo		
Yes	20	12.0
No	147	88.0

Based on Table 1, the majority of adolescents in Ogan Ilir Distric have high food preferences (61.1%) and high food familiarity (62.3%); more than half of respondents stated that their diet is not dependent on their peers (55.7%). Respondents who experienced food neophobia and did not experience food neophobia were almost identical; respondents with negative body image (69.5%) are twice as many as respondents with positive body image (30.5%). Most respondents in this study were female (60.5%), More than half of the respondents have low pocket money (56.9%) and the majority of the respondents have a high level of nutritional knowledge, which is 60.5%. Few respondents had any food taboos (12%).

Table 2. Bivariate Analysis Food Preferences of Adolescence and The Various Factors

Variable	Food Preference				Total	P value	PR 95% CI
	Low		High				
	n	%	n	%			
Food familiarity							
Low	44	69.8	19	30.2	63	0.000	3.459 (2.284-5.239)
High	21	20.2	83	79.8	104		
Peer Influence							
Strong	31	41.9	43	58.1	74	0.588	1.146 (0.784-1.674
Weak	34	36.6	59	63.4	93		
Food Neophobia							
Yes	26	32.1	55	67.9	81	0.110	0.708 (0.478-1.048)
No	39	45.3	47	54.7	86		
Sex							
Female	41	40.6	60	59.4	101	0.700	1.116 (0.751-1.660)
Male	24	36.4	42	63.6	66		
Perception Body Image							
Negative	44	37.9	72	62.1	116	0.823	0.921 (0.616-1.377)
Positive	21	41.2	30	58.8	51		
Pocket Money							
Low	36	37.9	59	62.1	95	0.879	0.941 (0.643-1.378)
High	29	40.3	43	59.7	72		
Nutrition Knowledge							
Low	28	42.4	38	57.6	66	0.557	1.158 (0.792-1.694)
High	37	36.6	64	63.4	79		
Food Taboo							
Yes	11	55.0	9	45.0	21	0.111	1.574 (1.026-2.416)
No	54	36.7	93	63.3	147		

Based on Table 2, it can be inferred that adolescences with high food familiarity have high food preferences of 79.8%. Based on the statistical test result, p-value = 0.000 with an estimate or PR value = 3.459 (95% CI: 2.284-5.239), it means that adolescents who have a low level of familiarity have a chance 3,459 times have low preference to food. Other personal factors do not affect food preferences in adolescents.

The proportion of respondents with strong peer influences has high food preferences (58.1%). Adolescents with food neophobia and those without food neophobia has a high preference

of 67.9% and 54.7%. Respondents who have negative body image perception with high food preferences are higher in proportion than teenagers who have negative body image perception. Female respondents have higher food preferences proportionately lower than male respondents.

Pocket money is not significant to be related to adolescents food preferences. The proportion of respondents who have low allowance with high preference is more than those with low allowance with low food preferences. The result of statistical test also proves there is no correlation between education and food preferences. Respondents with low nutritional knowledge who have high food preferences (57.6%), are lower than respondents with high nutritional knowledge (63.4%). The proportion of adolescents with food taboos has a high food preference (45%), lower than that of adolescents who have no food taboos (63.3%). Based on the results of statistical tests, obtained p-value = 0.093, so it can be interpreted that there is no significant relationship between food taboos with food preferences.

Discussion

High school students group in Ogan Ilir District, preference for food types generally tends to be in the animal protein source food group. Choosing animal protein products is always based on consideration of fulfilling nutrition to maintain health, increase endurance, and intelligence. There is an assumption in the community that the level of intelligence in the family or community is determined by how much the level of consumption of animal protein consumed in a certain period so that the role of animal protein to form a healthy, smart, productive and quality society cannot be replaced by other foods.

Food preferences do not only explain one's attitudes towards food but also assess eating habits, food selection and food intake. The higher the person's level of preference the more often someone consumes these foods. The bivariate analysis showed that there was a statistically significant relationship between food familiarity and food preferences. This study results is in line with previous studies conducted on the population aged 16-33 years and 12-14 years age group. Those studies state that familiarity has a positive relationship to food preferences including preferences on vegetables especially pea ($p<0.001$) and tomatoes ($p<0.001$).[6,7] Sensory experience factors of the five senses affect the consumption of adolescent foods. If adolescents judge that they have or often see, hold, smell and taste the food, they will more easily like the food and consume it.[8] The lack of familiarity to food due to the availability of diverse foods at home or in schools is limited, affecting food preferences.[9] Familiarity arises from individual satisfaction with food that causes adolescent to consume food they normally eat rather than try new foods. Therefore, to enhance adolescents experience and exploration of the flavors and textures of \different types of food, the availability of different types of food needs to be improved.[10] Adolescents prefer the food they normally eat, rather than eating new foods. [11]

Peer influence has no significant relationship with food preferences. This is consistent with the assertion that peer pressure has no effect on the selection of food in 16-year-olds.[12] Similarly, US studies have shown no relationship between peer pressure and preferences in fast food. [13] The influence of families has a stronger effect on the selection of teenage food compared to peers.[14] Proximity to parents is a positive predictor of the diversity of food intake, and eating with family makes teenagers tend to have good food intake.[15] Parents have a dominant and direct influence on habits, attitudes, and ways of eating,[16] whereas peers have little role in influencing teenager's preferences by putting pressure on the action of solidarity to eat the same foods.

This study results indicate that there is no significant relationship between food neophobia with food preferences. This is consistent with studies of schoolchildren in two different areas, indicating that there is no significant relationship between food neophobia and the level of preference for non-core foods, fruits, and vegetables.[17,18] There is no relationship between food neophobia and food preferences because food neophobia is limited only when adolescents try new foods and will have an effect on food preferences. The influence of food neophobia on food preferences is low or even lost on a positive experience when first trying the food. Although a person experiences food neophobia, but when one feels good food when tasting the first time then the most likely continuation is to love the food. [19]

There is no relationship between body image perception and food preferences because a person with negative body image perception does not limit the level of preference to food but only eliminates the food intake.[20] In addition, a person's food preferences are not only influenced by the perception of the body image but are also influenced by emotions, hunger, and appetite.[21] As a result, a person will continue to eat the foods they like and will set aside their determination to achieve the body shape they want. This finding is in line with a research conducted on young women in Surakarta, which showed that there is no relationship between the body image with the selection of food with p-value = 0.192. [22]

There was no significant relationship between sex and food preferences in the adolescent age group because the majority of the respondents of this study were women. Women contain more fat in their bodies, even though they weigh as much as men.[23] Theoretically, the nutritional needs of boys are different from girls and are usually higher because boys have higher physical activity. [24] There is no relationship between sex and food preferences in this study. It is likely because the activities of respondents are almost the same. more time spent and activities are done in the school environment.

The results of this study indicate that there is no statistical relationship between allowance and food preferences supported by previous research with p-value = 0.548.[25] Increased income in the community, one of which is income earning, can change the lifestyle and traditional diet to fast food that can lead to unbalanced nutritional quality.[26] There is no relationship between allowance

and food preferences in this study. It is likely to be due to complete food such as carbohydrate sources, fat sources, protein sources are not available in the school environment, so they do not use pocket money to buy the five food groups. These five groups of food is a necessity to be consumed every day, either at breakfast, lunch, or dinner. So there is no difference between respondents with high or low pocket money with food preferences source of carbohydrates, fats, proteins and vitamins & minerals because these five types of food are available at home.

The insignificant relationship between nutritional knowledge and food preferences is due to good nutritional knowledge, not necessarily changing attitudes toward food. They may understand the importance of carbohydrates, fats, proteins, fiber, vitamins, and minerals but do not apply in everyday life. [27] This makes knowledge unrelated to food preferences because the food preferences are the attitude of the individual's interaction with the surrounding environment.[28] The level of food preferences can be affected by availability and easy access to food.[29] The results of this study are supported by several previous related studies conducted in India suggesting that individual knowledge does not have a significant relationship with attitudes towards food in students aged 16-18 and research in high school students indicates that students' knowledge of nutrition and food selection has no significant relationship. [30,31]

There was no significant relationship between food taboos and food preferences on the basis of the study; most of the respondents had one dietary diet on a food group. So even if the respondents have food taboos and do not like the food, they still have other food alternatives in the same food group and make their preference level good. Some people still believe in food taboos so they assume that some foods should not be consumed for unclear reasons, and this can be detrimental to health. Food taboo in this study indicates low nutritional knowledge of the community.[32] Based on research, there are still teenagers who believe in taboo food with the reason of hereditary confidence that is not rational. Efforts to decrease confidence in food taboos are needed for teenagers to make good daily food intake.

Conclusion

Food preferences for adolescents in Ogan Ilir Distric is good, based on analysis result that the majority of respondents have a high level of preference (61.1%) and familiarity (62.3%) to food. Adolescents' food preferences are influenced, and by food familiarity, while other personal factors such as peer influence, food neophobia, body image perception have no effect on food preference level. The amount of allowance does not affect the level of adolescents' food preferences as well as nutritional knowledge, and food taboos has no significant relationship to the level of teenage food preference.

Can be formed groups to increase food preferences for students to learn about a variety of nutritious foods balanced through a variety of activities, such as scientific discussions, a competition to create a menu of balanced nutrition, healthy food promotion.

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Conflict of Interest

There is no conflict of interest in this study.

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