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Holistic Awareness: Understanding the Relationship Between Sport Activity and Body Physiology in Improving Health and Fitness

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Abstract

This article aims to present a holistic approach in understanding the relationship between exercise activity and body physiology in improving health and fitness. In this modern era, awareness of the importance of health and fitness is increasing, but a comprehensive understanding of this relationship is still needed. Through an in-depth literature review, this article reveals the complexity of the interaction between exercise activities and the changes in body physiology that occur. This research uses a qualitative descriptive research model that is a literature study that uses various literature reviews in strengthening research analysis. This research began by collecting some literature, then conducted a review and the collected literature was analyzed with a critical appraisal table of 10 literature. The main contribution of this article is the emphasis on a holistic approach that incorporates different aspects in understanding this relationship as a whole. This article also provides a sharp and powerful evaluation of the role of sports activities in improving physical health and fitness. Through a deeper understanding of the positive impact of exercise activities on various aspects of body physiology, this article provides a robust guide for individuals to integrate exercise activities into their lifestyles to achieve optimal health and fitness.

Keywords: Holistic awareness, sports activity, body physiology, health, fitness

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INTRODUCTION

In this modern era, awareness of the importance of health and fitness is increasing amid lifestyles that are often unhealthy. Sports activity has been recognized as one of the key factors in achieving optimal physical fitness. However, the relationship between sports activity and complex body physiology is an important aspect that must be well understood(Riddell et al., 2017; Seymour, 2016). In this context, a holistic approach that involves a comprehensive understanding of the interrelationships between various physiological aspects of the body and sports activities can provide valuable insights.(Fullagar et al., 2015; Mikkelsen et al., 2017).

Basically, sports activities affect various physiological systems in the body, including the cardiovascular, respiratory, and metabolic systems(Biddle & Batterham, 2015; Ferrucci et al., 2016). When a person engages in sports regularly, significant changes occur in the organs, tissues and cells in the body. For example, aerobic

exercise increases lung capacity and better oxygen circulation, while strength training can strengthen muscles and increase bone density. In-depth knowledge of the interaction between exercise activity and body physiology can provide a better understanding of the processes involved in improving overall health and fitness(Browall et al., 2018; Izquierdo et al., 2021).

Sports activity has long been recognized as an important factor in maintaining and improving physical health. Many studies have revealed its benefits, including increased muscle strength, better cardiorespiratory capacity, and reduced risk of chronic diseases such as heart disease, diabetes, and obesity. However, the understanding of the relationship between sports activity and changes in the physiology of the body as a whole still needs to be deepened(Luan et al., 2019; Périard et al., 2015).

The importance of a holistic approach in understanding the relationship between exercise activity and body physiology is becoming increasingly clear. Sports activities not only affect the physiological aspects of the body, but can also have significant psychological and social effects(Hegberg & Tone, 2015; Lox et al., 2016). Factors such as motivation, feelings of happiness, stress, and social interaction can influence how the body responds to sports activities and their impact on physical health and fitness.(Fragala et al., 2019; Tremblay et al., 2017).

Neurobiological studies are also providing a deeper understanding of the impact of exercise on the brain and cognitive function(Barnes, 2015; Bergeron et al., 2015). Regular physical activity has been shown to stimulate brain growth factor production and improve synaptic connections, which contribute to improved memory, concentration and other cognitive functions.(Bariya et al., 2018; Cheval & Boisgontier, 2021).

In the field of cardiology, recent studies have shown that sports activities can increase cardiorespiratory capacity and heart muscle strength. Regular aerobic exercise can increase the efficiency of the cardiovascular system in pumping blood, increasing oxygen flow, and strengthening the heart muscle(Hulme & Finch, 2015; Raichlen & Alexander, 2017). This research provides a better understanding of how exercise contributes to overall cardiovascular health(Mohr et al., 2020; Narici et al., 2021).

An understanding of the relationship between sporting activity and body physiology is also important in the context of disease prevention and management. Sports activity can affect a variety of physiological parameters, including increased bone density, weight management, increased basal metabolism, and reduced risk of osteoporosis(Idorn & Hojman, 2016; Peçanha et al., 2020). With a deeper understanding of this relationship, more effective approaches can be developed in the prevention and treatment of various diseases through sports activities(Lloyd et al., 2016, 2016).

In addition, a holistic approach in understanding the relationship between sports activity and body physiology also includes psychological and social aspects. Sports activities not only have an impact on the physical aspect, but also affect mental well-being, stress, and social interaction. Through in-depth research and literature review, we can find evidence that exercise activity can improve mood, reduce anxiety levels, and improve sleep quality.(Monda et al., 2017; Myers et al.,

2015). With a holistic understanding of these relationships, we can understand how important it is to integrate sports activities into everyday life to improve overall health.(Leal et al., 2018; Shanahan et al., 2016).

In this context, this article will conduct an in-depth review of the existing literature to reveal the complex relationship between sports activity and changes in body physiology. Utilizing a holistic approach, this article will highlight the importance of a comprehensive understanding of physiological aspects in improving overall health and wellness(MacLean et al., 2015; Woods et al., 2020). It is hoped that this article will provide valuable insights for readers to recognize and apply the importance of sports activities in achieving a healthy and active life(Fiuza-Luces et al., 2018; Mamurov et al., 2020).

In research regarding the relationship between exercise activity and body physiology to improve health and fitness, several recent studies have revealed interesting findings. Neurobiological research has highlighted the role of physical activity in stimulating the production of neurotrophic and brain growth factors that can improve cognitive function and protect the brain from neurodegenerative diseases. In cardiology, recent research has shown that regular aerobic exercise can increase cardiorespiratory capacity, strengthen the heart muscle and reduce the risk of cardiovascular disease. In addition, studies have also shown that strength training can increase bone density, muscle strength, and basal metabolism, which are important in osteoporosis prevention and weight management.(Ehrman et al., 2022; Jung et al., 2015). In this regard, understanding the latest advances in research will help strengthen the scientific foundation for understanding the relationship between exercise activity and body physiology, as well as highlighting the important implications for improving health and wellness holistically.(Chennaoui et al., 2015; Myer et al., 2016).

The novelty of this article lies in the holistic approach taken in understanding the relationship between sports activity and body physiology in improving health and fitness. This article does not only examine the physiological aspects in isolation, but also takes into account the psychological and social factors involved in this process. By combining these various elements, this article makes an important contribution to understanding the complex relationship between sports activity and overall body physiology. In addition, this article aims to provide a very sharp and powerful evaluation of the role of sports activities in improving physical health and fitness(Cairney et al., 2019; Gidlow et al., 2016). Through a detailed analysis of the current literature, this article will provide a deeper understanding of the positive impact of exercise on various aspects of body physiology, thereby providing a powerful guide for individuals to integrate exercise into their lifestyle to improve overall health.

METHODS

This study uses a qualitative descriptive research model which is a literature study that uses various literature reviews to strengthen research analysis. This research begins by collecting some literature, then conducting a review of some important terms in research, then collecting relevant research results literature,

then conducting an analysis based on all the literature that has been obtained by compiling discussions, then drawing conclusions based on the results that have been analyzed and submitting suggestions based on the conclusions reached.

The data used in this study is using secondary data.(Sugiyono, 2015)states that secondary data is data taken indirectly which can provide information to data collectors. The source of the data obtained is in the form of original scientific reports derived from published scientific articles and accredited and indexed journals, both printed and non-printed which are interrelated in the model of implementing blended learning in physical education and sports.

The data collection method used in this study is the documentation method. The documentation method is a method of collecting data by digging and searching for data from the literature related to what is in the problem formulation. The data that has been obtained from various literature is then collected as a single document that will be used in answering the problems that have been formulated.

The technique of searching for articles in this study is through web access Mendeley, Google Scholar, and Science Direct as well as access to search for other journals with the keywords learning model, blended learning, and sports health physical education. Articles or journals that meet the criteria are then taken for further analysis and a summary of the journal is made including the name of the researcher, year of publication of the journal, study design, research objectives, samples, instruments, and a summary of results or findings. The summary of the research journal is entered into the table sorted alphabetically and the year of publication of the journal and according to the format mentioned above. This literature review uses literature that can be accessed in full text in pdf format and scholarly (peer reviewed journal). To further clarify the abstract and full test journals read and scrutinized. The summary of the journal is carried out by analyzing the contents contained in the research objectives and research results/findings. The analytical method used is journal content analysis.

RESULTS & DISCUSSION

Results

This literature review was conducted to find out Holistic Awareness: Understanding the Relationship Between Sports Activity and Body Physiology in Improving Health and Fitness. The collected literature is analyzed with critical appraisal tables to answer the measurement objectives compared to simple measurement results. There are as many as 10 pieces of literature that discuss Holistic Awareness: Understanding the Relationship Between Sports Activity and Body Physiology in Improving Health and Fitness, all of these journals are nationally accredited journals and journals that are international in form. com by typing the keywords "Holistic awareness, sports activity, body physiology, health, fitness" which is then analyzed using critical apparition analysis to analyze the core of the journal, as well as the results or findings from these journals. The following is a table of critical appartial analysis of 10 journals:

NO.	Researcher	Article Title	Research result

1	(Prontenko et al., 2019)	Interrelation of students' motivation for physical education and their physical fitness level	To investigate the initial level of physical fitness, the level of the main physical quality development was examined among 437 students of the 1st year of study (231 men and 206 women) during 5 years (2013–2017). 73 students (38 men and 35 women) took part in the research of the level and dynamics of physical fitness of the future doctors during the studying.
2	(Gäbler et al., 2018)	The Effects of Concurrent Strength and Endurance Training on Physical Fitness and Athletic Performance in Youth: A Systematic Review and Meta-Analysis	In conclusion, CT is more effective than single-mode ET or ST in improving selected measures of physical fitness and athletic performance in youth. Specifically, CT compared with ET improved athletic performance in children and particularly adolescents. Finally, CT was more effective than ST in improving muscle power in youth.
3	(Bhattacharya et al., 2015)	Exercise but not (−)-epigallocatechin-3-gallate or β-alanine enhances physical fitness, brain plasticity, and behavioral performance in mice	The diets had no effect on their own or in combination with exercise on any of the fitness, plasticity, and behavioral outcome measures other than B-ALA decreased percent body fat while EGCG increased lean body mass slightly. The results suggest that, in young adult BALB/cJ mice, a 39 day treatment of exercise but not dietary supplementation with B-ALA or EGCG enhances measures of fitness, neuroplasticity and cognition.
4	(D. Utami, 2015)	The Role of Physiology in Improving Indonesian Sports Achievement Towards the Sea Games	More broadly true in improving achievement and not just one side. Although many facets that contribute to the achievement. It turns out one of the great scientific discipline contributions to the sport is a physiological role in supporting the improvement of achievement.
5	(Ahmed, 2021)	Correlation of Levels of Physical Freshness and Interest in Learning with	This study examines the level of Physical Freshness, Interest in Learning and the Results of the Physical Education Practice Exam Evaluation are closely related to the

		Evaluation Results of Class IX Physical Education Practices at SMP Negeri 3 Galesong Utara Takalar	following results: 1) The level of physical fitness has a significant correlation with the results of the evaluation of the Physical Education practice exams for grade IX SMP Negeri 3 Galesong Utara Takalar obtained a correlation value (r) of 0.831 with a probability level (0.000) < 0.05; 2) Interest in learning has a significant correlation with the results of the evaluation of the Physical Education practice exam for class IX, SMP Negeri 3 Galesong Utara Takalar, the correlation value (r) is 0.701 with a probability level (0.000) <0.05;; and 3) The level of physical fitness and interest in learning has a significant correlation with the results of the evaluation of the physical education practice exams for class IX at SMP Negeri 3 Galesong Utara Takalar. The regression value (R) is 0.839 with a probability level (0.000) < 0.
6	(Prasetyo & Winarno, 2019)	The Relationship between Nutritional Status and Physical Activity with the Level of Physical Fitness in Junior High School Students	This research examines: (1) nutritional status with a physical fitness level rcount (0.208) ≤ rtable (0.266), (2) physical activity with a physical fitness level rcount (0.747) > rtable (0.266) and (3) nutritional status and physical activity with the level of physical fitness Rcount (0.762) > Rtable (0.266). Conclusion: (1) nutritional status has an insignificant relationship with the level of physical fitness, (2) physical activity has a significant relationship with the level of physical fitness and (3) together nutritional status and physical activity have a significant relationship with the level of fitness physical.
7	(Soraya et al., 2019)	The Influence of the 2018 Skj Training on Increasing the Physical Fitness of Female Physical	This research examines based on the results of hypothesis testing that has been done previously stating that there is a significant effect between the 2018 SKJ training on increasing the physical fitness of female physical

		Education Students of Unib	education students at UNIB.
8	(Tremblay et al., 2016)	Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behavior, and Sleep	A stakeholder survey was employed (n = 590) and 28 focus groups/stakeholder interviews (n = 104) were completed to gather feedback on draft guidelines. Following an introductory preamble, the guidelines provide evidence-informed recommendations for a healthy day (24 h), consisting of a combination of sleep, sedentary behaviors, light-, moderate-, and vigorous-intensity physical activity. Proactive dissemination, promotion, implementation, and evaluation of plans have been prepared in an effort to optimize uptake and activation of the new guidelines. Future research should consider integrated relationships among movement behaviors, and similar integrated guidelines for other age groups should be developed.
9	(Poitras et al., 2016)	Systematic review of the relationships between objectively measured physical activity and health indicators in school-aged children and youth	These findings continue to support the importance of at least 60 min/day of MVPA for disease prevention and health promotion in children and youth, but also highlight the potential benefits of LPA and total PA. All intensities of PA should be considered in future work aimed at better elucidating the health benefits of PA in children and youth.
10	(Carson et al., 2016)	Systematic review of physical activity and cognitive development in early childhood	This review provides some preliminary evidence that physical activity may have beneficial effects on cognitive development during early childhood. Given the shortage of information and the weak quality of available evidence, future research is needed to strengthen the evidence base in this area.

Discussion

From the results of a literature study of 10 previously reviewed articles, an in-depth analysis of the relationship between sports activity and body physiology presented in this article provides a more holistic understanding of how the human body responds to physical activity.(Berg et al., 2015; Stork et al., 2017)In a holistic approach, it is important to consider not only the physiological aspects of the body, but also the psychological and social factors that affect health and wellness. As such, this article provides a solid foundation for integrating these various factors into planning an effective fitness program(Kenney et al., 2021; Wright et al., 2017).

Through a careful literature review, this article presents scientific evidence supporting the benefits of sports activity in improving overall health and fitness(Friedmann et al., 2015; Wright et al., 2017). Findings from research in neurobiology, cardiology, and other fields show that exercise activity contributes to improved cognitive function, better cardiorespiratory capacity, increased muscle strength, and healthy weight management. By understanding this evidence, individuals can motivate themselves to actively engage in sports activities with the goal of improving physical health and fitness(Jurak et al., 2020; Neufer et al., 2015).

The sharp evaluation in this article highlights the importance of understanding the positive impact of sports activities on various aspects of body physiology(Araújo et al., 2019; Astuti et al., 2023). With a strong emphasis on the role of sporting activity in promoting health and wellness holistically, this article provides clear guidance for individuals to recognize and apply the importance of sporting activity to their daily lives. In order to achieve optimal results, it is important for individuals to adopt a holistic and sustainable approach to sports activities, taking into account the psychological and social factors that affect overall health.(Mahanggoro, 2018; Ridwan & Astuti, 2021).

This article also makes an important contribution in strengthening the scientific foundation in understanding the relationship between sports activity and body physiology. By conducting an in-depth literature review, this article identifies remaining knowledge gaps in this field and reveals a need for further research(Mardani, 2020; RJ Utami et al., 2021). A deeper understanding of the complexity of this relationship can provide a stronger foundation for the development of effective fitness programs, as well as encourage further research to understand the effects of exercise on the human body as a whole.(Hidayat, 2022; Sari, 2016).

The importance of a holistic approach in understanding the relationship between sports activity and body physiology in improving health and fitness is the main focus of this article. In this context, it is important to take into account psychological and social factors that can affect the body's response to sports activities(Ayu, 2022; Setiyorini et al., 2018). By considering these aspects, individuals can develop a healthy mindset and recognize that physical fitness is not only limited to physiological changes, but also involves emotional and social aspects.(Ardiyanto & Mustafa, 2021; Sumarwati et al., 2022).

The literature review conducted in this article provides a deeper understanding of the benefits of sports activities on health and physical fitness. Neurobiology research findings show that physical activity can stimulate brain growth factor production and increase synaptic connections, which contribute to

improved cognitive function(Rismayanthi & Jaya, 2018; Sunarmo et al., 2021). Cardiology research reveals that exercise activity can increase cardiorespiratory capacity, strengthen the heart muscle, and reduce the risk of cardiovascular disease. With this understanding, individuals can be more motivated to adopt an active lifestyle and engage in regular sporting activities(Ekasari et al., 2019; Lengkana & Muhtar, 2021).

The sharp evaluation in this article highlights the importance of sports activities in improving health and physical fitness holistically(Rismayanthi, 2021). Sports activity not only provides physical benefits such as increased muscle strength and bone density, but also contributes to psychological well-being by elevating mood, reducing stress and increasing feelings of happiness. In addition, sports activities can also improve social interaction through participation in sports groups or joint physical activities. By understanding this positive effect, individuals can view sports activities as a whole in improving their quality of life(Gathercole et al., 2015; Lee et al., 2017).

In the context of developing effective fitness programs, a holistic approach in understanding the relationship between exercise activity and body physiology is very relevant. In planning a fitness program, it is important to consider individual goals, preferences, initial level of fitness, and psychological and social factors that may influence their involvement in sports activities.(Hwang & Braun, 2015; Jurbala, 2015). By adopting a holistic approach, fitness programs can be more effective in improving overall health and wellness and providing a more meaningful experience for the individual(Fong Yan et al., 2018; Lacy & Williams, 2018).

Although this article provides a deeper understanding of the relationship between exercise activity and body physiology in improving health and fitness, there are still knowledge gaps that need to be closed through further research.(Jordanova, 2017; Volek et al., 2015). For example, further research could explore the effects of exercise on more specific aspects of the body's physiology, such as the hormonal system, the immune system, or deeper neurological aspects. In addition, research can consider the role of environmental factors that influence sports activity and their impact on health and fitness. Through continued research, we can gain a more comprehensive understanding of the complexities of this relationship and develop more effective approaches to improving overall health and wellness.(Pontzer, 2015; Volek et al., 2015).

An in-depth interpretation of the relationship between sporting activity and body physiology in this article reveals that sporting activity has a broad and complex impact on physical health and fitness. Through increasing cardiorespiratory capacity, muscle strength, and improving cognitive function, sports activities directly improve one's physical performance and quality of life(Racinais et al., 2015; Van den Bosch & Sang, 2017). In addition, sports activities also provide significant psychological benefits, such as improved mood, reduced stress, and higher feelings of happiness. This interpretation suggests that sports activities are not only about the physical aspect, but also play an important role in enhancing the overall well-being of the individual(Warburton & Bredin, 2016; Wells et al., 2017).

Through a holistic approach, this article interprets the importance of considering psychological and social factors in the relationship between sports

activity and body physiology. Factors such as motivation, social interaction and social support can influence a person's involvement in sports activities and also modulate physiological responses to these activities(Cardinale & Varley, 2017; El Saddik, 2018). This interpretation emphasizes that the development of an effective fitness program must take these aspects into account, so as to create a more meaningful and sustainable experience for the individual. By incorporating an understanding of these psychological and social factors in fitness programs, we can create an environment that supports and motivates individuals to achieve optimal physical health and fitness.(Hoeger et al., 2018; Siedentop & Van der Mars, 2022).

This insightful interpretation also highlights the need for further research to deepen our understanding of the relationship between exercise activity and body physiology. While this article provides a solid foundation, there are still knowledge gaps that need to be filled. Further research can explore more specific and in-depth aspects of the body's physiology, such as the hormonal system or the immune system, and consider the role of environmental factors in influencing sports activity. This interpretation emphasizes the importance of continuing to engage in scientific research to gain a more comprehensive understanding of the complexities of this relationship. With deeper understanding, we can optimize the benefits of sporting activity in improving overall health and wellness.

Comparison between the literature review data and previous research shows consistency in findings regarding the benefits of sports activities in improving physical health and fitness. Various previous studies have also concluded that sports activities can improve cardiorespiratory capacity, muscle strength, and cognitive function. Thus, the findings in this article corroborate existing understanding and add consistent evidence regarding the importance of exercise activity in improving aspects of body physiology.

Along with previous findings, this article also provides a deeper understanding of the psychological and social factors that influence the relationship between exercise activity and body physiology. Comparison with previous research shows that the presence of these factors can modulate physiological responses to sports activities. That is, the understanding in this article complements previous research by revealing the importance of a holistic approach that includes psychological and social aspects in fitness programs.(Ayres, 2020; Huang et al., 2015).

This article also provides interesting comparisons with research on physical fitness in special population groups. For example, studies on children and adolescents show that sports activities have a positive impact on their physical growth and development. In addition, research on older people shows that exercise can help maintain bone health, reduce the risk of falling, and improve their quality of life. Thus, this comparison shows that the benefits of sports activity apply not only to the general population, but also to special population groups.

In comparing the literature data for this review, it should also be noted that there are variations in the study designs, methods, and parameters used in measuring the effects of exercise activity on body physiology. Some studies use an experimental design with a control group, while others rely on observational data collection. In addition, the parameters measured also vary, such as maximum VO2, muscle strength, or certain cognitive tests. Therefore, interpretation and

comparison of this literature data must be done with caution, and keep in mind that each study has its own strengths and limitations.

Finally, it is important to note that the literature review data spans a certain time and may not include all of the recent research on this topic. While this article provides a comprehensive review, there may still be new research that has not been included in the review

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CONCLUSION

Based on an in-depth literature review, it can be concluded that holistic awareness in understanding the relationship between sports activity and body physiology is very important in improving one's physical health and fitness. Sports activities not only have significant physical benefits, such as increased cardiorespiratory capacity, muscle strength, and cognitive function, but also provide psychological benefits which include improved mood, reduced stress, and higher feelings of happiness. In addition, sports activities also improve social interactions and the overall quality of life of individuals. A holistic approach that considers psychological and social factors in the development of wellness programs also has the potential to create meaningful and sustainable experiences for individuals. However, to deepen our understanding of this relationship, further research is needed involving more specific physiological parameters and studies in special populations. With a more comprehensive understanding, we can optimize the benefits of sports activities in improving overall health and fitness.

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