



Physical Activity Levels in High School Students in West Java during the Covid-19 Pandemic

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Abstract

The study aimed to obtain empirical evidence about the direct impact of the COVID-19 pandemic on the active lifestyle of high school students in West Java and the activities carried out during the Covid-19 pandemic. The study population included high school students in West Java, while the samples were chosen randomly, involving 1,715 students representing each district in West Java. The research method used was the descriptive quantitative method. The instrument used was a physical activity questionnaire for children (PAQ-C). Data analysis employed Microsoft Excel and SPSS 24. The results showed that the student's active life behavior before the Covid-19 pandemic was mostly distributed in the high (857 people, 50%) and moderate (824 people, 48%) categories. Meanwhile, during the Covid-19 pandemic, the most distribution was in a low category (847 people, 49%). The level of student active behavior before the covid-19 pandemic was in the high category, while the level of student active behavior during the covid-19 pandemic was in a low category. This data showed that the COVID-19 pandemic decreased the student's active living behavior from the moderate to the low category. Before the Covid-19 pandemic, the activities carried out were jogging, traditional sports, football, volleyball, badminton, basketball, futsal, Pencak Silat, strength training, and gymnastics. Meanwhile, the activities carried out during the pandemic included sunbathing, walking, jogging, cycling, watching more TV, playing games, sleeping, sitting around, and helping the elderly.

INTRODUCTION

In early 2020, the world was shaken by the incidence of severe infections with unknown causes, beginning with China's report to the World Health Organization (WHO) that there were 44 patients with severe pneumonia in an area, namely Wuhan City, Hubei Province, China, in the last day of 2019 Chinese year. The initial allegation was related to a wet market selling fish, marine products, and other animals. Finally, on 10 January 2020, the cause was known, and the genetic code was obtained, namely the Covid-19 virus.

The outbreak of the Covid-19 virus hitting Indonesia and the world impacted all aspects of life, including education. To break the chain of the Covid-19 spread, Indonesian government had made efforts to reduce the number. One of which was implemented in the education system in Indonesia, where students were encouraged to study at home and do their homework. Social distancing is an action where everyone is required not to be near each other by avoiding all kinds of gatherings to prevent the transmission of COVID-19 (Haqien & Rahman, 2020).

The implementation of teaching and learning activities has been carried out using an online system since March 2020 (Salehudin et al., 2021). The learning system was carried out without face-to-face interactions involving online learning facilities, such as Google Meet, Zoom, Google Classroom, Youtube, WhatsApp, Television, and other social media (Greenhow & Galvin, 2020; Jomezai et al., 2021; Salehudin et al., 2021). Likewise, Public High School students and teachers throughout West Java carried out online learning by using supporting applications, such as WhatsApp, Zoom, and Google Classroom, to make it easier to deliver assignments.

Judging from the content and subjects taught in schools during the pandemic, they can be categorized into two groups. The first group is a group of subjects dominated by theory and few practices. Meanwhile, the second group is dominated by practice with few theories. These two groups are different in the online learning application. Physical education is a scientific discipline categorized in the second category, dominated by the practice of physical activity. Meanwhile, in the current pandemic situation, students must keep their distance, wear masks, and isolate themselves at home. It will impact the student's active life behaviors, such as

playing football, basketball, futsal, badminton, running, swimming, gymnastics, and others, usually carried out on the school field.

Despite reducing infection rates, these restrictions had adverse effects by limiting participation in normal daily activities, physical activity, travel, and exercise access, such as closed gyms, no group gatherings, and social/physical distancing. On the other hand, the tasks given by the teacher to carry out Physical Education at home were not necessarily done entirely by students due to limited supervision and availability of facilities and infrastructure, as well as low motivation to carry out the tasks given by the teacher. The impact was that the implementation of Physical Education learning was less effective. In addition, it would impact decreased physical fitness, the lack of movement, and hypokinetic diseases.

The study from home policy aimed to break the chain of the coronavirus (covid-19) spread so that students could still study well. However, in fact, at school and college levels, learning from home posed various problems. One of the problems was the decline in student learning motivation (Winata, 2021; Cahyani et al., 2020; Nurfallah & Pradipta, 2021; Syachtiyani & Trisnawati, 2021). In addition, it was due to the change of habit, where students usually study directly with the teacher in the classroom to online learning.

During a pandemic outbreak, experts advise maintaining an active lifestyle or doing sports. Sport is vital for students, especially teenagers, to instill physical activity habits and active living behavior as a young generation. However, young people are often distracted by an inconducive atmosphere; thus, healthy living behavior does not seem important, especially during the current Covid-19 pandemic (Puccinelli et al., 2021; Raiola & Di Domenico, 2021; Sfindla & Hadrya, 2020).

Sedentary behavior tended to increase during the pandemic, affecting children's health (Setyoadi et al., 2016; Stevani, 2017; Salam, 2010). In addition, poor eating habits have a consequent risk of subsequent degenerative diseases, such as obesity, diabetes, cardiovascular pathology, and so on (Ardiani et al., 2021; Pamela, 2018). Therefore, data related to reports on student active lifestyle behavior is crucial for Physical Education teachers as evaluation materials and benchmarks of the learning process, especially during a pan-

demic where it is not ascertained when it will end. Therefore, this study aimed to investigate the student's active lifestyle behavior during the Covid-19 pandemic.

METHODS

The primary purpose of this study was to reveal the direct impact of the Covid-19 pandemic on the active lifestyle of high school students in West Java. This research is survey research, gaining data on the active lifestyle behavior of high school students using a questionnaire.

Participants

In this study, researchers took high school students in West Java as the population of the study. Sampling used cluster random sampling obtaining 1,715 respondents as samples. The respondents were 16-18 years old (17.1±1.2), willing to fill out the questionnaire, and in good health without any physical disabilities.

Instrument and Procedure

The physical activity questionnaire for older children (PAQ-C) was the main instrument used to collect data for this study. To obtain information about active living behavior carried out routinely, questionnaire distribution and verification employing physical activity questionnaire for older children (PAQ-C) were conducted (Kowalski et al., 2004).

An expert translator translated the physical activity questionnaire for older children (PAQ-C) at a language center in Bandung. The Indonesian-language questionnaire was then checked and validated for the readability level by several experts. The questionnaire was also adapted from previous research that had validated the previous instrument (Setiawan et al., 2020). The questionnaire was then converted into a Google Form and distributed to high school students through Physical Education teachers in each selected school, sent via email and WhatsApp media. Physical Education teachers were asked to provide instructions for filling the questionnaire so that students could fill in the questionnaire correctly. Only students willing to fill out a consent letter to be the research sample were involved as research data.

Data Analysis

The data processing and data analysis technique used descriptive statistics—measurement of physical activity employed SPSS version 20. The analysis step started from the descriptive test on each variable studied, including calculating the mean, standard deviation, and percentage.

RESULT

The physical activity questionnaire for older children (PAQ-C) recorded the respondent's physical activity in the last seven days. The data obtained from the PAQ-C questionnaire were intended to determine the student's physical activity levels. Therefore, the results of these measurements were categorized into five categories, namely: (1) very high, (2) high, (3) moderate, (4) low, and (5) very low. For more details, the data of the results of the PAQ-C questionnaire are presented in Table 1.

Table 1. Measurement of Physical Activity before the

Physical Activity Categories	Frequency	
	F	%
Very Low	0	0%
Low	28	2%
Moderate	824	48%
High	857	50%
Very High	6	0%
Total	1715	100

Table 2. Physical Activity Measurement Results during the Covid-19 Pandemic

Physical Activity Categories	Frequency	
	F	%
Very Low	167	10%
Low	847	49%
Moderate	615	36%
High	86	5%
Very High	0	0%
Total	1715	100

Based on Table 1, from 1715 students (100%), 0 student (0%) was in the very low physical activity category, 28 students (2%) were in the low category, 824

students (48%) were in the moderate category, 857 students (50%) were in the high category, and 0 student (0%) was in the very high category. It illustrated that 50% of students, before the pandemic, had high physical activity.

Based on Table 2, from 1715 students (100%), 167 students (10%) were in the very low physical activity category, 847 students (49%) were in the low category, 615 students (36%) were in the moderate category, 86 students (5%) were in the high category, and 0 student (0%) was in the very high category. It illustrated that 49% of students had low physical activity during the pandemic.

DISCUSSION

Based on the study results, the activities carried out by students were in the low category. Therefore, the results of this study are not much different from the results of other studies stating that the physical activity level during the Covid-19 pandemic is in the low category (Amini et al., 2020; Raiola & Di Domenico, 2021; Fearnbach et al., 2021). In addition, the results showed that the activities carried out by students included watching TV, playing games, sleeping, and sitting around. Hence, their physical fitness level was lower than before the Covid-19 pandemic. Therefore, teachers should design an attractive Physical Education learning; hence, student motivation and interest in learning Physical Education could increase. In addition, the teacher should also encourage students to seriously carry out the tasks given by the teacher in online learning.

Students are advised to increase physical activity by doing light physical activity for at least 30 minutes a day. They can also maintain their immunity by consuming nutritious and balanced foods, such as vitamins, fruits, vegetables, and proteins. Promotion of physical activity can be conducted through social media as the answer to the limited facilities, such as YouTube, Instagram, and media conferences, such as Zoom Meeting application. For this reason, the teacher should consider the individual learning model to be applied in the Physical Education learning process during the Covid-19 pandemic.

CONCLUSION

The data processing and analysis concluded that the physical activities carried out by high school students in West Java before the Covid-19 pandemic were jogging, traditional sports, soccer, volleyball, badminton, basketball, futsal, Pencak Silat, strength exercise, and gymnastics. Meanwhile, the activities carried out during the pandemic included sunbathing, walking, jogging, cycling, watching more TV, playing games, sleeping, sitting around, and helping the elderly. The level of students' physical activity before the pandemic was in the high and moderate category, while the level of student physical activity during the pandemic was in the low category. The data showed that students did more physical activity before the Covid-19 pandemic than during the Covid-19 pandemic.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

REFERENCES

- Amini, H., Isanejad, A., Chamani, N., Movahedi-Fard, F., Salimi, F., Moezi, M., & Habibi, S. (2020). Physical activity during COVID-19 pandemic in the Iranian population: A brief report. *Heliyon*, 6(11), e05411.
- Ardiani, H. E., Permatasari, T. A. E., & Sugiati, S. (2021). Obesitas, Pola Diet, dan Aktifitas Fisik dalam Penanganan Diabetes Melitus pada Masa Pandemi Covid-19. *Muhammadiyah Journal of Nutrition and Food Science (MJNF)*, 2(1), 1-12.
- Cahyani, A., Listiana, I. D., & Larasati, S. P. D. (2020). Motivasi belajar siswa SMA pada pembelajaran daring di masa pandemi covid-19. *IQ (Ilmu Al-qur'an): Jurnal Pendidikan Islam*, 3(01), 123-140.
- Fearnbach, S. N., Flanagan, E. W., Höchsmann, C., Beyl, R. A., Altazan, A. D., Martin, C. K., & Redman, L. M. (2021). Factors Protecting against a Decline in Physical Activity during the COVID-19 Pandemic. *Medicine and Science in Sports and Exercise*.
- Greenhow, C., & Galvin, S. (2020). Teaching with social media: Evidence-based strategies for making remote higher education less remote. *Information and Learning Sciences*.
- Jogezai, N. A., Baloch, F. A., Jaffar, M., Shah, T., Khilji, G. K., & Bashir, S. (2021). Teachers' attitudes towards social media (SM) use in online learning amid the COVID-19 pandemic: the effects of

- SM use by teachers and religious scholars during physical distancing. *Heliyon*, 7(4), e06781.
- Kowalski, K. C., Crocker, P. R., & Donen, R. M. (2004). The physical activity questionnaire for older children (PAQ-C) and adolescents (PAQ-A) manual. College of Kinesiology, University of Saskatchewan, 87(1), 1-38.
- Nurfallah, M., & Pradipta, T. R. (2021). Motivasi belajar matematika siswa sekolah menengah selama pembelajaran daring di masa pandemi covid-19. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 5(3), 2425-2437.
- Pamelia, I. (2018). Perilaku konsumsi makanan cepat saji pada remaja dan dampaknya bagi kesehatan. *IKESMA*, 14(2), 144-153.
- Puccinelli, P. J., da Costa, T. S., Seffrin, A., de Lira, C. A. B., Vancini, R. L., Nikolaidis, P. T., ... & Andrade, M. S. (2021). Reduced level of physical activity during COVID-19 pandemic is associated with depression and anxiety levels: an internet-based survey. *BMC Public Health*, 21(1), 1-11.
- Raiola, G., & Di Domenico, F. (2021). Physical and sports activity during the COVID-19 pandemic. *Journal of Physical Education and Sport*, 21, 477-482.
- Setyoadi, S., Rini, I. S., & Novitasari, T. (2016). Hubungan Penggunaan Waktu Perilaku Kurang Gerak (Sedentary Behaviour) dengan Obesitas pada Anak Usia 9-11 Tahun di SD Negeri Beji 02 Kabupaten Tulungagung. *Jurnal Ilmu Keperawatan: Journal of Nursing Science*, 3(2), 155-167.
- Sfendla, A., & Hadrya, F. (2020). Factors associated with psychological distress and physical activity during the COVID-19 pandemic. *Health security*, 18(6), 444-453.
- Stevani, E. (2017). Hubungan Sedentary Behavior (Perilaku Kurang Gerak) Dengan Kejadian Obesitas Pada Anak Usia Sekolah Di Sd Negeri 30 Kubu Dalam Padang 2017 (Doctoral dissertation, Universitas Andalas).
- Syachtiyani, W. R., & Trisnawati, N. (2021). Analisis motivasi belajar dan hasil belajar siswa di masa pandemi covid-19. *Prima Magistra: Jurnal Ilmiah Kependidikan*, 2(1), 90-101.
- Haqien, D., & Rahman, AA (2020). Pemanfaatan Zoom Meeting untuk Proses Pembelajaran Masa Pandemi Covid-19. *SAP (Susunan Artikel Pendidikan)*, 5(1). <https://doi.org/10.30998/sap.v5i1.6511>
- Raiola, G., & Di Domenico, F. (2021). Physical and sports activity during the COVID-19 pandemic. *Journal of Physical Education and Sport*, 21, 477-482.
- Salam, A. (2010). Faktor risiko kejadian obesitas pada remaja. Hasanuddin University.
- Salehudin, M., Arifin, A., & Napitupulu, D. (2021). Extending Indonesia Government Policy for E-Learning and Social Media Usage. *Pegem Journal of Education and Instruction*, 11(2), 14-26.
- Setiawan, E., Budiarto, B., & Afriyandi, A. R. (2020). KORELASI ANTARA PHYSICAL ACTIVITY DAN PHYSICAL FITNESS PADA ATLET BOLA BASKET LEVEL PEMULA. *Jurnal Pendidikan Olah Raga*, 9(2), 192-201.
- Winata, I. K. (2021). Konsentrasi dan Motivasi Belajar Siswa terhadap Pembelajaran Online Selama Masa Pandemi Covid-19. *Jurnal Komunikasi Pendidikan*, 5(1), 13.