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The Effect of Exercise Intensity and Healthy Lifestyle on Students' Physical Fitness Levels

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Abstract: The Effect of Exercise Intensity and a Healthy Lifestyle on Physical Fitness Levels is a scientific article aimed at analyzing whether exercise intensity and a healthy lifestyle influence physical fitness levels. This research method uses a literature review method. This method aims to examine, analyze, and synthesize various previous research results. The results of this article are: 1) Exercise intensity influences physical fitness levels, 2) Healthy lifestyle influences physical fitness levels. In addition to these two exogenous variables that influence endogenous variables, physical fitness levels are still many other factors, including motivation, peer support, and physical activity.

Keywords: Exercise Intensity, Healthy Lifestyle, Physical Fitness Levels.

INTRODUCTION

Physical fitness is a crucial aspect in supporting students' health and ability to carry out daily activities. A fit body allows students to perform various activities, both learning and physical, optimally without experiencing excessive fatigue. In the context of physical education, physical fitness is not only related to physical ability but also part of efforts to develop healthy lifestyle habits in students. Physical education, sports, and health play a role in encouraging physical development, motor skills, and the instilling of healthy lifestyle habits in students (Rizqi, 2016). Rizqi's (2016) research on the physical fitness levels of students at Pamekasan State Senior High School 3 showed that the majority of students were in the low physical fitness category. This situation indicates that students' physical fitness remains an aspect that requires attention in the implementation of physical education.

Students' physical fitness levels can be influenced by various factors, one of which is regular physical activity. Physical activity involves bodily movement and requires energy, while exercise is a form of physical activity carried out in a planned and structured manner to improve specific physical abilities. In practice, exercise intensity is a crucial component to consider because it reflects the level of stress or effort exerted during training. Exercise at an appropriate intensity can stimulate the body to adapt and improve physical abilities. Conversely, physical activity that is too low and does not provide adequate stimulation can

lead to suboptimal physical fitness development. Research by Rahayu, Dirgantoro, and Rahmadi (2022) on physical fitness based on exercise intensity in students at SMP Negeri 7 Banjarmasin showed that the students' physical fitness levels were in the poor category, and the physical education (PJOK) learning activities they participated in tended to be light or not tiring. These results suggest that the intensity of students' physical activity needs to be considered in efforts to improve their physical fitness.

These findings regarding exercise intensity were also evident in research by Hafidzah, Irianto, and Dirgantoro (2021) on students at SMP Negeri 2 Kandangan. This study analyzed physical fitness levels based on exercise intensity in students aged 13–15 and found that the students' physical fitness levels were in the poor category. These results indicate that the intensity of students' physical activity is an important aspect to consider in developing physical fitness. In addition to exercise intensity, physical activity in general is also related to physical fitness levels. Huwaida, Anggraini, and Firdawati (2021) explain that physical activity is a factor related to students' physical fitness. Lack of physical activity in children can impact their fitness and health.

In addition to exercise intensity, a healthy lifestyle is another factor that is inseparable from students' physical fitness. A healthy lifestyle includes habits that support health maintenance, such as regular physical activity, consuming a nutritious and balanced diet, maintaining rest periods, and adopting health-promoting habits. These habits can impact students' physical condition because the body requires adequate energy intake and recovery time to perform activities optimally. Islamiati, Indrayogi, and Budiman (2021) found a relationship between the implementation of a healthy lifestyle and the physical fitness of school-age children. The results of this study showed a correlation coefficient of 0.594 and a contribution of 35.25%, indicating that the implementation of a healthy lifestyle is related to the physical fitness of school-age children.

The relationship between a healthy lifestyle and physical fitness is also demonstrated in a study by Mulyaningsih et al. (2024), which examined physical activity and a healthy lifestyle with the physical fitness levels of extracurricular sports participants at SMP Negeri 2 Mlati. The study specifically examined the relationship between physical activity and a healthy lifestyle and the physical fitness levels of students participating in sports activities. This suggests that physical fitness is not solely related to the sports activities undertaken during Physical Education (PJOK) lessons, but also to the physical activity habits and lifestyles students adopt in their daily lives.

However, research on the relationship between a healthy lifestyle and physical fitness does not always yield consistent results. Hidayatulloh and Hartoto (2022) conducted a study of 105 students at SMAN 1 Kebomas Gresik and found no significant relationship between a healthy lifestyle and physical fitness. The correlation value obtained was 0.051 with a significance level of 0.605. These results indicate that a healthy lifestyle is not always directly related to physical fitness levels and that other factors may contribute. The differences in these research findings are interesting to study further because they indicate that the relationship between a healthy lifestyle and physical fitness can vary based on student characteristics, physical activity levels, environment, and established habits.

Other factors related to physical fitness are nutritional status and energy adequacy. Sari (2018) explains that students' physical fitness is related to the balance between nutritional status, energy adequacy, and physical activity. Students' busy routines can limit time for sports activities, while energy needs must still be met to support daily activities. Therefore, physical fitness cannot be measured solely by sports activities; students' overall lifestyles must also be considered. These findings reinforce the view that exercise intensity and a healthy lifestyle are among various factors that can contribute to students' physical fitness levels.

Based on various previous studies, it is clear that exercise intensity and a healthy lifestyle play a crucial role in developing students' physical fitness, although research findings regarding the relationship between these factors still show differences. Exercise intensity relates to the physical stimulus the body receives through sports activities, while a healthy lifestyle relates to daily habits that support health and recovery. Therefore, both aspects are important to consider simultaneously in understanding students' physical fitness.

Based on this description, this study aims to analyze the influence of exercise intensity and a healthy lifestyle on students' physical fitness levels through a review of previous research. This study is expected to provide a more comprehensive picture of the factors related to students' physical fitness and serve as a consideration in developing physical education lessons that encourage regular physical activity and the adoption of a healthy lifestyle.

This study aims to explain the experiences and meanings given to the influence of exercise intensity and a healthy lifestyle on physical fitness levels. Based on the references to the problems described previously, the research questions are as follows:

1. Does exercise intensity affect physical fitness levels?
2. Does a healthy lifestyle affect physical fitness levels?

METHOD

This study used a literature review method with a qualitative descriptive approach. This method was used to identify, review, and analyze the results of previous research related to exercise intensity, healthy lifestyles, and students' physical fitness levels.

RESULTS AND DISCUSSION

Results

The results of this article based on the background of the problem, objectives, and methods are as follows:

Physical Fitness Levels

Physical fitness is a crucial aspect in supporting students' ability to perform various daily activities. (Huda, 2016) explains that physical fitness is a physical condition that allows a person to perform physical activities requiring strength, endurance, and flexibility, while still having the energy to continue other activities without experiencing significant fatigue. In the context of students, physical fitness is crucial because they engage in various activities, both in the learning process and outside of school. A good level of fitness can help students carry out their activities optimally and with enthusiasm.

(Abidin, 2017) explains that physical fitness is a person's ability to perform daily activities optimally without experiencing excessive fatigue and still having the energy reserves to continue subsequent activities. In a study of students participating in extracurricular futsal, physical fitness was a crucial aspect because the sport requires physical abilities such as speed, endurance, and agility. Therefore, the level of physical fitness can reflect the extent to which a student's physical ability to cope with the demands of daily activities.

According to research (Aulia & Ahmad, 2018), physical fitness is a person's ability to perform daily activities optimally without experiencing significant fatigue and still having energy reserves for subsequent activities. This definition demonstrates that physical fitness is not only related to the ability to exercise but also relates to the body's ability to carry out daily activities effectively. For students, good physical fitness can support their involvement in learning and other physical activities.

Furthermore, (Wahana & Rochmania, 2018) explains that physical fitness is a person's ability to carry out daily activities without experiencing significant fatigue and still having energy remaining for other activities. The study found a significant relationship between clean

and healthy living behaviors and the physical fitness levels of tenth-grade students. This indicates that students' physical fitness levels are not only related to sports activities but can also be influenced by the habits they adopt in their daily lives.

Physical fitness level has been widely studied by previous researchers, including: (Wiranantika et al., 2017), (Erliana, 2019), (Nursena, 2019), (Wanjaya, 2019), (Arifandy et al., 2021), (Putra & Rosyida, 2021), (Hafidzah et al., 2022), (Rahayu et al., 2023), (Milliandika et al., 2023), (Mulyaningsih et al., 2024).

Exercise Intensity

Exercise intensity is a key component of exercise, indicating the level of physical exertion a person experiences. Intensity describes the amount of effort the body expends during an activity or exercise. According to (Rahayu et al., 2023), exercise intensity relates to the level of exertion of a physical activity performed continuously. Intensity can be measured by the magnitude of the activity load, the speed of movement, and the level of fatigue experienced during exercise.

(Hafidzah et al., 2022) defines exercise intensity as a component of physical activity that describes the level of stress placed on the body during exercise. Intensity is a crucial aspect to consider when determining exercise load, as each individual has different physical abilities. Therefore, exercise intensity needs to be tailored to a person's physical condition and abilities to ensure optimal benefits.

Meanwhile, (Milliandika et al., 2023) considers intensity as one of the components of the FITT (Frequency, Intensity, Time, Type) principle. In this principle, intensity indicates the intensity of an activity or exercise. Intensity does not stand alone, but is related to the frequency, duration, and type of exercise in determining the overall load of a training program. Therefore, intensity is a crucial element in developing a planned physical activity program.

(Harahap & Jayadi, 2019) defines exercise intensity as the amount of work performed in a given unit of time. The greater the amount of work performed in a given time, the higher the training intensity. This definition demonstrates that intensity is not only determined by the severity of a movement, but also by the relationship between the load or amount of work and the time required to complete it.

(Purnomo et al., 2020) explain that exercise intensity can be distinguished by levels: low, medium, and high intensity. These different levels of intensity result in different bodily responses to exercise. Therefore, intensity is a measure that can be used to describe the extent of physical demands placed on the body during exercise.

Exercise intensity has been widely studied by previous researchers, including: (Hafidzah et al., 2022), (Rahayu et al., 2023), (Milliandika et al., 2023), (Purnomo et al., 2020), (Harahap & Jayadi, 2019), (Kusnanik et al., 2017), (Sukadiyanto & Muluk, 2016), (Bompa & Buzzichelli, 2019), (Mulyaningsih et al., 2024), (Hidayat, 2017), (Erliana, 2019), (Wanjaya, 2019)

Healthy Lifestyle

A healthy lifestyle is a series of habits or behaviors that a person consciously and regularly engages in to maintain, preserve, and improve their health. A healthy lifestyle encompasses not only exercise but also diet, rest periods, personal and environmental hygiene, and daily habits that support health. According to (Suharjana, 2016), a healthy lifestyle is a behavior that a person engages in to maintain and improve health by regulating various habits in daily life, including physical activity, diet, rest, and health maintenance.

According to (Prasetyo, 2017), a healthy lifestyle can be understood as a person's efforts to regulate and implement lifestyle habits that can benefit physical health and overall body condition. Implementing a healthy lifestyle is done through regular and sustainable behaviors

that help the body maintain optimal condition. A healthy lifestyle also requires individual awareness, as its success is greatly influenced by a person's consistency in implementing healthy habits in daily life. Furthermore, (Kurniawan & Prasetyo, 2018) explain that a healthy lifestyle is a behavior that reflects a person's efforts to maintain health through sufficient physical activity, nutritious food consumption, adequate rest, and maintaining personal and environmental hygiene. This lifestyle is an important part of supporting a person's physical condition because physical health is not determined by a single activity but is the result of various habits practiced continuously.

According to (Islamiati et al., 2021), a healthy lifestyle is a habit implemented in daily life, taking into account aspects of physical activity, food consumption patterns, rest, and behaviors that can support health. Implementing a healthy lifestyle in school-age children is crucial because during this period, growth and development processes occur, requiring a healthy body and adequate energy intake. A good lifestyle can help support children's ability to carry out various daily activities.

(Hidayatulloh & Hartoto, 2022) defines a healthy lifestyle as a series of behaviors carried out by a person to maintain health through positive habits. In the context of students, a healthy lifestyle can be reflected in the habit of engaging in physical activity, consuming healthy foods and drinks, maintaining good hygiene, getting enough sleep and rest, and avoiding habits that can harm health. Therefore, a healthy lifestyle is a crucial part of supporting students' physical development and condition.

A healthy lifestyle is also closely related to physical activity and fitness. (Mulyaningsih et al., 2024) explain that a healthy lifestyle is related to a person's habits in carrying out daily activities that support health and fitness. The implementation of a healthy lifestyle in students can be realized through regular physical activity, consuming a balanced diet, adequate rest, and maintaining good health habits. Therefore, a healthy lifestyle cannot be viewed solely as exercise, but rather as a pattern of behavior that encompasses various aspects of a person's life.

Healthy Lifestyle has been widely studied by previous researchers, including: (Suharjana, 2016), (Prasetyo, 2017), (Wahana & Rochmania, 2018), (Sari, 2018), (Islamiati et al., 2021), (Hidayatulloh & Hartoto, 2022), (Mulyaningsih et al., 2024), (Huwaida et al., 2021), (Riyanto, 2020), (Oktaviani & Wibowo, 2021).

Discussion

a) Exercise intensity affects the level of physical fitness

Based on previous research, exercise intensity is a factor related to students' physical fitness levels. Exercise intensity indicates the level of physical activity a person engages in. Exercise at an appropriate intensity stimulates the body to adapt to the physical load, thereby improving its ability to perform activities. In the context of students, physical activity at an adequate intensity is crucial because physical fitness is needed to support learning, sports, and daily activities. Therefore, exercise intensity can be an important aspect to consider in efforts to improve students' physical fitness levels.

Research results (Hafidzah et al., 2022) indicate that students' physical fitness levels can be assessed by exercise intensity. The study was conducted on students aged 13–15 at SMP Negeri 2 Kandangan using the Indonesian Physical Fitness Test (TKJI) and a questionnaire. The results indicated that students' physical fitness levels were classified as low. These findings suggest that students' physical activity with inadequate exercise intensity may be associated with low physical fitness.

Similar results were found by Rahayu et al. (2023) among students at SMP Negeri 7 Banjarmasin. The study showed that the students' physical fitness levels were in the poor category, while the physical education and health activities they performed tended to be light-weight or did not cause significant fatigue. This suggests that activities with too low a load

may not provide optimal physical stimulation to improve physical fitness. Therefore, training activities need to be designed with appropriate intensity to ensure the body receives sufficient stimulation to develop its physical abilities.

These findings are supported by research by Milliandika et al. (2023), which analyzed physical fitness in terms of exercise intensity among students at SMP Negeri 19 Banjarmasin. The study used the FITT (Frequency, Intensity, Time, Type) concept to assess students' physical activity. The results showed that most students were classified as having poor or very poor physical fitness. The study also showed that students' physical activity did not fully meet the training characteristics required to support physical fitness. This suggests that exercise intensity needs to be considered, along with frequency, time, and type of activity, for optimal benefits.

The relationship between physical activity and physical fitness is also evident in research (Hidayat, 2017). The study found a significant relationship between physical activity and students' physical fitness levels, with a significance value of 0.012. These results indicate that physical activity is related to students' physical fitness. The more physically active a person is, the more likely the body is to receive stimulation to maintain and improve its physical abilities. This finding supports the view that regular exercise with appropriate load can be a crucial factor in maintaining physical fitness.

(Riyanto, 2020) explains that physical activity and physical fitness contribute to the physical education learning process. Programmed physical activity can help maintain students' fitness. This suggests that physical activity in Physical Education (PJOK) learning should not only focus on movement or games, but also consider the regularity and load of the activities given to students. With programmed activities, students have the opportunity to gradually improve their physical abilities.

Research (Zenitha, 2020) also shows a relationship between physical activity outside of PJOK class hours and students' physical fitness levels. A study of students at SMP Negeri 6 Surabaya showed a significant relationship between physical activity levels outside of physical education (PJOK) lessons and physical fitness, although the correlation was relatively low. These results indicate that students' physical fitness is not only determined by activities during PJOK lessons, but also by physical activity they do outside of school. Therefore, the more opportunities students have to engage in regular physical activity, the greater their chances of achieving better physical fitness.

When linked to training theory, intensity is important because the body requires a certain load or stimulus to adapt. Training that is too light and does not provide sufficient challenge can result in less than optimal improvements in physical ability. Conversely, regular training at an intensity appropriate to one's abilities can help the body adapt gradually. Therefore, training intensity cannot be separated from other training components, such as frequency, duration, and type. Adjusting these four components is necessary to ensure that students' physical activity provides the appropriate stimulus for physical fitness development.

However, previous research also indicates that training intensity is not the sole factor determining students' physical fitness levels. For example, research (Milliandika et al., 2023) found that despite appropriate training intensity guidelines, students' overall physical fitness results were still in the poor category. This suggests the possible influence of other factors, such as training frequency, duration of activity, type of training, healthy lifestyle, nutritional status, rest periods, and students' physical activities outside of school.

Thus, based on the synthesis of previous research, it is clear that training intensity plays a role in students' physical fitness levels, but this influence needs to be understood as part of a combination of factors. Exercise performed at an appropriate intensity, regularly, and tailored to the student's abilities can stimulate the body to improve endurance, strength, speed, and other physical abilities. Conversely, physical activity that is too light or not performed regularly can

potentially lead to less than optimal physical fitness development. Therefore, implementing appropriate exercise intensity in physical education lessons and sports activities outside of school is one way to improve students' physical fitness.

This research is in line with research conducted by: (Hafidzah et al., 2022), (Rahayu et al., 2023), (Milliandika et al., 2023), (Erliana, 2019), (Wanjaya, 2019), (Purnomo et al., 2020), (Erliana, 2019), (Wanjaya, 2019), (Purnomo et al., 2020), (Hafidzah et al., 2022), (Rahayu et al., 2023), (Milliandika et al., 2023).

b) A healthy lifestyle influences the level of physical fitness

Based on previous research, a healthy lifestyle is a factor that can play a role in determining students' physical fitness levels. A healthy lifestyle encompasses various habits practiced regularly, such as consuming nutritious and balanced meals, engaging in physical activity, maintaining personal and environmental hygiene, getting adequate rest, and avoiding habits that can harm health. These habits are linked to physical condition because the body requires adequate nutritional intake, physical activity, and recovery time to function optimally. Therefore, implementing a healthy lifestyle from school age is a crucial effort to support students' physical fitness.

Research (Islamiati et al., 2021) shows a relationship between the implementation of a healthy lifestyle and the physical fitness of school-aged children. The healthy lifestyle in this study encompasses various health-promoting behaviors, such as physical activity, dietary patterns, and health-maintaining habits. These results demonstrate that the implementation of healthy habits can be a factor supporting children's physical fitness. Students who habitually practice healthy lifestyles have a greater chance of maintaining good physical condition because their bodies are supported by various positive habits that are consistently practiced. This is also in line with research (Wahana & Rochmania, 2018) that examined the relationship between clean and healthy living behaviors and students' physical fitness levels. A healthy lifestyle can help students maintain their physical condition through habits related to hygiene, physical activity, and health maintenance. Good habits will support the body's ability to carry out daily activities. Therefore, a healthy lifestyle is not only related to disease prevention but can also be part of efforts to maintain and improve students' physical abilities.

A healthy lifestyle is also closely related to diet and meeting energy needs. Students who engage in various physical activities require adequate energy and nutrient intake to support these activities. (Sari, 2018) explains that physical fitness is related to several factors, including nutritional status, energy adequacy, and physical activity. Energy intake that is not balanced with the body's needs can affect a person's ability to perform physical activities. Therefore, implementing a balanced diet is an important part of implementing a healthy lifestyle and maintaining physical fitness.

In addition to diet, adequate rest and sleep are also part of a healthy lifestyle that can support students' physical condition. The body needs recovery time after physical activity to return to optimal performance. Irregular sleep habits or insufficient rest can make the body more susceptible to fatigue, resulting in less than optimal physical activity. Therefore, a healthy lifestyle needs to be implemented comprehensively and not solely focused on sports or physical activity.

Research (Mulyaningsih et al., 2024) also demonstrates the importance of a healthy lifestyle in relation to the physical fitness levels of students participating in extracurricular sports activities. A healthy lifestyle can be viewed as habits that support the body's readiness for physical activity. Students who actively participate in sports require good eating habits, rest, and physical activity to maintain their physical condition. Therefore, physical fitness is the result of a process that depends not only on training but is also influenced by the habits students adopt in their daily lives.

However, previous research has shown that the relationship between a healthy lifestyle and physical fitness does not always produce consistent findings. (Hidayatulloh & Hartoto, 2022) found that a healthy lifestyle had no significant relationship with students' physical fitness levels in their study. These differences in results indicate that physical fitness is a complex condition and is not solely determined by a healthy lifestyle. Other factors such as exercise intensity, frequency of physical activity, nutritional status, environmental conditions, and individual characteristics can also contribute to students' physical fitness levels.

The differences in these research findings actually highlight the importance of examining healthy lifestyles alongside other factors related to physical fitness. In this study, healthy lifestyles were examined alongside exercise intensity, as the two factors have distinct but interrelated characteristics. Exercise intensity describes the physical activity load the body experiences during exercise, while healthy lifestyles describe the habits adopted in daily life to maintain physical condition. Someone who exercises regularly but fails to maintain a healthy diet or rest schedule may experience different fitness outcomes than someone who adopts a comprehensive healthy lifestyle.

Based on the synthesis of previous research, it can be concluded that healthy lifestyles play a role in supporting students' physical fitness levels, particularly through physical activity habits, a balanced diet, adequate rest, and overall health maintenance. However, the influence of healthy lifestyles on physical fitness cannot be viewed as the sole factor, as fitness levels are also influenced by exercise intensity and frequency, the individual's physical condition, nutritional status, and environmental factors. Therefore, consistent implementation of a healthy lifestyle combined with appropriate physical activity intensity is expected to contribute optimally to improving students' physical fitness.

This research is in line with research conducted by: (Wahana & Rochmania, 2018), (Sari, 2018), (Islamiati et al., 2021), (Hidayatulloh & Hartoto, 2022), (Mulyaningsih et al., 2024), (Suharjana, 2016), (Prasetyo, 2017), (Wahana & Rochmania, 2018), (Sari, 2018), (Riyanto, 2020), (Zenitha, 2020), (Huwaida et al., 2021), (Islamiati et al., 2021), (Oktaviani & Wibowo, 2021), (Hidayatulloh & Hartoto, 2022), (Mulyaningsih et al., 2024).

CONCLUSION AND SUGGESTIONS

Conclusion

This study aims to determine whether exercise intensity and lifestyle influence physical fitness levels. Based on the article's questions, the following conclusions can be drawn from this study: 1) Exercise intensity influences physical fitness levels, 2) A healthy lifestyle influences physical fitness levels.

Suggestions

Further research is recommended to examine in more depth the influence of exercise intensity and healthy lifestyles, as well as other factors that may influence students' physical fitness levels. This way, physical activity and healthy lifestyles can be optimally implemented to support improved physical fitness.

REFERENCE

Abidin, M. F. (2017). Perbandingan tingkat kebugaran jasmani antara siswa yang mengikuti ekstrakurikuler futsal di SMAN 1 Taman Sidoarjo dengan SMA Khadijah Surabaya. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Citradewi, R. M., & Prasetyo, H. J. (2018). Pengaruh latihan senam kebugaran jasmani 2012 terhadap peningkatan kemampuan daya tahan siswa putri kelas VIII B SMP Negeri 3 Kartasura. *Smart Sport, 13*(1).

Hafidzah, R., Irianto, T., & Dirgantoro, E. W. (2022). Analisis kebugaran jasmani dari aspek intensitas latihan pada peserta didik di SMP Negeri 2 Kandangan Kabupaten Hulu Sungai Selatan. *STABILITAS: Jurnal Pendidikan Jasmani dan Olahraga, 3*(2).

Harahap, S., & Jayadi, I. (2019). Efek perendaman air dingin terhadap fleksibilitas otot hamstring setelah melakukan latihan intensitas tinggi. *Jurnal Prestasi Olahraga, 2*(3).

Hidayatulloh, M. A., & Hartoto, S. (2022). Hubungan antara pola hidup sehat dan kebugaran jasmani siswa. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Huda, M. M. (2016). Survei tingkat kebugaran jasmani siswa kelas VII, VIII dan IX SMPN 5 Sidoarjo. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Hafidzah, R., Irianto, T., & Dirgantoro, E. W. (2021). Analisis kebugaran jasmani dari aspek intensitas latihan pada peserta didik di SMP Negeri 2 Kandangan Kabupaten Hulu Sungai Selatan. *STABILITAS: Jurnal Pendidikan Jasmani dan Olahraga, 3*(2). https://doi.org/10.20527/mpj.v3i2.1539

Hidayatulloh, M. A., & Hartoto, S. (2022). Hubungan antara pola hidup sehat dan kebugaran jasmani siswa. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Huwaida, Z., Anggraini, F. T., & Firdawati. (2021). Hubungan aktivitas fisik dengan kebugaran jasmani siswa SDN 13 Sungai Pisang. *Jurnal Ilmu Kesehatan Indonesia, 2*(4). https://doi.org/10.25077/jikesi.v2i4.361

Islamiati, T. A., Indrayogi, & Budiman, I. A. (2021). Hubungan penerapan pola hidup sehat dengan kebugaran jasmani anak usia sekolah pada saat pandemi COVID-19. *Prosiding Seminar Nasional Pendidikan, 3*, 356–360.

Kurniawan, A., & Prasetyo, Y. (2018). Pola hidup sehat dan tingkat kebugaran jasmani peserta didik. *Jurnal Pendidikan Jasmani Indonesia*.

Milliandika, A., Dirgantoro, E. W., & Rakhman, A. (2023). Analisis kebugaran jasmani dari aspek intensitas latihan pada peserta didik di Sekolah Menengah Pertama Negeri 19 di Banjarmasin. *STABILITAS: Jurnal Pendidikan Jasmani dan Olahraga, 4*(2).

Mulyaningsih, F., Suryobroto, A. S., Pertiwi, N. C., & Utama, A. M. B. (2024). Hubungan antara aktivitas fisik dan pola hidup sehat dengan tingkat kebugaran jasmani peserta ekstrakurikuler olahraga di SMP Negeri 2 Mlati. *Majalah Ilmiah Olahraga, 29*(1).

Oktaviani, N. A., & Wibowo, S. (2021). Survei tingkat kebugaran jasmani siswa SMP Negeri di Madiun. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Purnomo, E., Irianto, J. P., & Mansur. (2020). Respons molekuler beta endorphin terhadap variasi intensitas latihan pada atlet sprint. *Jurnal Keolahragaan, 8*(2). https://doi.org/10.21831/jk.v8i2.33833

Rahayu, V. E., Dirgantoro, E. W., & Rahmadi. (2023). Analisis kebugaran jasmani berdasarkan aspek intensitas latihan pada peserta didik SMP Negeri 7 Banjarmasin tahun ajaran 2021/2022. *STABILITAS: Jurnal Pendidikan Jasmani dan Olahraga, 4*(2). https://doi.org/10.20527/mpj.v4i2.1942

Silviah, R. (2025). Determination Young Athletes' in Improving Perfomance: Teamwork and Training Consistency (Literature Review Sport Education). *Siber International Journal of Sport Education*, *2*(4), 145-150.

Silviah, R. (2024). The Role of Teacher Competency, Independent Curriculum, and Management Information Systems, to improve the Quality of Education. *Siber International Journal of Sport Education*, *1*(2), 44-50.

Rizqi, A. F. (2016). Profil tingkat kebugaran jasmani siswa SMA Negeri 3 Pamekasan tahun ajaran 2015/2016. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Sari. (2018). Hubungan antara status gizi, kecukupan asupan energi, dan aktivitas fisik dengan kebugaran jasmani pada siswa kelas XI SMAN 1 Batu. *Jurnal Pendidikan Olahraga dan Kesehatan*.

Suharjana. (2016). Kebiasaan berperilaku hidup sehat dan tingkat kebugaran jasmani peserta didik. *Jurnal Pendidikan Jasmani Indonesia*.

Wahana, S., & Rochmania, A. (2018). Hubungan perilaku hidup bersih dan sehat dengan tingkat kebugaran jasmani siswa kelas X di SMAN 2 Lamongan. *Jurnal Prestasi Olahraga, 1*(3).