



## The Relationship Between Social Media Use and Peer Support with Sedentary Behavior Gorontalo State High School 3

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### ABSTRACT

Sedentary behavior is a sedentary behavior characterized by energy expenditure  $\leq 1.5$  MET (Metabolic Equivalent of Task) such as when in a sitting or lying position. Some common sedentary behaviors include lying down or sitting for a long time, when playing social media, watching movies or videos, or playing games. Peer influence also plays an important role in shaping students' habits and behaviors. Students who do not get support from peers are more likely to behave passively. The purpose of the study was to analyze the relationship between social media use and peer support and sedentary behavior in SMA 3 Negeri Gorontalo.

A type of quantitative research with a correlational approach, the research population of all grade XI students amounted to 438 students with a sample of 209 respondents. Data analysis used the spearman rank test.

The results of the study were obtained as many as 166 respondents (79.4%) experienced high sedentary behavior, students with the level of social media use alert as many as 139 respondents (66.5%), for peer support was in the high category as many as 163 respondents (78.0%).

In conclusion, there was a relationship between social media use and sedentary behavior (pvalue  $0.000 < 0.05$ ), strong relationship strength,  $r = 0.661$ , there was a relationship between peer support and sedentary behavior (p-value =  $0.000 < 0.05$ ), moderate relationship strength  $r = 0.550$ . Suggestions for students to be wiser in using social media and remind each other in friend groups to do activities that involve physical movements so that sedentary habits can be reduced.

### INTRODUCTION

The development of digital and information technology has brought significant changes in various aspects of life, one of which is lifestyle changes. The use of electronic devices such as mobile phones, computers, and televisions has increased in this era. This technological advancement provides many benefits, such as easier access to information, communication, and various kinds of entertainment. However, on the other hand, excessive use of technology can have a negative impact. All activities that previously required human physical energy were replaced by machines and technology. This convenience can trigger changes in people's living habits into sedentary behavior (Rahma et al., 2025).

Sedentary behavior is sedentary behavior characterized by energy expenditure  $\leq 1.5$  MET (Metabolic Equivalent of Task) such as when in a sitting or lying position. Sedentary behavior in modern society such as sitting or lying down a lot is unavoidable in daily life and can be done anywhere at home, at work, at school or while traveling (Nafi'ah & Hadi, 2022)

World Health Organization (WHO) data states that around 2 million deaths per year are caused by sedentary behavior. In addition, 60 to 85% of people in the world from both developed and developing countries live a sedentary lifestyle and four out of five adolescents (11-17 years old) do not do enough physical activity (World Health Organization, 2018). Sedentary behavior has also been designated by WHO as the largest cause of

death, disease, and the record is evidenced by being included in the list of 10 causes of death and disability in the world (World Health Organization, 2002).

This sedentary behavior crisis is particularly prominent in adolescents. Based on data from the 2023 Indonesian Health Survey (SKI), the proportion of the Indonesian population aged  $\geq 10$  years who have less physical activity reaches 39.5%. More specifically in the junior high/high school adolescent age group (15-19 years), the percentage of physical activity is 40.0% and 40.1% at the age of 10-14 years, this figure is higher than the productive adult age group. This figure confirms that the majority of adolescents in Indonesia are at significant health risk. Nationally, only 60.5% of the population aged  $\geq 10$  years old have sufficient physical activity, indicating a large gap between healthy living recommendations and the reality of people's behavior (Ministry of Health of the Republic of Indonesia, 2023).

The Local Condition of Gorontalo When viewed regionally, SKI 2023 data shows that Gorontalo Province has a proportion of less physical activity of 40.7%. This figure is slightly above the national average. The reason for not doing physical activity in the adolescent age group (15-19 years) has the lowest proportion of reasons for no time (34.5%) but the proportion of reasons for being tired is significant (54.6%). This data indicates that sedentary problems in adolescents are not only a matter of lack of time, but may be more caused by changes in energy or motivation, which are very likely influenced by environmental factors and tiring screen time activities (Ministry of Health of the Republic of Indonesia, 2023).

Geographically dispersed individuals can connect virtually thanks to social media. Anyone can communicate with each other on social media, which makes users feel comfortable. However, this tendency can also lead to dependency or addiction. A person who is addicted to social media will focus too much on social media. From this point of view, excessive attention to social media can be considered an addiction. This action is driven by an unbearable impulse. This will take a lot of time and interfere with other more important life activities (Silalahi, 2025). This behavior has the potential to cause various potential diseases such as Obesity, Cardiovascular Disease, Hypertension, Stroke, Type 2 Diabetes Mellitus, Osteoporosis, anxiety and other mental health disorders, and even the risk of premature death (Aji et al., 2023).

Peer influence also plays an important role in shaping students' habits and behaviors. Students who do not get support from peers are more likely to behave passively. This is supported by research conducted by McCarthy, Ersig, and Chung in (Arihandayani & Martha, 2020), which found that in adolescence, peers affect a person's level of physical activity such as exercising. The more personal and intimate the friendship, the more similar a person's actions are to the actions of their peers. As a result, close friends usually have a greater influence on sports and other physical activities. These friends are categorized as close friends who often hang out together, are usually of the same gender, and encourage each other.

A preliminary survey has been conducted regarding sedentary behavior, social media use, and peer support in a group of students at SMA Negeri 3 Gorontalo. A total of 25 students were randomly selected. In preliminary observations of 25 students at SMA Negeri 3 Gorontalo, there were students who spent a long time on screen-based activities such as social media and games every day. Based on the duration grouping, the majority were in the category of high sedentary behavior, followed by the medium category, and only a small part were included in the low category. On school days, as many as 12 students stated that they spent more than 6 hours per day, some even mentioned approximately one day. On holidays, the intensity of use tends to increase dramatically, with 8 students spending more than 6 hours to a full day. Activities after school apart from sleeping and studying are often filled with sedentary activities such as playing games, watching, and hanging out which also involve sitting or lying down for a long time. 16 out of 25 students mentioned lying down as the dominant body position when using a cellphone. The role of peers seems strong from the chosen joint activities, such as hanging out and playing games which were reported by most of the students mentioned by many students as many as 18 out of 25 students. Game invitations were also mentioned by many students as many as 7 students out of 25 students. Based on the description above, the researcher was interested in conducting a study entitled "The relationship between social media use and peer support and sedentary behavior in students at SMA 3 Gorontalo"

## RESEARCH METHODS

### Research Location and Time

The location of this research has been conducted at SMA Negeri 3 Gorontalo. This research has been conducted for 1 month in January-February.

### Research Design

This type of research is a quantitative research with a correlational approach, which aims to determine the relationship between independent variables, namely social media use and peers, and dependent variables, namely sedentary behavior in students at SMA 3 Gorontalo.

### Population and Research Sample

The population in this study is all grade XI students at SMA Negeri 3 Gorontalo which consists of 12 classes with a research population of 438 students. Determining the sample size uses the slovin formula with the

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presentation of the relaxation used is 5% so that the sample size is 209 respondents. The sample technique uses proportional random sampling. Data analysis uses univariate and bivariate data. In bivariate data analysis, the non-parametric Spearman Rho test or the Spearman Rank test is used.

## RESULTS

### Univariate Analysis Results

Table 1 Characteristics of respondents by level of sedentary behavior

Level Sedentary behavior	Quantity	
	Frequency (f)	Percentage (%)
Low	1	5
Medium	42	20.1
Height	166	79.4
Quantity	209	100

Source: Primary Data 2026

Based on table 1, the bottom of the 209 student respondents at SMA Negeri 3 Gorontalo shows that 166 respondents (79.4%) have experienced a high level of sedentary behavior, 42 respondents (20.1%), students who have experienced a low level of sedentary behavior amounted to 1 respondent (5%).

Table 2 Characteristics of respondents by level of social media use

Social media usage rate	Quantity	
	Frequency (f)	Percentage (%)
Normal	31	14.8
<i>Alert</i>	139	66.5
<i>Addict</i>	39	18.7
Quantity	209	100

Source: Primary Data 2026

Based on table 2, it shows that of the 209 student respondents at SMA Negeri 3 Gorontalo, 139 respondents (66.5%) were at the alert level, 39 respondents were at the addict level, then 31 respondents were at the normal level (14.8%).

Table 3. Characteristics of respondents based on the level of peer support in students at SMA Negeri 3 Gorontalo

Level Peer Support	Quantity	
	Frequency (f)	Percentage (%)
Very Low	0	0
Low	21	10.0
Height	163	78.0
Very High	25	12.0
Quantity	209	100

Source: Primary Data 2026

Based on table 3, it shows that of the 209 student respondents at SMA Negeri 3 Gorontalo, 163 respondents (78.0%) were at a very high level, 25 respondents (12.0%), students at a very low level amounted to 21 respondents (10.0%) and students at a very low level amounted to 0 respondents (0%).

## Bivariate Analysis Results

Table 4 Distribution of the relationship between social media use and sedentary behavior in students at SMA Negeri 3 Gorontalo

Social Media Use	Sedentary Behavior						Quantity	
	Low		Medium		Height			
	N	%	N	%	N	%	N	%
Normal	1	3.2	30	96.8	0	0	31	100
Alert	0	0	12	8.6	127	91.4	139	100
Addict	0	0	0	0	39	100	39	100
Total	1	0.5	42	20.1	166	79.4	209	100

Test Rank Spearmen p-value = 0.000 r = 0.661

Source: Primary Data 2026

Based on table 4, it is shown that 39 respondents (100%) students who use social media at the level of addicts with high sedentary behavior. Students who use social media at the alert level with high sedentary behavior as many as 127 respondents (91.4%), students in the alert category with moderate sedentary behavior as many as 12 respondents (8.6%). Students who use social media at a normal level with moderate sedentary behavior as many as 30 respondents (96.8%) and students with the normal category with low sedentary behavior as many as 1 respondent (3.2%).

The results of the rank spearmen correlation test showed that p-value = 0.000 < 0.05 there was a significant variable relationship between social media use and sedentary behavior in students at SMA Negeri 3 Gorontalo, with the strength of a strong relationship, namely the correlation value r = 0.661.

Table 5 Distribution of peer support relationships with sedentary behavior in students at SMA Negeri 3 Gorontalo

Peer Support	Sedentary Behavior						Quantity	
	Low		Medium		Height			
	N	%	N	%	N	%	N	%
Low	1	4.8	20	95.2	0	0	21	100
Height	0	0	22	5	141	86.5	163	100
Very High	0	0	0	0	25	100	25	100
Total	1	5	42	20.1	166	79.4	209	100

Test Rank Spearmen p-value = 0.000 r = 0.550

Source: Primary Data 2026

Based on table 5, it is shown that students who are on very high peer support with high sedentary behavior as many as 25 respondents (100%). Students who are on high peer support with high sedentary behavior as many as 141 respondents (86.5%), students who are on high peer support with moderate sedentary behavior as many as 22 respondents (13.5%). Students who are on low peer support with moderate sedentary behavior as many as 20 respondents (95.2%) and students who are in the low category with low sedentary behavior as many as 1 respondent (4.8%).

The results of the rank spearmen correlation test showed that p-value = 0.000 < 0.05 that there was a significant relationship between the variable of peer support and sedentary behavior in students at SMA Negeri 3 Gorontalo with the strength of the moderate relationship, namely the correlation r = 0.550.

## DISCUSSION

### The Relationship between Social Media Use and Sedentary Behavior in Students at SMA Negeri 3 Gorontalo

Based on table 4, it is shown that 39 respondents (100%) students who use social media at the level of addicts with high sedentary behavior. Students who use social media at the alert level with high sedentary behavior as many as 127 respondents (91.4%), students with the alert category with moderate sedentary behavior as many as 12 respondents (8.6%). Students who use social media at a normal level with moderate sedentary behavior as many as 30 respondents (96.8%) and students with the normal category with low sedentary behavior as many as 1 respondent (3.2%).

The results of the spearman rank statistical test showed a correlation value of  $r = 0.661$  and  $p\text{-value} = 0.000 < 0.05$ . Therefore, it can be concluded that there is a relationship between social media use and sedentary behavior in students at SMA Negeri 3 Gorontalo. The value of the spearman rank correlation coefficient of 0.661 indicates that the strength of the relationship between the two variables is in the strong category. This means that the higher the level of social media use, the higher the sedentary behavior carried out by students.

Based on the results of the study, it was shown that all students who used social media at the addict level had high sedentary behavior as many as 39 respondents (100%). From these results, it can be seen that at the level of social media use that has led to dependence, all respondents experienced activity patterns dominated by sedentary behavior. Students tend to feel restless if they are far from their mobile phones and have difficulty stopping the use of gadgets even though they realize that the duration is excessive, so their activity patterns are completely dominated by sedentary behavior. This indicates that excessive use of social media plays a big role in shaping a sedentary lifestyle in students.

At the level of social media use alert, most students are also in the category of high sedentary behavior, namely 127 respondents (91.4%), while a small number of others are in the moderate sedentary category as many as 12 respondents (8.6%). From these results, it can be seen that students who are in the alert category have not fully experienced dependence, but the high intensity of social media use is enough to encourage sedentary behavior. Students in this category tend to check their phones frequently, feel compelled to respond immediately to notifications, and spend free time with digital activities, so that the opportunity to move becomes increasingly limited.

Meanwhile, in students with normal social media use levels, most of them were in the moderate sedentary behavior category as many as 30 respondents (96.8%), and only a small percentage were in the low sedentary category as much as 1 respondent (3.2%). From these results, it can be seen that the use of social media within normal limits does not fully guarantee low sedentary behavior. Sedentary behavior in this group may be influenced by other factors such as learning activities that require students to sit for long periods of time, the use of digital devices for academic purposes, and passive rest habits. This is because sedentary behavior in this group is no longer driven by social media, but by functional factors such as academic obligations. Students spend a long time sitting in completing assignments or participating in learning in class, where these activities are considered more priority and beneficial to their achievement than physical activity. In addition, the pattern of passive rest between study times also contributes to maintaining the duration of sedentary time at a moderate level.

These results are in line with research by (Shirley, 2025) in the city of Medan which found a positive and significant relationship between social media addiction and sedentary behavior. Although the study was conducted in the early adult group, the study stated that the higher the level of social media addiction, the higher the duration of the respondents' sitting behavior and screen-based activities. The study strengthens the results of this study that the increased use of social media contributes to the increase in sedentary behavior. This is strengthened by a descriptive study at SMKN 2 Garut which showed that 86.8% of adolescents had high sedentary behavior with an average time of 8.3 hours/day, where the use of cellphones for entertainment was the main contributor (Rahma et al., 2025). Similar conditions were also found in SMA Bandung City, where almost all respondents were included in the category of high sedentary behavior (Maidartati et al., 2022). These findings confirm that social media use has become a major determinant of adolescent sedentary behavior.

The high correlation between social media use and sedentary behavior is inseparable from changes in adolescent social interaction patterns that are now more prevalent in the digital space. Dependence on gadgets makes students feel more comfortable interacting online than doing physical or social activities directly. The absence of a single respondent with the use of social media in the addict category who have moderate or low sedentary behavior further emphasizes that digital dependence has become a factor inhibiting students' physical activity. If this is left unchecked and becomes a persistent bad habit, then the long-term health risk for adolescents will increase.

### **The Relationship of Peer Support and Sedentary Behavior in Students at SMA Negeri 3 Gorontalo**

Based on table 5, it is shown that students who are on very high peer support with high sedentary behavior as many as 25 respondents (100%). Students who are on high peer support with high sedentary behavior as many as 141 respondents (86.5%), students who are on high peer support with moderate sedentary behavior as many as 22 respondents (13.5%). Students who are on low peer support with moderate sedentary behavior as many as 20 respondents (95.2%) and students who are in the low category with low sedentary behavior as many as 1 respondent (4.8%).

The results of the rank spearman correlation test showed that  $p\text{-value} = 0.000 < 0.05$  that there was a significant relationship between the variable of peer support and sedentary behavior in students at SMA Negeri 3 Gorontalo with the strength of the moderate relationship, namely the correlation  $r = 0.550$ .

Based on the results of the study, it was shown that all students who were in the category of very high peer support had high sedentary behavior as many as 25 respondents (100%). From these results, it can be seen that although students feel very strong social support from their peers, this condition has not been able to reduce sedentary behavior. The form of support they receive is more in the form of chatting or loyalty to friends, but not

accompanied by physical activities. Here comes a sense of togetherness, where students feel that it is okay to be lazy to move because their friends are also doing the same thing. In addition, strong social interactions often occur in digital contexts, such as communicating through social media or gathering while using gadgets, so that even though support is felt high, the activities carried out are still sedentary.

In the category of high peer support, most students were in high sedentary behavior as many as 141 respondents (86.5%). From these results, it can be seen that high enough peer support has not been able to completely change students' habits to be more active in moving. This is because students in this category generally get invitations, motivation, and positive examples from peers, but sedentary habits such as using gadgets for long periods of time, studying while sitting, playing games, and watching are still more dominant in daily life. These habits provide instant comfort and satisfaction, so they are preferred over physical activities that require greater effort.

Meanwhile, in students with high peer support but moderate sedentary behavior as many as 22 respondents (13.5%), from these results, it can be seen that some students are starting to be able to balance social support with more active behavior. Peer support in this group is likely to be more manifested in the form of direct invitations to physical activity, such as joint sports or mobile activities in the school environment. In addition, personal awareness factors and the ability to control sedentary habits also play a role in reducing the duration of sitting activities so that they are not in the high category.

In the low peer support category, most students were in moderate sedentary behavior as many as 20 respondents (95.2%), while only 1 respondent (4.8%) was in the low sedentary behavior category. Low peer support led to a lack of social encouragement to engage in physical activity. However, sedentary behavior in this group was not entirely in the high category, which indicates that there are other factors that also influence, such as academic routines, personal motivation, daily habits, and the role of family in encouraging physical activity.

However, this research is not in line with the results of research conducted by (Pradany, et al., 2020) and (Arihandayani & Martha, 2020) that peer intentions and support play a role in preventing sedentary behavior in adolescents. The study explains that peer support in the form of emotional, instrumental, informational, and assessment can encourage adolescents to be more physically active. Meanwhile, the results of this study can be seen that although most of the peer support that students have is in the high category, they can still carry out high sedentary behavior. This is because there are other factors that trigger sedentary behavior such as high use of social media, education and parenting, and school policies (Nafi'ah & Hadi, 2022).

In addition, time and environment constraints can also affect the effectiveness of peer support. Even if friends invite you to exercise or actively move, students may still spend more time sitting due to busy school schedules, accumulated tasks, or the habit of resting with gadgets. This suggests that peer support plays a driving factor, but its success is strongly influenced by environmental conditions and individual habits.

## CONCLUSION

There is a relationship between social media use and sedentary behavior in students at SMA Negeri 3 Gorontalo with the results of the spearman rank statistical test showing a correlation value of  $r = 0.661$  and  $p\text{-value} = 0.000 < 0.05$ . The value of the spearman rank correlation coefficient value of 0.661 shows the strength of the relationship between the two variables in the strong category.

There was a relationship between peer support and sedentary behavior in students at SMA Negeri 3 Gorontalo with the results of the spearman rank statistical test showing a correlation value of  $r = 0.550$  and  $p\text{-value} = 0.000 < 0.05$ . The value of the spearman rank correlation coefficient of 0.550 shows the strength of the relationship between the two variables in the medium category.

## SUGGESTIONS

For students, it is expected to be wiser in using social media by limiting the duration of daily use and realizing the importance of maintaining a balance between screen-based activities and physical activities. Students are encouraged to take advantage of their free time with more active activities such as light exercise, walking, participating in extracurricular activities, or outdoor activities with friends. In addition, students also need to remind each other in friend groups so that they not only interact through gadgets, but also do activities that involve physical movements so that sedentary habits can be reduced.

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