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ORIGINAL ARTICLE

THE RELATIONSHIP BETWEEN SOCIAL, ECONOMY AND PEER SUPPORT WITH VEGETABLES AND FRUIT CONSUMPTION BEHAVIORS AMONG VOCATIONAL STUDENTS

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Abstract

Adolescent generally undergo changes in their lifestyle, including their consumption pattern. Consumption of vegetables and fruit in adolescents is very important to support growth and good health status, if teenagers consume less vegetables and fruits are at risk of experiencing degenerative diseases that usually appear in adulthood. One of the problems in the juvenile phase is the lack of consumption of vegetables and fruits which are influenced by internal and external factors. Several factors related to the adequacy of vegetable and fruit consumption in adolescents include: characteristics, socioeconomic, and social support (family and peers). The research problem is how is the socio-economic relationship with the consumption of vegetables and fruits. The study aimed to examine the relationship between socio-economic and peer support with vegetables and fruit consumption behaviors among vocational. A cross-sectional study design was applied in this study at Vocational School 1 Percut Sei Tuan in Deli Serdang District. About 97 students from class X and XI were recruited in this study. The results showed that there is relationship between socioeconomic (income household per month, pocket money, fruit available) with fruit consumption (*p value*<0.05) and there is relationship between peer support with vegetable and fruit consumption (*p value*>0.05). Researchers suggest that families, especially parents, continue to control adolescents, including peers and in terms of consumption of vegetable and fruit both at home and outside the home.

Keywords: Socioeconomic, Peer support, Comsumption of vegetables and fruit

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1. Introduction

Everyone must eat a variety of foods that meet the balanced nutritional requirements of rice, side dishes, vegetables and fruit. The composition of balanced nutrition is expected to be fulfilled especially through the intake of vegetables and fruits as a source of minerals and vitamins. Vegetables and fruits also function as antioxidants that are useful to ward off free radicals and prevent dangerous diseases (1). Insufficient consumption of vegetables and fruit in individuals will increase the risk of chronic diseases such as: coronary heart

disease, stroke, cancer, diabetes mellitus (DM) type 2, and in the long term can also allow the risk of obesity (2).

The World Health Organization (WHO) generally recommends the consumption of vegetables and fruit to live a healthy life of 400 grams per person per day, which consists of 250 grams of vegetables and 150 grams of fruit. For Indonesians, consumption of vegetables and fruits is 300-400 g per person per day for toddlers and school-age children, and 400-600 g per person per day for teenagers and adults. About two-thirds of the amount of vegetable and fruit consumption is a portion of vegetables (3).

Especially in adolescence which is a period of growth and the process of human maturity, consumption of vegetables and fruits is very necessary. This is because at this time there was a change in growth that was very unique and sustainable. Physical changes because of the growth that occurs will affect the health status and nutrition. Nutritional problems in adolescents will have a negative impact on the level of public health such as a decrease in learning concentration and a decrease in physical fitness (4).

Based on the results of Paramita's research, with the result that based on the Spearman correlation test, there is a significant relationship between pocket money and fruit consumption. The tendency that occurs in the relationship is positive, so if the allowance is lower then the consumption of fruit is low (5).

Mandira and Indrawani's study of fruit and vegetable consumption according to respondents' characteristics, peer influence, availability and exposure of mass media to students in SMA Negeri 115 Jakarta in 2013 found that 42.3% of respondents who consumed vegetables and fruits met the recommended balanced nutrition. The study also found that there was a relationship between attitudes with consumption of fruits and vegetables in adolescents (6). Based on the research results of Nenobanu, Kumiasari, and Rahardjo, stated that several factors that influence the consumption of vegetables and fruits in adolescents include characteristics, economic status / family income, availability, exposure, peers, and mass media (7).

The initial survey at SMK Negeri 1 Percut Sei Tuan in Deli Serdang Regency obtained data on the number of students in class X and class XI Department of Software Engineering as many as 97 people consisting of 38 men and 59 women. The results of interviews with 18 students (10 men and 8 women), obtained information as many as 8 men were consuming less vegetables and fruit (80%). While 3 female students stated that they consumed less vegetables and fruit (37.5%). Various reasons cause students are not consuming vegetables and fruits that are not like vegetables, the family does not routinely provide vegetables and fruit for economic reasons, school canteens also do not routinely provide vegetables and fruits, vegetables provided are not liked by students and so on.

2. Objectives

The study aimed to examine the relationship between socio-economic and peer support with vegetable and fruit consumption of vocational high school students.

3. Method

A cross-sectional study design was applied in this study. We recruited 97 samples from student of SMK Negeri 1 Percut Sei Tuan in Deli Serdang Regency. Before conducting data collection, researchers provide information about the research objectives,

implementation procedures, time and research benefits clearly, then ask for willingness of vocational students to become respondents by signing an informed consent. Data retrieval is done directly from respondents based on research instruments using questionnaires given about the characteristics, social economy, and peer support. Data analysis used univariate analysis, bivariate analysis with chi square statistical test.

4. Result

4.1. Distribution of socio-demographic of Vocational High School Student (n=97)

Table 1 distribution of socio-demographic of Vocational High School Student (n=97)

Father Education Level Primary School 4 4.1 Junior High School 25 25.8 Senior High School 61 62.9 University 7 7.2 Mother Education Level 7 7.2 Primary School 4 4.1 Junior High School 24 24.8 Senior High School 65 67.0 University 4 4.1 Father Occupation 4 4.1 Govermen employees 11 11.3 private employees 40 41.2	
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private employees 40 41.2	
r	
Enterpreneur 21 21.6	
Farmer 25 25.8	
Mother Occupation	
Govermen employees 3 3.1	
House Wife 22 22.7	
Private employees 28 28.9	
Enterpreneur 24 24.7	
Farmer 20 20.6	
Income household	
per month	
\leq Rp 2.749.074 38 39.2	
> Rp 2.749.074 59 60.8	
Spending for food consumption	
Low < mean 41 42.3	
Hight \geq mean 56 57.7	
pocket money	
Low < mean 32 33.0	
Hight \geq mean 65 67.0	
vegetable availability	
Available 95 97.9	

Not Available	2	2.1
fruit availability		
Available	83	85.6
Not Available	14	14.4
Support on vegetable consumption		
Support	35	36.1
Not support	62	63.9
Support on fruit consumption		
Support	47	48.5
Not support	50	51.5
Vegetable Consumption		
Enough	67	69.1
Less	30	30.9
Fruit Comsumption		
Enough	35	36.1
Less	62	63.9

4.2 Relationship between sociodemographic with vegetable and fruit consumption of Vocational High School Student

Table 2. shows statistically obtained p>0.05, which means that there is no significant relationship between education of fathers and mothers, father occupation and mother, income household permonth, spending for food consumption, pocket money, and vegetable available with vegetable consumption of students.

Statistically obtained p>0.05, which means that there is no significant relationship between father and mother education, father occupation and mother, spending for food consumption with fruit consumption of student, whereas statistically obtained p<0.05, which means that there is significant relationship between income household permonth (p=0.007, RP=2.61), pocket money (p=0.001, RP=8.33), and fruit available (p=0.006, RP=2.79) with fruit consumption of student.

Table 2. Relationship between sociodemographic with vegetable and fruit consumption of Vocational High School Student

Variabel	Vegetable Consumption		RP	p
	Enough	Less		
	f (%)	f (%)		
Father Education Level				
Primary School	3(75.0)	1(25.0)	-	0.770
Junior High School	17(68.0)	8(32.0)		
Senior High School	43(70.5)	18(29.5)		
University	4(57.1)	3(42.9)		
Mother Education Level				
Primary School	3(75.0)	1(25.0)	-	0.269
Junior High School	13(54.2)	11(45.8)		
Senior High School	48(44.9)	17(26.2)		
University	3(75.0)	1(30.9)		

Father Occupation				
Civil Servants	7(63.6)	4(36.4)	-	0.946
Private employees	60(69.8)	26(30.2)		
Mother Occuption				
Works	52(69.3)	23(30.7)	-	1.000
Doesn't works	15(68.2)	7(31.8)		
Income household permonth				
> Rp 2.749.074	45(76.3)	14(23.7)	-	0.092
\leq Rp 2.749.074	22(57.9)	16(42.1)		
Spending for food consumption	Į.			
High ≥ Rp 326.666	43(67.2)	21(32.8)	-	0.743
Low < Rp 326.666	24(72.7)	9(27.3)		
Pocket money				
High ≥ Rp 8.175	49(74.2)	17(25.8)	-	0.170
Low < Rp 8.175	18(58.1)	13(41.9)		
Vegetable available		_		
Available	67(70.5)	28(29.5)	-	0.173
Not available	0(0)	2(100)		

Variabel	Fruit Consumptio		RP	р
	Enough	Less		
	f (%)	f (%)		
Father Education Level				
Primary School	2(50.0)	2(50.0)	_	0.742
Junior High School	10(40.0)	15(60.0)		
Senior High School	21(34,4)	40(65,6)		
University	2(28,6)	5(71,4)		
Mother Education level				
Primary School	2(50.0)	2(50.0)	_	0.207
Junior High School	9(37.5)	15(62.5)		
Senior High School	21(32.3)	44(67.7)		
University	3(75.0)	(25.0)		
Father Occupation				
Civil Servants	4(36,4)	7(63,6)	-	1,000
Private employees	31(36,0)	55(64,0)		
Mother Occuption				
Works	27(36.0)	48(64.0)	_	1.000
Doesn't works	8(36.4)	14(63.6)		
Income household permonth				
> Rp 2.749.074	28(47.5)	31(52.5)	2.61	0.007
\leq Rp 2.749.074	7(18.4)	31(81.6)		
Spending for food consumption				
High ≥ Rp 326.666	27(42.4)	37(57.8)	-	0.128
Low < Rp 326.666	8(24.2)	5(75.8)		
Pocket money				
$High \ge Rp \ 8.175$	33(50.0)	33(50.0)	8.33	0.001
Low < Rp 8.175	2(6.5)	29(93.5)		

Fruit available				
Available	33(39.8)	50(60.2)	2.79	0.006
Not available	2(14.3)	12(85.7)		

4.3 Relationship between peer support with vegetable and fruit consumption of Vocational High School Student

Table 3. shows statistically obtained p<0,05, which means that there is significant relationship between peer support with vegetable consumption (p=0.049, RP=1.63) and fruit consumption (p=0.001, RP=11.3) of student.

Variabel	Vegetable Consumption		RP	p
	Enough	Less		
	f (%)	f (%)		
Peer Support				
Support	29(82.9)	6(17.1)	1.63	0.049
Not support	38(61.3)	24(38.7)		
Variabel	Fruit Const	ımption	RP	р
	Enough	Less		
	f (%)	f (%)		
Peer Support				
Support	32(68,1)	15(31,9)	11.3	0.001
Not support	3(6,0)	47(94,0)		

5. Discussion

Relationship of Socioeconomic with Vegetable and Fruit Consumption of Vocational High School Student

Based on bivariate analysis test shows the results are p>0.05, which means there is no relationship between education of fathers and mothers, father occupation and mother, income household permonth, spending for food consumption, pocket money, and vegetable available with vegetable consumption of students. Based on the results of fruit consumption sufficiency, the value of p<0.05, which means that there is a significant relationship between income household permonth (p=0.007, RP=2.61), pocket money (p=0.001, RP=8.33), and fruit available (p=0.006, RP=2.79) with fruit consumption of student.

The RP value is 2.61 which means that the income household permonth > 2,749,074 (IDR) has 2.61 opportunities to consume enough fruit compared to the income household permonth < 2,749,074 (IDR), the RP is 8.33, it means that the pocket money \geq 8,175 (IDR) has 8,33 opportunities to consume enough fruit compared to the pocket money < 8.175 (IDR), and the RP is 2.79, it means that the fruit is available has 2.79 opportunities to consume enough fruit compared to the fruit is no available. Whereas based on the results of the adequacy of fruit consumption is p value \geq 0.05, which means there is no relationship between father and mother education, father occupation and mother, spending for food consumption with sufficient fruit consumption.

Based on the results of a study by Bahria and Triyanti, it was found that there was no relationship between education of fathers and mothers with the consumption of vegetables and fruits. However, there is a tendency for fruit consumption to be higher in higher education.

Different results on consumption of vegetables that his father and mother had lower education were higher than those of their fathers and mothers were highly educated (8). It can be assumed that the education of the father and mother is high, not enough to guarantee the consumption of vegetables because there are internal factors from adolescents who play the most role in determining the choice of food for themselves, namely preference.

Based on the results of the study it can be concluded that the education of parents or adolescents is not related to the consumption of vegetables and fruits, for vegetable consumption because there are internal factors of the respondents who have the most role in influencing vegetable flavor which ultimately can determine whether a person eats the vegetable or not. Although, the tendency of fruit consumption is quite higher in the high education of mothers, education is usually associated with knowledge that will affect the choice of food ingredients and fulfillment of nutritional needs for families.

Based on the results of the study it can be concluded that the work of parents or adolescents is not related to consumption of vegetables and fruit, for permanent and non-permanent father's work does not reflect the level of family income because the division of the job category is too broad. Vegetable and fruit consumption is quite larger in students or adolescents who have working mothers compared to students or adolescents who have mothers who do not work (housewives). The tendency of higher consumption of vegetables and fruit in mothers who work because with working mothers will help family finances and mothers feel more free to spend money from their own income, especially in terms of family food.

In line with the results of research by Rachman, Mustika, and Kusumawati, stated that there was a significant relationship between parent or household income per month with adequate consumption of fruit in adolescents (9). Families from high economic circles are better able to provide diverse foods such as meat, fish and fruits compared to families from low economic circles. Parent's income greatly affects the fulfillment of needs in a family. The level of income will reflect the ability of the purchasing power of food at the household level, so that the consumption of food, especially fruit which is both quantity and quality is influenced by the income factor of parents. The higher the income of parents, the higher the number and type of food consumed and the high purchasing power of food, especially fruit. According to Bahria and Triyanti, that the economy is included in normal goods with a value of elasticity of expenditure or income with a positive sign. This means that, if there is an increase in expenditure with increased income, the expenditure for fruit consumption increases so that fruit consumption also increases (8).

Based on the results of the study it can be concluded that household income per month has no relationship with vegetable consumption, while household income per month has a relationship with fruit consumption. The absence of a relationship between vegetable consumption in adolescents in this study because of the factors that most categories like vegetable consumption and peers support the consumption of vegetables. Whereas there is a relationship between fruit consumption in adolescents in this study because economically, fruit is included in the category of food that is more expensive than vegetables with household income increasing, the expenditure for fruit consumption increases, so fruit consumption will also increase.

Based on the results of the study it can be concluded that monthly food consumption expenditure has no relationship with vegetable consumption, while monthly food consumption expenditure is related to fruit consumption. The absence of a relationship between vegetable consumption in adolescents in this study because of the factors that most categories like

vegetable consumption and peers support the consumption of vegetables. Whereas there is a correlation between fruit consumption in adolescents in this study because economically, fruits are included in the category of food that is more expensive than vegetables with monthly household income increasing, the monthly consumption of fruit food will increase, so fruit consumption will also increase.

Relationship of Peer Support with Vegetable and Fruit Consumptio of Vocational High School Student

Based on the results of vegetable and fruit consumption sufficiency, the value of p<0.05, which means that there is a significant relationship between peer support with vegetable and fruit consumption of student.

The RP value is 1.63 which means that the peer support is support has 1.63 opportunities to consume enough vegetable compared to the peer support is not support, the RP is 11.3, it means that the peer support is support has 11.3 opportunities to consume enough fruit compared to the peer support is not support.

The influence of peer groups or peers is very strong. When children start school, children begin to influence the choice of food that causes nutritional needs. Teenagers start to care about social and social, and try to get acceptance from their peers. Often choosing food is very important they can accept their peers (10).

In line with the McSpadden et al study, it states that there is a relationship between social support (friends and family) and vegetable and fruit consumption and Sianturi et al research, finding out how relationships between peers and vegetable consumption (11). While the results of the study of Bahria and Triyanti, showed that there was no relationship between peer support and consumption of vegetables and fruit. It is better than vegetables and fruit which is quite large in adolescents whose peers support to consume vegetables and fruits compared to teens whose peers do not support the consumption of vegetables and fruit (8).

The influence of peer groups or peers during adolescence is very strong. When children start school peer pressure begins to influence the choice of food, which causes neglect of nutritional needs. Teenagers begin to care about physical appearance and social behavior and try to get acceptance from their peers. The purpose of choosing their food is based on acceptance by their peers (8)

Based on the results of the study it can be concluded that students or adolescents who get peers support having a sufficient number of categories of vegetable and fruit consumption is greater than students or adolescents who get peers do not support. Adolescents who get peers support with enough categories of consumption of vegetables and fruit more than the category of less consumption of vegetables and fruit (12).

Based on the results of the study it can be concluded that peer support is related to the consumption of vegetables and fruits because peers in adolescence are very influential, besides the activities of teenagers in school such as taking sports extracurricular or academic activities and others causing them to spend more time with friends the same age as the family, so that the schedule of eating more often with peers, so if peers often eat vegetables and fruit, the teens in the peer group will take part in consuming fruits and vegetables. In this case the role of people is no less important which is one of the external factors of adolescent consumption or eating behavior, so parents must continue to control the food consumption of adolescents by always recommending and reminding them to consume vegetables and fruits for health.

6. Conclusions

The results of the bivariate analysis show that students or teenagers who have income household permonth < 2,749,074 (IDR) are 2.61 times more likely to consume enough fruit, students or adolescents who receive high pocket money $\ge 8,175$ (IDR) opportunity is 8.33 times more likely to consume enough fruit, students or teenagers who have the availability of fruit are 2.79 times more likely to consume enough fruit, and students or teenagers who receive peer support have a chance of consuming 1.63 times more vegetable and a chance of consuming 11.3 times more fruit.

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