Available online at https://journal.uny.ac.id/index.php/ijhress/index
International Journal Humanitarian Responsibilities, Education & Sport Sciences (IJHRESS)
Vol 3 (1), 2025, 5-14

PHYSICAL ACTIVITY OF ELEMENTARY SCHOOL STUDENTS IN URBAN AREAS POST COVID-19 PANDEMIC

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Abstract: The peri-urban area is an area located on the outskirts, so that students' physical activity can still be found in various places. However, the current view is different after the Covid-19 pandemic, currently students tend to do very minimal physical activity. In addition to the loss of interest in doing physical activity due to the closure of all public facilities, the impact of gadget addiction for elementary school students affects the management of students' emotional processing. This study aims to (1) examine the physical activity of elementary school students in the peri-urban area, (2) determine the physical activity of students after Covid-19 in the peri-urban area, and (3) reveal the factors that influence the physical activity of students in the peri-urban area. This study is descriptive quantitative. The population used in public elementary schools in the suburbs was 169 students. The sampling technique for this study was taken using the simple random sampling technique. The physical activity measurement instrument in this study used the Physical Activity Questionnaire–Children (PAQ-C). Data analysis used descriptive statistics expressed in the form of percentages. The results of the study showed that the physical activity of students in the peri-urban area showed that 82 students (48.52%) had good activity conditions. Meanwhile, as many as 87 students (51.47%) had poor physical activity conditions. This provides a real picture that the Covid pandemic that occurred can reduce the physical activity conditions of elementary school students. Then the physical activities that are widely carried out by students in peri-urban areas include football, walking, cycling, jogging, futsal and other physical activities. Students' physical activity after the pandemic is influenced by the Covid disaster management policy with social restrictions, changes in sedentary lifestyles during online learning activities, technological advances that cause students to prefer games that use less physical activity and the lifestyle of students' parents. The conclusion of this study is that the Covid-19 pandemic has an effect on students' physical activity which is correlated with the health conditions of students in peri-urban areas.
Keywords: Physical Activity, Students, Peri-Urban, Covid-19

INTRODUCTION

School-age children love physical activity because it allows them to play while still learning and adapting to their environment at home and at school. In the midst of a pandemic, physical activity stimulation is actually needed. Physical activity can be one of the daily health supports that can help the education process.(Komarudin et al., 2023). Creative tasks for teachers and parents at home are to vary the learning methods. When school-age children experience appetite disorders that cause the possibility of increasing or decreasing, the effects of this physical exercise become very concerning. Physical exercise is an environmental component that can drain energy. Sedentary behavior and lack of physical activity cause childhood obesity, of the eight studies six of which showed a positive relationship between physical activity and obesity.(Surudarma, 2017).

Regulation of the Minister of Health of the Republic of Indonesia No. 75 of 2013 states that children aged 7 to 12 years need a total of 1850-2100 calories per day, with moderate physical activities such as walking, exercising, and sweeping, which are usually done at school. However, due to the COVID-19 Pandemic and the closure of public places such as schools, children are not attending school so that the calorie needs with moderate activities have changed to light activities.

This results in an imbalance between calorie input and output. There is a relevant relationship between Body Mass Index (BMI) and physical activity in elementary school students(Furtun, 2022). Data from WHO (2018) shows that 71% of deaths globally are caused by lack of physical activity, including the deaths of 15 million people per year aged 30 to 70 years. (Abduh, Kamarudin, & Liloi, 2020).

In Indonesia itself, the COVID-19 case was discovered on March 2, 2019, where it was reported on May 8, 2020 that 12,776 cases were found with a total of 930 deaths. Because of incidents like this, Indonesia has taken various positive steps to suppress the spread of the virus through health education, including washing hands, wearing masks, and carrying hand sanitizers. Different prevention methods involve limiting activities outside the home, such as isolating people who have the virus, prohibiting gatherings, implementing Physical Distancing, and limiting activities in public places such as shops and schools to prevent children from going out and to stay at home with their families.(Princess, 2020). To stop the spread of COVID-19, the Indonesian government has adopted a policy that applies the principle of physical distancing to all levels of society. This policy has an impact on the world of education, especially in relation to how students learn. Physical distancing will be used at the elementary school level until the situation is deemed safe(Ananda, Fadhilaturrahmi, & Hanafi, 2021). All levels of education, from early childhood programs to high schools, must follow this regulation. This is a proactive effort that allows for the use of technology for learning, such as social media and online meeting platforms.(Suhendro, 2020).

The COVID-19 pandemic has affected people's lives around the world. The COVID-19 outbreak that has changed the social order and impacted human physical activity patterns has become an emerging problem. Driven by the era of globalization that makes everything easier, it has made school-age children have fewer opportunities to do physical activity. School-age children are more likely to enjoy activities in front of the television and their personal gadgets during a pandemic that requires activities at home. The current situation and conditions of the COVID-19 pandemic have more or less impacted people's lifestyles, especially children at school. Physical activity habits are also affected. Previously there were only a few prohibitions on going outside, but to prevent the spread of the pandemic from spreading further, various restrictive regulations have been increasingly enforced. Various efforts to control the pandemic have had a significant impact on the economic sector, daily activities, and all aspects of children's lives. These impacts can be lifelong for some children. Although the health risks from COVID-19 infection in children are lower(Wicaksono, SyamTuasikal, & Indahwati, 2021).

The use of online learning (online) is still needed for teaching and learning activities at the elementary school level due to the emergence of the COVID-19 pandemic disaster. The growth of social interaction that is greatly needed by school-age children is hampered by the policy of social restrictions as a form of health protocol. Physical activities of practicing and playing directly cannot meet learning objectives. Due to their limited ability to carry out activities, school-age children tend to be passive in the teaching and learning process which makes them bored and tends to be boring. Social interaction in children is very useful for encouraging motoric, cognitive, psychological development, and even aspects of cultural preservation(Prayogo et al., 2022).

Johnson's research on student-athlete behavioral adaptation during the 2020 and 2021 pandemic periods using Constructivist-based Grounded Theory (CGT) showed that student-athletes' preferred adaptations to the COVID pandemic were the gradually developed ability to take responsibility for themselves, insight into the importance of deep social interactions, increased awareness of physical activity and its relationship to perceived health.(Johnson, Hertting, Ivarsson, & Lindgren, 2022). Then research from Jining Li in China with the latent profile analysis (LPA) method showed that the anxiety aspect with [odds ratio (OR) = 0.12] was associated with the overall experience of physically unfit student exercise while the level of depression (OR = 0.19) tended to be associated with psychological exhaustion. Female students (0.496) were more likely to

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experience unfit physical activity, and the COVID-19 outbreak had an effect of anxiety of (OR = 2.14) on post-COVID-19 psychological distress.(Li, Xiao, Huang, & Liu, 2023). In Indonesia, Research from Ikhwan on the influence of physical activity on nutritional status in high school students using the Global Physical Activity Questionnaire (GPAQ) method showed that 93.3% of students' physical activity levels were categorized as lacking, 6.7% of students had moderate physical activity, while 56.4% had normal nutritional status, so even though students' physical activity levels were low, students' nutritional status was generally categorized as normal.(Abduh et al., 2020). Meanwhile, Iqbal's research on children's physical activity during the New Normal period at Junior High Schools in East Semarang District showed that during the new normal period, students did more physical activities by walking, cycling and jogging. Physical activity was mostly done by exercising in the afternoon with a frequency of 2-3 times a week showing better body performance than exercising in the morning.(Maulana, Hudah, & Ratimiasih, 2021).

Different from previous studies, this study uses the Physical Activity Questionnaire–Children (PAQ-C) method, with the aim of (1) examining the physical activity of elementary school students in peri-urban areas post-covid, (2) finding out the physical activity of students post-Covid-19 in peri-urban areas, and (3) revealing factors that influence the physical activity of students in peri-urban areas. The urgency of this study aims to identify and obtain information about the physical activity of elementary school children in peri-urban areas after the Covid-19 pandemic.

METHOD

This study is a descriptive study of the level of physical activity of elementary school students in the 2024/2023 academic year in a peri-urban area. The method applied in this study is a survey method with data collection techniques using questionnaires.

The sampling technique used in this study is Probability Sampling, namely Proportional Random Sampling so that a sample of 176 students is obtained. Level of physical activity of students This research was conducted by asking respondents who were the research sample to fill out a questionnaire fromThe Physical Activity Questionnaire–Children (PAQ-C).

RESULTS

Based on the research data obtained, it is known that from 169 research respondents, seen from the aspect of gender, there are 89 male students (52.70%) and 80 female students (47.30%). Then it can be seen that the research respondents from the aspect of age show that students aged 9 years are 42 students (4.8%), aged 10 years are 74 students (43.7%), students aged 11 years are 48 students (28.4%), and students aged 12 years are 5 students (2.9%). The following is a table regarding the characteristics of elementary school students in the peri-urban area who are respondents in this study.

Table 1: Characteristics of Elementary School Age Research Subjects in Elementary Schools in the Peri-Urban Area of the Special Region of Yogyakarta Province.

Characteristics	Information	Total (n)	Percentage(%)
Age	9 years	42student	4.8%
	10 years	74student	43.7%
	11 years	48student	28.4%
	12 years	5student	2.9%
Total		**169 students**	
Physical Activity	Good category	82 students	48.52%
	Less categories	87 students	51.47%
Total		**169 students**	
Physical Activity by Gender	Male student	89 students	52.70%
	Female student	80 students	47.30%
Total		**169 students**	

Keywords: Physical Activity, Students, Peri-Urban, Covid-19

Based on the table, it can be seen that the physical activity of students in the peri-urban area shows that as many as 82 students (48.52%) have good activity conditions. Meanwhile, as many as 87 students (51.47%) have poor physical activity conditions. This is evidence that the Covid pandemic that occurred can reduce the physical activity conditions of elementary school students. Maintaining their level of physical activity during the pandemic is very important for students to maintain their immune system(Prastyo, Saichudin, & Kinanti, 2014).

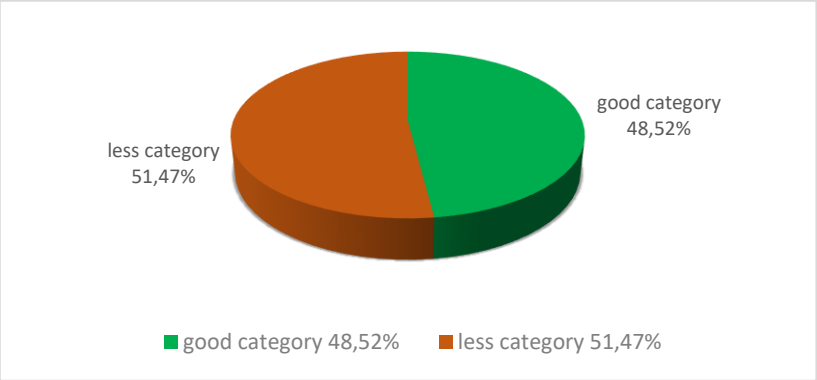

Figure 1: Percentage of Students' Physical Activity Levels

For physical activities that are widely done by students in peri-urban areas, including 52 students playing soccer, 41 students walking, 38 students cycling, 19 students jogging, 11 students playing futsal and 8 students doing other physical activities. As seen in the following picture:

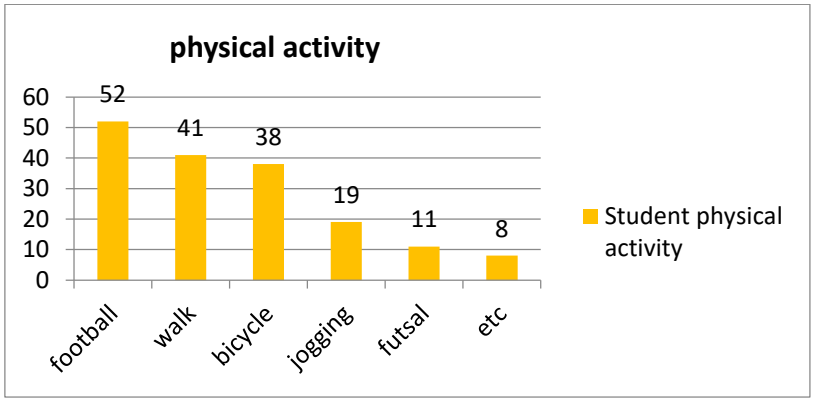

Figure 2: Students' Physical Activities in 1 Week

DISCUSSION

The never-ending endemic period, online learning must continue to be used in teaching and learning activities in elementary schools. The Covid virus can spread independently, and can attack anyone at any time. both adults, teenagers, and children. Social relationships that should be developed by school-age children are hampered by social restrictions imposed as a form of health protocol. The learning process cannot be carried out through direct practice and games. Due to their limitations in carrying out activities, school-age adolescents tend to be inactive in the teaching and learning process, feel bored and tired. Because they have to stay at home and undergo quarantine, the frequency of people's physical activity has decreased during the Covid-19 outbreak(Schnitzer, Schöttl, Kopp, & Barth, 2020). During the Covid-19 pandemic, physical activity in all countries has decreased significantly.(Xiang, Zhang, & Kuwahara, 2020).

Indonesia has implemented a number of measures to prevent and control Covid-19. However, a strong health system and public awareness are also needed to support these

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policies.(Princess, 2020). Various proactive steps taken by the Indonesian Government to reduce the transmission of the virus through health education that encourages the use of masks, the use of hand sanitizers, and hand washing movements. In addition, the policy of reducing the amount of time spent on activities outside the home is another prevention strategy. Examples include limiting children to the home and staying away from public places, such as shops and schools, limiting public spaces, and implementing Physical Distancing(Princess, 2020). The Indonesian government has set priority policies for handling the Covid-19 pandemic as an effort to protect the public from the potential threat of a Covid disaster that endangers the national economy and maintains the country's financial system, as well as protecting the public in the health sector through major social policies and public health emergencies.(Rahmanto & Surya, 2022).

Elementary school children enjoy physical activity because it allows them to play and adapt to both the classroom and outdoor environments as they learn. During the pandemic, it is especially important to increase physical activity. The average level of physical fitness of students during the Covid-19 pandemic is in the moderate category.(Ma'arif & Prasetiyo, 2021). The presence of the era of globalization that encourages ease for everyone to do activities has resulted in a decrease in physical activity carried out by school-age children. The pandemic that requires children to do activities inside the house tends to make school-age children prefer to enjoy activities in front of the television and their respective gadgets. The decrease in physical activity and the increase in passive behavior are no longer surprising considering that most schools in Indonesia are closed.(Dunton, Do, & Wang, 2020).

As the findings of this study indicate that post-COVID-19 students in suburban areas have lower levels of physical activity compared to other students, namely 82 students (48.52%). The low level of activity among these students may be due to significant changes in children's lifestyles, such as the rise of electronic games on mobile phones that replace active games such as football and the use of motorized vehicles for long-distance activities that used to be often done which required walking, running, or cycling. The Covid-19 pandemic has an impact on students related to changes in sedentary lifestyles during distance learning activities, coupled with technological advances that cause students to prefer games that require less physical activity, this needs to be a concern because it is feared that it will become a habit of students after the Covid-19 pandemic in face-to-face learning initiated by each local government(Hayati, Rizkanto, Anisa, Anwar, & Harun, 2023). This is inseparable from the connection between physical activity and sedentary behavior with children's mental health during the COVID-19 pandemic.(Bellanisa, Islami, & Garina, 2023).

These lifestyle changes will also reduce students' rest or sleep time. As a result, during the pandemic, students are more likely to play electronic devices on their phones, ignoring their sleep time. There is a reciprocal relationship between children's physical activity levels and lack of sleep. Students' sleep quality is affected by changes in physical activity during the pandemic(Tamimy, 2021). Students do additional physical activities during the new normal, such as jogging, cycling, and walking.(Maulana et al., 2021). After the Covid-19 pandemic, students who are more physically active are male and students who are more passive are female, because students are in the inactive category because they have low physical activity but high passive values.(Panthoja & Wibowo, 2022).

In addition, the impact of the Covid-19 pandemic has caused changes in teaching strategies and decreased access to school-based physical activities such as physical education, recess, and walking to and from school. On the other hand, physical education teachers face various challenges in delivering physical education learning, including difficulties in implementing the curriculum, access to equipment, and attention to personal health and well-being. The decrease in physical activity of students during the pandemic requires solutions to ensure students remain physically active during the pandemic and provide support to physical education teachers in delivering physical education learning.(Basuki, Rahman, Prakoso, & Bayu, 2021). To overcome the drastic decline in students' physical activity, promotional efforts are needed through social

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media and webinars about the importance of daily physical activity in maintaining physical fitness.(Ratnasari, 2020).

This research study shows that 89 male students (52.70%) are more active than 80 female students (47.30%). Female students tend to be more interested in science than sports, so female students are rarely seen doing physical activities. In this case, female students are less likely to be involved in physical education activities than male students and have more negative experiences with physical education.(Baena-Extremera, Gómez-López, Granero-Gallegos, & Abraldes, 2014). In suburban locations, students engage in various physical activities such as soccer, walking, cycling, running, and futsal. Students usually engage in physical activities on the streets and undeveloped land around the neighborhood where they live.

As many people know, maintaining physical fitness has many benefits, but strangely many people also want a fit condition. Even though they do not do any physical activity, strangely they still want their physical health(Setyoadi, Rini, & Novitasari, 2016). The suburban area is becoming a location that is increasingly developing to meet the activities of the local community. The area that was once rural in the Peri-urban area is experiencing rapid development as a result of the combined influence of urban activities and knowledge. Apart from the physical changes caused by the growth of land use, it can be seen in fact that the areas located in the suburbs are also experiencing social and economic changes. The economic transition can be seen from the perspective of immigrants and natives, where the natives play a role as centers of trade, commerce, and non-agrarian industry.

Overall, the findings suggest that children engaged in more sedentary activities than physical activities during the majority of their unstructured leisure time throughout the pandemic. Compared with boys and younger children, girls and older children were more likely to engage in these sedentary behaviors. This suggests that age-gender disparities may have worsened during the COVID-19 pandemic, placing girls and older children at higher risk for health problems associated with physical inactivity, such as obesity and metabolic dysregulation.(Dunton et al., 2020).

The decrease in physical activity among the public may be due to a shift in their perceptions of the products and instruments that facilitate such work.(Aprillia, 2022). Since daily habits are influenced by lifestyle, the lifestyle of students' parents can have an impact on their children's ability to exercise. Because they are leaders at home and have a close emotional bond with their children, parents play an important role in enabling their children to participate in physical activities. Given that students' physical fitness is still in moderate condition, it is expected that they will focus more and do more physical activities outside the classroom as well as in physical education, sports, and health subjects at school in order to achieve more optimal physical fitness.(Saputra, Awaluddin, Rusli, & Ismail, 2021). The importance of physical fitness to maintain health There is no doubt because physical fitness increases along with good health levels.(Ilyas & Almunawar, 2020).

Due to various evolving factors, the peri-urban area will play a significant role in the future growth of the city. This includes the physical development of buildings and traffic routes, as well as economic development and increasing physical activity among the local community, especially students. Peri-urban has developed into an important component in planning urban development initiatives.

CONCLUSION

Based on the results of the study, it can be concluded that as many as 82 students (48.52%) who are categorized as good and 87 students (51.47%) in the suburban area have poor levels of physical activity. In suburban locations, students often do soccer, walking, cycling, running, futsal, and other physical activities. Lifestyle choices made by children, technological advances, and parental involvement are other elements that influence the physical activity of students in suburban

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areas. The Covid-19 pandemic has an impact on students' physical activity which is correlated with the health conditions of students in peri-urban areas.

It is important to educate the community about the value of physical activity. In order for students to develop a healthy lifestyle, it is essential for parents to monitor their children's daily activities and ensure they get enough sleep and exercise. By making the most of classroom sports activities, educators can help children learn to regulate and increase their physical activity.

In this study, it is important for researchers to pay attention to the limitations of the study and make corrections to the use of objective measuring instruments and add more subjects so that the results of the study are better. In addition, this study can be used to design physical activities for school students that are better in terms of improving the quality of physical health that affects optimal health.

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