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Sedentary Lifestyle And Screen Time On Nutritional Status

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ABSTRACT

Nutritional status on teenager is a matter important thing to do is known by every individual so can anticipate And prevent happening nutrition not enough nor nutrition more. During this pandemic period, Covid-19 not only impacted income, but also improved nutritional status for teenagers in Indonesia. this is to support the teenager For own sedentary lifestyle and screen team no health related with Body Mass Index (BMI) enhancement. The goals of this research are to discover the relationship between sedentary lifestyle and screen time with nutritional status of grade X students at SMKN 2 North Rantau during the covid-19 pandemic. This type of study is analytic observational with a cross-sectional design. This research was conducted from August to September 2022. Data capture was only done one time and using primary data from the results of a class X student questionnaire at SMKN 2 North Rantau. The amount of sample obtained was as many as 85 students with the technique of taking samples of clusters sampling . On the sedentary lifestyle connection where the results of the chi-square test analysis with p value 0.718 ($p>0.05$), there was no significant relationship between sedentary lifestyle and nutritional status on students at SMKN 2 North Rantau. On connection screen time test analysis chi-square with p-value 0.852 ($p>0.05$), there was no significant relationship between physical activity and nutritional status on students at SMKN 2 North Rantau. Mark significant between sedentary lifestyle and screen time on nutritional status value of $r>0.05$ ($r<0.05$) which means there is no meaningful relationship between sedentary lifestyle and duration of screen time on nutritional status student class X at SMKN 2 North Rantau during the Covid period -19 pandemics .

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1. INTRODUCTION

Nutritional status in adolescents is an important thing that must be known by every individual in order to anticipate and prevent undernutrition and overnutrition. The nutritional status of adolescents is influenced by unhealthy lifestyle, eating patterns and lack of physical activity, which results in overweight problems. Data from WHO shows that as many as 39% of men and women worldwide are in excess nutritional status. Basic Health Research Data for 2018, it was found that the population of adolescents aged > 18 years with excess body weight was 13.5% where this number showed a 2.1% increase that occurred from 2013 to 2018.

During the Covid-19 pandemic it did not only have an impact on income but also on the nutritional status which increased in adolescents in Indonesia, because the COVID-19 pandemic could affect a sedentary lifestyle, screen time, eating patterns and one's physical activity. This global pandemic outbreak has been defined by WHO since late 2019. Corona virus Disease (COVID-19) is a disease caused by the SARS-CoV-2 virus which was found in humans originating from Wuhan, China in 2019. The Indonesian state itself uses the PPKM system, which prohibits outdoor activities outside of necessity. these individuals during the pandemic.

The implementation of PPKM during the Covid-19 Pandemic caused schools to implement an online learning system, where modernization and technological advances make humans spoiled by the convenience of existing facilities so that there are many potential risks that also have a consequence, such as a sedentary lifestyle (sedentary living). causing adolescents to have a sedentary lifestyle change

behavior, especially a sedentary lifestyle. Individuals who lead a sedentary lifestyle also spend time with screen time. Screen time is the time spent by someone for activities in front of the screen with electronic use which is often done in the form of watching television, playing games and other social media applications.

Based on a preliminary survey by Henny Afika in 2021 which was conducted on 45 teenage students at SMA Negeri 7 Medan, there were six categories of obesity, five people with overweight and 34 people with normal nutritional status with a ratio of 13.3%, 11.1 respectively %, 75.6. This supports adolescents to have an unhealthy eating pattern which is associated with an increase in Body Mass Index (BMI). A diet that consumes junk food and consumes less fiber in vegetables and fruit can result in an increase in Body Mass Index, especially long screen time which can trigger a more drastic increase in body weight. The problem of nutritional status is one of them due to the influence of physical activity. Besides that, PPKM and fear in the community about exposure to the virus can reduce the movement of daily activities such as walking and other movements. Lack of physical activity indicates a lack of energy expenditure, so the body stores more energy in the form of fat, this causes an imbalance of incoming energy from food and energy out due to decreased physical activity, resulting in accumulation of fatty tissue in the body which is at risk for nutritional status .

2. METHOD

This study uses the type of researchobservational analytic with a cross-sectional approach (cross-sectional study).This research was conducted from August to September 2022.The target population in this study were all students at SMKN 2 Rantau Utara. The reachable population for this research is class X students at SMKN 2 Rantau Utara in 2021/2022. The sampling technique to be used is cluster sampling. The sample in this study were class X students of SMKN 2 Rantau Utara in the 2021/2022 academic year who met the inclusion and exclusion criteria. The sample size in this study was 85 people who were calculated based on the Slovin formula. The inclusion criteria in this study were active students at SMKN 2 Rantau Utara class X in the 2021/2022 academic year and were willing to be respondents during the research.

Univariate analysis, namely in the form of tables or figures, is used to describe the characteristics of each research variable, where the variables to be studied use the frequency distribution and percentage of each group which includes sedentary lifestyle, duration of screen time, eating patterns and physical activity of the respondents. Bivariate analysis in this study was used to see the relationship between sedentary lifestyle, screen time duration, diet and physical activity on the nutritional status of respondents using the chi-square test.

3. RESULTS AND DISCUSSION

Characteristics of Research Subjects

Table 1 Distribution of Respondents by Age

Characteristics	Frequency	Percentage (%)
Age		
year	30	35
year	55	65
Total	**85**	**100**

Based on table 1 it shows that the majority of students with the most frequency are aged 16 years, namely as many as 55 people (64.7%). While student respondents aged 15 years were 30 students (35.3%).

Table 2 Average data and standard deviation of sedentary lifestyle and screen time

Sedentary Activity	Average (minutes/day)	Standard Deviation
Doing tasks without a computer?	82.06	84,73
Reading books for entertainment?	43,52	65,67

Study at home?	53.06	54.90
Riding a vehicle when leaving the house?	97.60	109,17
Doing crafts or hobbies?	82,62	79.52
Just sitting down to chat together Friend?	139.52	114,47
Playing/practicing music?	66,25	80,23
School on Saturday/worship?	51.25	57.09
screen time		
Watch TV?	62,64	83.00
Watch video/DVD/play *play Station*(PS)?	60,17	83,31
Using a computer/laptop?	15.35	31.50
Using a Cellphone?	205,81	141.68

Table 2 shows that the highest sedentary activity is in the type of activity just sitting chatting together with an average of 139.52 minutes/day with a standard deviation of 114.47 and for the lowest sedentary activity is in the type of activity reading books for entertainment with an average of 43 .52 minutes/day with a standard deviation of 65.67. While the highest type of screen time is found in activities using mobile phones with an average of 205.81 minutes/day with a standard deviation of 141.68 and the lowest type of screen time is found in activities using a computer/laptop with an average of 15.35 with a standard deviation of 31 ,50.

Table 3 Frequency Distribution of Sedentary Lifestyle in Students at SMK Negeri 2 Rantau Utara

Category	Frequency	Percentage (%)
High	62	73
Medium	15	18
Low	8	9
Total	**85**	**100.0**

Table 3 shows that most students have high sedentary activity, namely 62 people (73%), then students who have moderate sedentary activity as many as 15 people (18%) and students who have low sedentary activity as many as 8 people (9%).

Table 4 Distribution of Respondents Based on Screen Time in Students of SMK Negeri 2 Rantau Utara

Category	Frequency	Percentage (%)
High Screen time	73	86
Low Screen time	12	14
Total	**85**	**100.0**

Table 4 shows that the most students have High Screen time, namely 73 (86%). Then students who have Low Screen time are 12 people (14%).

Table 5 Distribution of the Frequency of Physical Activity in Students at SMK Negeri 2 Rantau Utara

Characteristics	Frequency	Percentage (%)
Light Physical Activity	16	18,8
Moderate Physical Activity	34	40.0
Heavy Physical Activity	35	41,2
Total	**85**	**100.0**

Table 5 shows that most students have strenuous physical activity with a frequency of 35 people (41.2%). Meanwhile, 34 people (40%) had moderate physical activity and 16 people (18.8%) had mild physical activity.

Table 6 Frequency Distribution of Nutrition Status in Students at SMK Negeri 2 Rantau Utara

Category	Frequency	Percentage (%)
Malnutrition	0	0
Undernutrition	3	3,5
Good Nutrition	73	85.9
Overnutrition	4	4,7
Obesity	5	5,9
Total	**85**	**100.0**

Table 6 shows that most students have normal weight category nutritional status as many as 73 people (85.9%). While in the more nutritional category there were 4 people (4.7%) and there were 5 people (5.9%) in the obesity category and students with undernutrition category as many as 3 people (3.5%).

Table 7 Relationship between sedentary lifestyle and nutritional status

Sedentary Lifestyle	Nutritional status					Mark *P*
	nutrition Bad	nutrition Not enough	nutrition Normal	nutrition More	Obesity	
Tall	0	2	54	3	3	
Currently	0	1	11	1	2	**0.718**
Low	0	0	8	0	0	

Table 7 shows that students with high sedentary behavior have normal nutritional status, namely 54 people. Meanwhile, there were 11 students who had normal nutritional status with moderate sedentary behavior and 8 students who had normal nutritional status with low sedentary behavior. The table above uses a chi-square analysis test with a p value of 0.718 (p> 0.05), meaning that there is no significant relationship between a sedentary lifestyle and the nutritional status of students at SMK Negeri 2 Rantau Utara.

Table 8 Relationship between screen time and nutritional status

screen time	Nutritional status					Mark *P*
	nutrition Bad	nutrition Not enough	nutrition Normal	nutrition More	Obesity	
High screen time	0	2	64	3	4	**0.650**
Low Screen time	0	1	9	1	1	

Table 8 shows that students with high screen time behavior have normal nutritional status, namely 64 people. Meanwhile students with Low Screen time behavior had the most normal nutritional status of 9 people. The table above uses a chi-square analysis test with a p value of 0.650 (p>0.05), meaning that there is no significant relationship between screen time and nutritional status of students at SMK Negeri 2 Rantau Utara.

Table 9 Relationship between diet and nutritional status

Variable	Nutritional status P	Variable	Nutritional status P
Staple food		Watermelon	0.073
Rice	0.715	rambutans	0.943
Red rice	0.982	Durian	0.964
Corn	0.785	Apple	0.501
Cassava	0.190	**Vegetables**	
Potato	0.24	Spinach	0.618
Bread	0.56	Spinach	0.268

Noodles	0.236	Mustard	0.082
Animal Side Dishes		Broccoli	0.280
Egg	0.354	Mold	0.862
Chicken meat	0.41	Cabbage	0.479
Beef	0.372	Eggplant	0.724
Fish	0.473	**Snacks**	
Seafood	0.719	Sweet drink	0.840
Vegetable Side Dishes		Snacks traditional	0.656
Tempeh	0.837	Candy	0.911
Know	0.535	Chips	0.851
Fruits		Chiki-chikian	0.174
Avocado	0.225	*Fast food*	0.632
Orange	0.225	Wafers, bread	0.781
Pawpaw	0.119		
Banana	0.733		

Table 9 presents the results of the chi-square analysis test between diet and nutritional status. Dietary data obtained through FFQ with 6 categories of eating frequency. Overall, the value for each significance for each frequency of food consumption is valued (p> 0.05), meaning that there is no significant (significant) relationship between diet and the nutritional status of students of SMK Negeri 2 Rantau Utara.

Table 10 Relationship between physical activity and nutritional status

Physical Activity	Nutritional status					Mark *P*
	nutrition Bad	nutrition Not enough	nutrition Normal	nutrition More	Obesity	
Light	0	0	14	1	1	
Currently	0	1	31	1	1	**0.852**
Heavy	0	2	28	2	3	

Table 10 shows that students with moderate physical activity have normal nutritional status, as many as 31 people. Meanwhile students with heavy physical activity had the most normal nutritional status of 28 people and students with mild physical activity had the most normal nutritional status, namely 14 people. The table above uses the chi square analysis test with a p value *Value*0.852 (p>0.05), meaning that there is no significant relationship between physical activity and nutritional status of students at SMK Negeri 2 Rantau Utara.

DISCUSSION

Based on the results of the distribution analysis data in table 4.2, it is stated that the majority of students have a high frequency of sedentary activity, namely 62 people (73%). The results of this study are in line with research conducted by Firmansyah et al (2021), where 159 students had high category sedentary activity (85%). This can be seen from how often teenagers sit in front of screens and cellphones and rarely do activities outside the home. Besides that, it was also caused by the Covid-19 pandemic which made students tend to spend more time at home so they rarely did outdoor activities.

Based on the results of the distribution in table 4.3 it states that the majority of students have high screen time behavior, namely 73 people (86%). This research is in line with the results of Afika's research (2021) which states that as many as 74% of dominant students have high screen time activities, where unlimited access to modern industrial developments increasingly encourages students to have high use of screen exposure and causes daily activities to become centralized to be used for use of electronic devices.

Based on the results of the distribution in table 4.5 it states that most students have strenuous physical activity with a frequency of 35 people (41.2%). This research is in line with research conducted by Yunita at SMA Negeri 1 Tinangkung which obtained results that 57 respondents (60.6%) had heavy

physical activity. The physical activity of school-age students is more likely to have a low level of physical activity, because basically the activities that are often carried out by teenagers are teaching and learning activities in the school environment.

Based on the results of the distribution in table 4.6 it is stated that students who have good nutritional status are 73 people (85.9%). This research is in line with Savitri's research (2015) which found that 50 respondents (58.8%) had good or normal nutritional status. This could have happened because the student's diet met nutritional needs and a regular eating pattern.

The results of the bivariate analysis in table 4.7 show that the chi square test obtained a p-value = 0.718 (p>0.05) which indicates that there is no significant relationship between the sedentary lifestyle and the nutritional status of students at SMK Negeri 2 Rantau Utara. This research is in line with research conducted by Putra (2017), namely the results of the chi-square test obtained showed that there was no significant relationship between sedentary activity and overweight (p-value = 0.635). Time of measurement Moderate and low sedentary lifestyle factors become overweight because students with high sedentary behavior also have strenuous physical activity, so that even though students have a high sedentary lifestyle, their nutritional status indicates non-overweight status.

The results of bivariate analysis in table 4.8 test the chi-square analysis with a p value of 0.650 (p> 0.05), meaning that there is no significant relationship between screen time and nutritional status of students at SMK Negeri 2 Rantau Utara. Research conducted by Andriani showed that there was no significant (significant) relationship between screen time duration and the nutritional status of class XI students at SMA Negeri 1 Bojonegoro (p value = 0.605). Another factor that results in the absence of a relationship between screen time and nutritional status is because someone who does a high duration of screen time simultaneously does heavy and moderate physical activity while at home. Students with obesity and good nutritional status have screen time that exceeds the recommended limit, which is 2 hours per day.

Table 4.9 shows the results of the chi-square test between diet and nutritional status. Dietary data were obtained from the FFQ questionnaire with 6 categories of eating frequency. The significant value of the overall frequency of food consumption is (p>0.05), meaning that there is no significant (significant) relationship between diet and the nutritional status of students at SMK Negeri 2 Rantau Utara. The results of this study are similar to Hafiza's research (2020) in the city of Pekanbaru, where consumption patterns have no significant relationship with nutritional status with a p value of 1 > a (0.05). This can happen because of the heavy physical activity carried out by SMK students even though the pattern of consumption is excessive, it can be balanced by the activities carried out by adolescents so that it is balanced with their expenses. The nutritional status of most students is good nutrition so that the relationship between the two variables is not visible.

From the results of bivariate analysis in table 4.10 using the chi square analysis test with a p value of 0.852 (p> 0.05), it means that there is no significant relationship between physical activity and nutritional status in students at SMK Negeri 2 Rantau Utara. The results of the study which showed no significant relationship between physical activity and nutritional status were also in line with research conducted by Aprillia (2022) where a value (p <0.05) was obtained using the chi-square test (p-value = 0.614). Physical activity is one of the causes that can affect a person's nutritional status, but there are other factors that are very important and affect nutritional status, especially adolescents, such as nutritional intake obtained from diet, parental income factors, genetic factors and a history of obesity from parents which can influence the occurrence of obesity and factors of children's snacking habits in the school environment. In this study there were some students who had heavy physical activity but had obesity nutritional status. This can be caused by poor consumption patterns, therefore, even though the physical activity is strenuous, the nutritional status of students is classified as obese.

4. CONCLUSION

There are 62 students (73%) who have a high level of sedentary activity. There are 73 students (86%) who have High Screen time. 35 students (41.2%) who had heavy physical activity. There were 73 students (85.9%) who had good nutritional status. There was no significant relationship between sedentary lifestyle, duration of screen time, diet and physical activity on the nutritional status of students at SMK Negeri 2 Rantau Utara during the Covid-19 pandemic.

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