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THE RELATIONSHIP BETWEEN GADGET USE AND NUTRITIONAL STATUS AMONG STUDENTS AT STIKES GUNUNG MARIA TOMOHON

Priscila Evangelin Asa[1], Risca Manoppo[2]
[1,2] Sekolah Tinggi Ilmu Kesehatan Gunung Maria Tomohon

Email koresponden: preesapriscila@gmail.com

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Abstract

This study aims to determine the relationship between gadget use and nutritional status in students at STIKES Gunung Maria Tomohon. Method: This study used a cross-sectional study design, conducted in December 2024 at STIKES Gunung Maria Tomohon. The number of samples was 84 respondents. Data analysis used the Spearman Rank test. Results: There is no relationship between Gadget Use and Nutritional Status, (correlation coefficient is 0.078 and Sig. 2-tailed = 0.481 <0.05). Conclusion: There is no relationship between gadget use and nutritional status at STIKES Gunung Maria Tomohon and it is recommended that the campus can improve Nutrition and Health Education in nutrition education for students. The campus can hold seminars, workshops, or classes that educate students about the importance of a healthy diet, balanced eating habits, and how to choose nutritious foods.

Keywords: gadget usage, nutritional status

1. INTRODUCTION

Gadgets, such as smartphones, tablets, and laptops, have become indispensable tools in daily activities, whether for academic, social, or entertainment purposes. According to data from the Indonesian Internet Service Providers Association, about 90% of students in Indonesia use the internet every day, with an average usage time of more than 8 hours per day (Indonesian Internet Service Providers Association [APJII], 2023). Furthermore, excessive gadget use can also affect sleep patterns and increase the risk of stress, both of which have a direct impact on nutritional status (Cespedes et al., 2016; Yuniastuti, Handayani, & Abudu, 2021). Nutritional status is an important indicator for assessing individual health, and it is influenced by dietary patterns, physical activity, and psychosocial factors such as stress and lifestyle habits (Ministry of Health of the Republic of Indonesia, 2021; Kariuki, Olando, & Mwaniki, 2021).

Students, as a group of young adults, are in a life phase that is vulnerable to changes in nutritional status due to the transition from adolescence to adulthood, including irregular eating habits caused by a busy class schedule (Sari, Indrawati, & Pratiwi, 2019). Moreover, intensive gadget use is often associated with decreased physical activity. Students who spend more time in front of screens tend to have a more sedentary lifestyle, which can ultimately increase the risk of obesity (Kim, Lee, & An, 2019; Sayuti & Irfan, 2024). Additionally, using gadgets late at night can disrupt sleep patterns, which also affects metabolism and an individual's nutritional status (Cespedes et al., 2016). Students in health institutions, such as STIKES Gunung Maria Tomohon, are not exempt from this risk. Although they may have better knowledge about the importance of nutrition and health, modern lifestyles filled with technology often influence their behavior (Widjaja, Riani, & Hidayat, 2018; Pengge & Rahmawati, 2025).

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Lack of attention to meal times, poor food choices, and neglect of physical activity can be exacerbated by high gadget usage. Therefore, it is important to understand the relationship between gadget use and nutritional status among students to provide insights that can be used to develop effective interventions. The objective of this study is to determine the relationship between gadget use and nutritional status among students at STIKES Gunung Maria Tomohon.

2. METHODS

This study is a quantitative study using a cross-sectional study design, conducted at STIKES Gunung Maria Tomohon in December 2024. The population consists of all students at STIKES Gunung Maria Tomohon, totaling 489 individuals, and the sample size was determined using Slovin's formula, resulting in 84 individuals. The independent variable in this study is social media addiction, while the dependent variable is mental health. The data collection technique used a non-probability sampling method, and the data analysis used to determine the relationship between gadget usage and nutritional status employed the Spearman Rank test. The data analysis technique utilized a set of SPSS Version 25.0 tools.

RESULTS AND DISCUSSION

The frequency distribution based on gender in this study can be seen in Table 1.

Table 1. Distribution of respondents based on gender at STIKES Gunung Maria Tomohon

Gender	Frequency	Percentage (%)
Male	14	16,7
Female	70	83,3
Total	84	100

Based on Table 1, it shows that the respondents with the female gender are the most numerous, totaling 70 respondents (83.3%), while males total 14 respondents (16.7%) from the total respondents.

Table 2. Distribution of respondents based on age at STIKES Gunung Maria Tomohon

Age of Respondents	Frequency	Percentage (%)
17	10	11,9
18	26	31
19	29	34.5
≥20	19	22,6
Total	84	100

Based on Table 2, it shows that the most respondents are aged 19 years with 29 respondents (34.5%), and the fewest respondents are aged 17 years with 10 respondents (11.9%).

Table 3. Distribution of respondents based on gadget usage variables at STIKES Gunung Maria Tomohon.

Gadget Usage	Frequency	Percentage (%)
Low	9	10,7
Moderate	66	78,6
High	9	10,7
Total	84	100

Based on Table 3, it shows that the majority of respondents have moderate gadget usage, totaling 66 respondents (78.6%), while respondents with low and high usage each total 9 respondents (10.7%). The frequency distribution based on nutritional status variables at STIKES Gunung Maria Tomohon can be seen in Table 4 below.

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Table 4. Distribution of respondents based on nutritional status variables at STIKES Gunung Maria Tomohon.

Nutritional Status Variable	Frequency	Percentage (%)
Underweight	20	23,8
Normal	51	60,7
Overweight	13	15,5
Total	84	100

The data in Table 4 above shows that based on the nutritional status variable, the most common is the normal variable, totaling 51 respondents (60.7%), while the least common is the overweight variable, totaling 13 respondents (15.5%) from the total respondents. The distribution analysis of the relationship between gadget usage and nutritional status in this study can be seen in Table 5 below.

Table 5. Distribution analysis of the relationship between gadget usage and nutritional status among students at STIKES Gunung Maria Tomohon.

Gadget Usage	Nutritional Status								*R*	*p-value*
	Underweight		Normal		Overweight		Total			
	n	%	N	%	n	%	N	%		
Low	3	33,3	3	33,3	3	33,3	9	100	0,078	0,481
Moderate	14	21,2	47	71,2	5	7,7	66	100		
High	3	33,3	1	11,1	5	55,5	9	100		
Total	20	23,8	51	60,7	13	15,8	84	100		

The results of the bivariate analysis show that there is no relationship between gadget usage and nutritional status, and the relationship is very weak (correlation coefficient of 0.078 and Sig. 2-tailed = 0.481 > 0.05).

3. RESULTS AND DISCUSSION

The results of the bivariate analysis show that there is no relationship between gadget usage and nutritional status. Among the 9 respondents with low gadget usage, there were 3 respondents with underweight status, 3 with normal status, and 3 with overweight status. Similarly, among the 66 respondents with moderate gadget usage, 14 were underweight, 47 were of normal weight, and 5 were overweight. In the high gadget usage group, which consisted of 9 individuals, there were 3 underweight respondents, 1 with normal weight, and 5 who were overweight.

Based on these results, it can be stated that there is no significant relationship between gadget use and nutritional status. This is supported by the statistical findings, which show a p-value of 0.481 (greater than $\alpha = 0.05$) and a correlation coefficient of 0.078. These findings are consistent with the study by Anggraeni et al. (2021), which involved 250 children aged 10–15 years who used gadgets for varying durations, ranging from 1 to 6 hours per day. Despite the variation in gadget usage, the study found no significant relationship between the duration of gadget use and the nutritional status of the children ($\chi^2 = 2.56$, $p = 0.12$). A similar study by Widjaja et al. (2018), conducted on 400 adolescents divided into two groups those who used gadgets for more than 3 hours per day and those who used them for less than 1 hour also found no significant relationship between gadget usage and nutritional status ($p = 0.08$).

In contrast, the study by Widyawati (2022) found a significant relationship between gadget use and nutritional status among students at SMA Negeri 2 Playen, Gunung Kidul Regency. This study reported a p-value of 0.001 and a correlation coefficient of 0.600, indicating a strong correlation. Similarly, research by Sari et al. (2019), which included 500 adolescents from various schools, found that those who used gadgets for more than 4 hours a day tended to consume unhealthy foods such as fast food and sweet snacks ($p < 0.05$). Overall, no significant relationship was found between the duration of gadget use and nutritional status, as measured by Body Mass Index (BMI) and other nutritional indicators. While gadget use may influence physical activity patterns such as reducing time

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spent exercising or increasing sedentary behavior the results of this study suggest that other factors, such as dietary habits, nutrition knowledge, and healthy eating behaviors, have a more substantial impact on students' nutritional status.

Moreover, variables such as socioeconomic status, stress levels, and physical activity outside of gadget usage were found to have a greater influence on nutritional outcomes than gadget use itself. Therefore, although gadget usage may affect certain aspects of healthy living, this study concludes that there is no direct correlation between gadget use and nutritional status among students at STIKES Gunung Maria Tomohon.

4. CONCLUSION

Gadget use among students at STIKES Gunung Maria Tomohon is at a moderate level. The nutritional status of students at STIKES Gunung Maria Tomohon is within the normal range. There is no relationship between gadget use and nutritional status, and the relationship is very weak (correlation coefficient of 0.078 and Sig. 2-tailed = 0.481 > 0.05). It is hoped that the campus can enhance nutrition and health education in nutrition education for students. The campus can hold seminars, workshops, or classes that educate students about the importance of healthy eating patterns, balanced eating habits, and how to choose nutritious foods.

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