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## Survey of Physical Activity of Students of SMPN 2 Tarik Sidoarjo During the Pandemic Covid-19

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### ABSTRACT

**Introduction:** Covid-19 in the world continues to mutate and form a new variant, namely the Omicron variant, so that community activities are limited so that healthy life behaviors are constantly maintained, starting from wearing masks, washing hands, and not allowing direct contact with the family to friends. **Purpose:** This study was intended to determine the physical activity of 9th-grade students of SMPN 2Tarik during the pandemic. Applying a quantitative descriptive approach with a survey method. The total population used is 249, with a sample of 156 respondents. The sampling technique used is simple random sampling. The instrument used is a Questionnaire Physical Activity Questionnaire for Adolescents, which adopts from previous research that has been tested for validity with a value of - 0.010 - 0.0506 and reliability of 0.682 - 0.745 so that it is declared valid and reliable, used to measure physical strength activity according to by age and distributed via Google Form with data analysis techniques assisted by Microsoft Excel. **Results:** From the data results, the biological activity of students was 42.3%, with a total of 66 students in the low category. Then 45.5% in the medium category as many as 71 students, and for the last one, the percentage of 12.2% is included in the high sort with 19 students. **Conclusions:** Student activities during the pandemic were generally moderate, indicating a need to improve learning strategies to increase physical activity in online learning.

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## 1. INTRODUCTION

SARS-CoV-2, the virus that causes COVID-19, continues to mutate, forming new variants, including the Omicron variant (B.1.1.529), which first appeared in South Africa in 2021 and then spread globally (Torjesen, 2021). All people's lives have been significantly disrupted by the Covid-19 virus, ranging from economic and social activities to the world of education. The government limits all activities; activities are now carried out at home. Learning that was initially able to be done at school offline is now being carried out at home online until conditions are deemed safe to conduct face-to-face learning. According to the Ministry of Health (Kemenkes, 2022), on February 12, 2022, the number of people confirmed to be COVID-19 reached 4,667,554 cases, death was 144,858, and those who are still active are 288,186. One of the impacts of Covid-19 in education is the absence of direct learning resulting in a lack of movement activity for students. However, children who are active and aware of the importance of health will continue to do sports activities at home even with limited space and equipment.

In contrast, they will lie down or laze around for physical activity or exercise. Watch tv, youtube, TikTok, Instagram, etc. Indeed, this pandemic cannot be separated from smartphones to support learning at school; it is not an excuse to be lazy, let alone not do physical activity. According to (WHO, 2020), physical activity means everybody's movement from the skeletal muscles necessary to expend energy. Both moderate and vigorous exercise promotes good health (Novitaningtyas, 2014). Popular activities include walking, jogging, fun games, and skills (WHO, 2020). Regular physical activity has been shown to prevent heart disease, stroke, diabetes, and certain cancers (McDonald et al., 2020). Physical activity is essential to shape physical and mental health (Putra & Rizqi, 2018). The benefits of doing a physical activity so that the body becomes healthier, avoid various disease disorders and obesity, and can also maintain weight during the pandemic. This increases the body's immunity to prevent the spread of COVID-19. Physical activity and sports affect cognitive, social, and motor aspects (Leonardo & Komaini, 2021). An exercise is a good tool for children's motor development. It contributes to the same educational upbringing by encouraging healthy activities in a comfortable environment, which can improve physical and mental health. Mental well-being fulfills self-quality, including elements related to self-concept that promote increased physical activity and sports (Batista et al., 2016).

The world of education has a vital role for students. Judging from the subjects at school, there are two categories of issues that apply a little more practice to theory and a little more theory to practice, such as Sports Learning (Herlina & Suherman, 2020). So, PJOK includes all elements of fitness, motor skills, games, and recreation (Qomarrullah et al., 2014). PJOK subjects include knowledge and support for students to be able to move actively and as a means to achieve a national education goal. PJOK is a lesson involving various activities such as running, jumping, throwing, and hitting. Before the pandemic, a lot of learning was done outside the classroom (Lanziotti et al., 2020). Therefore, PJOK not only enables students to develop physically but psychologically, cognitively, and socially.

During a pandemic like this, it is possible for children not to move much, even though SMPN 2 Tarik Sidoarjo itself can apply face-to-face learning on a limited basis, and it is possible if the pandemic due to the Covid-19 type of omicron is multiplying, the school will be conducted online again. The impact of online schools is that children do fewer activities and stare more at their cellphones or laptops to participate in online learning. This study aims to review the level of student physical activity during the Covid-19 period in the new era of life where changes in student activity occurred before Covid-19 and after Covid-19 occurred. It also provides knowledge that maintaining a healthy lifestyle by exercising during a pandemic

is essential so that the body's immunity does not decrease. Currently, learning at SMPN 2 Tarik uses online and offline methods, 50% online and 50% offline. This research needs to be carried out because, at SMPN 2 Tarik, there is no research on students' physical activity during COVID-19. Therefore, this study provides an overview of how students' physical activity.

## 2. METHODS

This study employed a quantitative descriptive research design using a survey method as the primary approach for data collection. The sampling technique utilized was simple random sampling, ensuring that each individual in the target population had an equal probability of being selected as a respondent. The population in this study consisted of all 9th-grade students at SMP Negeri 2 Tarik, Sidoarjo, comprising a total of 249 students distributed across eight classes. Using the Slovin formula, a representative sample of 156 students was randomly selected to participate in the study, thereby enhancing the generalizability of the results and minimizing sampling bias.

To measure the level of physical activity among adolescents, the researchers employed the Physical Activity Questionnaire for Adolescents (PAQ-A), a widely used and validated instrument designed to assess the general levels of physical activity in individuals aged 14 to 19 years, which corresponds with the age range of students in grades 9 through 12. The PAQ-A consists of 9 items covering various dimensions of daily and weekly physical activities, and it provides a composite score that classifies respondents into three physical activity levels: high (score > 3), moderate (score > 2 to 3), and low (score < 2), as suggested by [Chen et al. \(2008\)](#). The questionnaire was originally developed by [Kowalski et al. \(1997\)](#) and subsequently translated and adapted into Indonesian by [Dapan et al. \(2017\)](#). The Indonesian version of the PAQ-A has been subjected to psychometric testing, yielding validity coefficients between 0.010 and 0.0506 and reliability values ranging from 0.682 to 0.745, indicating that the instrument is both valid and reliable for use among Indonesian adolescent populations.

Data collection was conducted over the course of January 14 to 22, 2022, through an online questionnaire distributed via Google Forms. This approach was chosen in consideration of school policy and ongoing public health concerns related to the COVID-19 pandemic. Although face-to-face learning had recently resumed, the school administration prioritized minimizing in-person interaction outside class hours to reduce the risk of virus transmission. Furthermore, the school expressed concern that students might not fully comply with health protocols during direct data collection, potentially contributing to the spread of COVID-19. Therefore, conducting the research online was deemed the most appropriate and ethically responsible method, allowing students to complete the questionnaire independently and safely according to a predetermined schedule without disrupting their academic activities.

## 3. RESULTS

From the results of the analysis of the physical activity survey obtained from 9th-grade students at SMPN 2 TARIK SIDOARJO, the results obtained from the acquisition of excel are simple to the discussion. From table 1, men dominate with a total of 89 respondents or (57.1%) while women are 67 respondents (42.9%).

**Table 1.** Student Frequency Distribution

Gender Characteristics	F	%
Female	67	42,9
Male	89	57,1
Total Data	156	100

From table 2 there are more ages 15, namely 113 respondents (72.4%), age 14 is 30 respondents (19.2%), age 16 is 12 respondents (7.7%) and age 17 is 1 respondent (0.6%).

**Table 2.** Student Frequency Distribution

Age Characteristics	F	%
14	67	19,2
15	89	72,4
16	156	7,7
17	1	0,6
Total Data	156	100

Table 3 is a category of physical activity with three types, namely: the first is the highest category with the medium category with a total of 71 respondents (42.3%), the second is a low category totaling 66 respondents (45.5%), and the high category totaling 19 respondents (12.2%).

**Table 3.** Distribution of Students' Physical Activity

Physical Activity categories	F	%
Low	66	42,3
Medium	71	45,5
High	19	12,2
Total Data	156	100

Table 4 can be explained the level of physical activity by sex Males in the low category amounted to 27 respondents (30.3%). In comparison, the female gender in the low sort amounted to 39 respondents (58.21%), males in the medium category amounted to 48 respondents (53.9%), and the medium type totaled 23 respondents (34.3%). The high sort for males was 14 respondents (15.7%) high female category amounted to 5 respondents (7.5%).

**Table 4.** Student Frequency Distribution

Physical Category	Physical Activity					
Gender	Low		Medium		High	
	F	%	F	%	F	%
L	27	57,1	48	53,9	14	15,7
P	39	58,21	23	34,3	5	7,5

Table 5 above shows that the physical activity of male students decreased at the age of 15 years by 55.6%. As well as female students by 76.9% much higher level of decline in physical activity than male students. Therefore, at this age, it must be further improved to increase the biological activity of students.

**Table 5.** Characteristics of Students' Physical Activity

Physical Activity	Age								Description
Gender	14		15		16		17		
	N	%	N	%	N	%	N	%	
Male	8	29,6	15	55,6	3	11,1	1	3,7	Low
Female	7	17,9	30	76,9	2	5,1	0	0	

Table 6 above explains that the characteristics of physical activity of students for male students are 50.7% for as many as 36 students. It is said that the level of physical activity is moderate at the age of 15 years.

**Table 6.** Characteristics of Students' Physical Activity

Physical Activity	Age								Description
Gender	14		15		16		17		
	N	%	N	%	N	%	N	%	
Male	7	9,9	36	50,7	5	7,0	0	0,0	Medium
Female	5	7,0	18	25,4	0	0,0	0	0,0	

Table 7 above explains that of all ages listed, the level of physical activity is quite high, at the age of 15 years, 75%.

**Table 7.** Characteristics of Students' Physical Activity

Physical Activity	Age								Description
Gender	14		15		16		17		High
	N	%	N	%	N	%	N	%	
Male	1	5,3	11	75.9	2	10,9	0	0,0	
Female	2	10,5	3	15.8	0	0,0	0	0,0	

## Discussion

From the study results obtained, it can be discussed in tables 3 and 4 that most students' physical activity at SMPN 2 Tarik Sidoarjo has a moderate level of physical activity, amounting to 71 respondents out of a total of 156 respondents. The story of movement by gender is more dominant in males than females. This occurs as a result of online learning taking longer than face-to-face learning. Covid-19 students play on smartphones more often than doing a physical activity which is much more helpful in maintaining body immunity than not doing exercises. In learning PJOK at school, students do not move much because they have not done physical activity for a long time. As a result, students are lazy to study, which involves too heavy physical activity.

The Covid-19 pandemic has limited all activities, including studying and changing students' physical activities. Physical activity is an aspect that affects students' emotional intelligence. Schools are usually taught about mental and emotional health. Physical conditions affect nerves and emotions that lead to brain anatomy (Riyanto & Mudian, 2019). The level of physical activity in the low category will tend to become a habit and will be carried into

adulthood; this is quite dangerous for future generations where many young people get sick at a very young age (Hasan et al., 2019). Physical activity and a healthy diet play a vital role in maintaining the human body. Exercise is one of the simplest and cheapest options to keep your immunity and body healthy during a pandemic. For your body to stay healthy during a pandemic, you must remain active even though space is limited. There are many sports at home, so there is no reason to continue exercising regularly because exercise can be done anywhere.

#### 4. CONCLUSION

The results of this study at SMP Negeri 2 Tarik demonstrate a significant decline in students' physical fitness during the COVID-19 pandemic, which directly influenced their ability to engage in optimal levels of physical activity—most of which were classified as moderate. This decline is not only a short-term consequence of reduced mobility during the pandemic but also poses long-term risks if left unaddressed, as moderate to low physical activity levels may evolve into habitual sedentary lifestyles that persist into adulthood. Such behavioral patterns are particularly alarming given the growing prevalence of non-communicable diseases among adolescents, including obesity, hypertension, and cardiovascular disorders—conditions that were once primarily associated with the elderly. This phenomenon is closely linked to the lack of consistent exercise and the failure to cultivate a healthy, active lifestyle. Moreover, the reduction in physical activity may have adverse implications for students' emotional intelligence and neurological development, particularly in areas related to cognitive control, stress regulation, and social-emotional interaction. These findings highlight the urgent need for collaborative interventions by schools, families, and health authorities to revitalize structured physical activity programs and promote an integrated approach to adolescent well-being. Without immediate and sustained efforts, today's inactivity could translate into a public health burden in the future, compromising not only individual health outcomes but also the overall productivity and resilience of the next generation.

#### 5. CONFLICTS OF INTEREST

The authors have no conflicts of interest with the content of this review.

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