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The Impact of Online Games on the Nutritional Status of Adolescents

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ABSTRACT

In times of drastic change, teenagers require higher levels of nutrition, as well as lifestyle. Now many teenagers are fond of online games, which may have an impact on their lifestyle, forgetting about the need to eat. The aim of this research was to determine the effect of online games on the nutritional status of adolescents at SMP Negeri 2 Maros. This study implemented a cross-sectional design. This research involved 157 students who were chosen randomly. Online game playing habits were measured through filling out a questionnaire; while nutritional status was measured based on the Body Mass Index for Age (BMI for age), so that weight and height were measured directly. Next, the data was analyzed descriptively and continued with hypothesis testing using statistical tests using Chi-square. The analysis results showed the p value was 0.026 (there was a significant effect). Thus, it was concluded that the habit of playing online games had an impact on the nutritional status of teenagers at SMP Negeri 2 Maros.

Keywords: Adolescent; nutritional status; online games

INTRODUCTION

Adolescence is a transition period from childhood to adulthood, ranging from ages 10 to 18 for those prone to nutritional problems. Various causes make adolescents prone to nutritional problems, namely that they require higher nutrients, have changed lifestyles and eating habits, and have special nutritional needs. The balance between energy intake and physical activity is very important to note so that there is no lack of energy that can cause nutritional problems.(1) Data of Riskesdas (basic health research) in 2018 in Indonesia showed that 25.7% of adolescents aged 13–15 years and 26.9% of adolescents aged 16–18 years had short or very short nutritional status. In addition, there were 8.7% of adolescents aged 13–15 years and 8.1% of adolescents aged 16–18 years with underweight or very underweight conditions. While the prevalence of overweight and obesity amounted to 16.0% in adolescents aged 13–15 years and 13.5% in adolescents aged 16–18 years.(2)

The prevalence of BMI for age in South Sulawesi aged 13–15 years for those who are classified as very thin is 2.46% and 8.28%, for those who are classified as obese is 10.46%, and for those who are classified as very obese, it is 4.15%. Nutritional status data in Maros Regency shows that the average prevalence of BMI for age 13–15 years of age is classified as very thin at 5.62% and 11.16% thin, which is classified as fat at 8.67%, and which is classified as very fat at 0.79%.(2)

School-age children are very vulnerable to online game play that makes them addicted to playing. The development of online games is currently growing rapidly, so it is easy to play through computers, laptops, and gadgets that are connected via the internet network. This results in children becoming obese or overweight because children are lazy to do physical activity so that only certain parts move like active fingers.(3) Data from 2018 predicted that there are about 2.3 million internet users who utilize online games, and 95% like online gaming applications. Online games that are in great demand among teenagers in Indonesia range in size from 43 million people. Utilization of smartphones to play online games totals 15.9%.(4)

In research conducted by Haeril in 2019 on the influence of children who actively play online games on the diet, nutritional status, and posture of children aged 13–15 years, the nutritional status of children who actively play online games is classified as thin with a percentage value of 43%.(3) The results of a study by Ayu (2020) found that most of the 45 children (54.2%) had a low physical activity pattern. Almost half of the 33 children (39.8%) were well-nourished.(1)

Based on the description above, The aim of this research was to determine the effect of online games on the nutritional status of adolescents at SMP Negeri 2 Maros.

METHODS

This research was conducted at SMP Negeri 2 Maros, South Sulawesi, Indonesia in January 2023. This type of research was observational, using a cross-sectional design to determine the effect of online gaming habits on the nutritional status of adolescents. The population of this study were all Class VII students at SMP Negeri 2 Maros, with a population size of 220 students. Sampling was carried out using a determination method based on the Slovin formula, so the minimum sample size required was 157. Sampling was carried out using a random sampling method with the aim of determining students who met the criteria.

The independent variable studied was the habit of playing online games, while the dependent variable was the nutritional status of adolescents. The habit of playing online games was measured by filling out a questionnaire; meanwhile, adolescent nutritional status was measured based on body mass index (BMI) according to age, so that weight and height were measured directly to students.

After the data was complete, then descriptive data analysis was carried out in the form of frequencies and proportions because the data was categorical. The next stage was to test the hypothesis using the Chi-square test.

This research was carried out by paying attention to ethical principles in health research, so that it provides benefits for students, does not harm students, and respects students' dignity as human beings.

RESULTS

Based on Table 1, it is known that the majority sex was male (63.1%); the predominant age was 12 years old (54.1%); while the majority of students came from class F.

Table 1. Distribution of demographic characteristics of students

Demographic characteristics	Frequency	Percentage
Sex		
Male	99	63.1
Female	58	36.9
Age		
12 years old	85	54.1
13 years old	70	44.6
14 years old	2	1.2
Class		
Class A	16	10.2
Class B	26	16.6
Class C	11	7.0
Class D	24	15.3
Class E	21	13.4
Class F	27	17.2
Class G	11	7.0
Class H	3	1.9
Class I	18	11.5

Table 2. Distribution of online gaming habits and nutrional status of students

Variables	Frequency	Percentage
Online game		
Good	11	7.0
Bad	146	93.0
Nutritional status		
Underweight	12	7.6
Overweight	22	14.0
Normal	108	68.8
Obesity	15	9.2

Based on Table 2, it is known that the habit of playing online games among students was very widespread (93.0%). Meanwhile, 68.8% of teenagers still had normal nutritional status. The results of hypothesis testing

showed a p-value of 0.026, so it was interpreted that the habit of playing online games has a significant impact on the nutritional status of adolescents.

DISCUSSION

Online games are very fun and entertaining for teenagers, but they have properties that cause users to become addicted. Most teenage boys have free time to play online games. This makes teenagers spend more time just playing online games, both at home and at school. So they are addicted to play, which has an impact on their physical activity and nutritional status.

The results showed that the habit of playing online games among students in SMP Negeri 2 Maros was very widespread. Susanti et al in their research at SDN 4 Purwodadi produced almost the same findings that 75% of students were addicted to smartphones. Susanti et al in their research at SDN 4 Purwodadi produced almost the same findings that 75% of students were addicted to smartphones. This study also found that there is a relationship between addiction to playing online games on smartphones and students' eating patterns. The higher the level of online game addiction, the less food intake.[5-11]

Adolescence is a period of change from child to adult, which involves a rapid maturation process, so it requires a large nutritional intake, which is needed to support the rapid process of growth and development.[12] If you receive adequate nutritional intake, normal nutritional status can be achieved, provided you are always active in physical activity every day, so that you get a more ideal nutritional status. Assessment of nutritional status in adolescents can be determined through BMI according to age.

The results of this study show that the majority of students at SMP Negeri 2 Maros have good nutritional status. This is in line with other research findings, including Haeril's report on the influence of the habit of playing online games on the eating patterns, nutritional status and body posture of children aged 13–15 years, with one finding that the nutritional status of the majority is good.[3]

The results of this research show that the habit of playing online games has an impact on the nutritional status of students at SMP Negeri 2 Maros. This is in line with previous research, including the findings of Heril (2019) which shows that children who actively play online games tend to have a thin body posture. Nutritional status is related to the food intake consumed and physical activity carried out every day. If the food consumed has good nutritional value then the nutritional status will also be good, and vice versa if the food consumed has poor nutritional value it will cause malnutrition. By playing online games, children will tend to forget about the need to eat because their attention is focused on the game.[3]

However, there is also a trend that the habit of playing online games with high intensity triggers obesity, for example the findings of Kocakoglu et al. in his study involving 491 children aged 10–11 years.[13] Maybe this is related to the habitual pattern of playing online games accompanied by food and drinks such as various snacks and packaged drinks; Meanwhile, physical activity is very minimal due to the time spent playing the game. This obesity problem is related to a diet that tends to be high in intake of carbohydrates, sugar, salt and fat, but minimal in intake of vegetables and water, so it is not in accordance with the recommended food intake. Logically, the use of electronic devices as represented by the habit of playing online games is related to changes in physical activity patterns and habits. If this is not anticipated, the negative effects on children will become more prolonged, because playing online games can cause addiction. Playing online games can disrupt the balance of daily energy regulation in children, especially insufficient energy expenditure.[14] This condition will get worse if playing activities are supported by excessive intake of packaged food and drinks; So the intake of energy sources is excessive, but energy expenditure is very less. The longer the duration of playing online games, the greater the risk of being overweight or even obese in teenagers, which is related to the consumption of sweet drinks.[6,7,15-20]

CONCLUSION

Based on the results of this study, Thus, it was concluded that the habit of playing online games had an impact on the nutritional status of teenagers at SMP Negeri 2 Maros.

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