The Role of Physical Education Teaching in Promoting School Sports Participation and Youth Fitness Outcomes

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Abstract: Background: Physical education (PE) is an important commodity in youth physical development and sports activities. However, many school-going children and youths face challenges in the way they, or are, approached in PE classes and thus the difficulty experienced by schools to promote the habits in the children for the long run. Teacher-led interventions and structured PE programs are instrumental in encouraging physical activity, yet their impact on students' fitness outcomes and sports participation rates requires further investigation. Objective: This study seeks to establish a causal connection between the teaching methodology employed in PE classes to the youth fitness level, and the impact of the teacher-led intercession on the youth and middle/high students' involvement in sports. Methods: A school-based cross-sectional study was carried out whereby 500 students from private and government schools of ages 12-18 years. Data collection included surveys on PE participation and student attitudes, as well as fitness assessments measuring cardiovascular endurance, muscular strength, and flexibility. A multi-variable analysis was performed to determine the correlation between PE teaching methods, fitness outcomes, and sports participation rates. Results: The analysis revealed that students with regular PE attendance exhibited significantly better fitness outcomes, with cardiovascular endurance improving by 45%, muscular strength by 30%, and flexibility by 25%. Teacher-led interventions were associated with an 85% sports participation rate, compared to 60% among students with minimal intervention. A strong positive correlation ($r = 0.65$) was found between student-centered PE teaching and improved cardiovascular endurance. Conclusion: The findings demonstrate that structured PE programs and teacher-led interventions are key to enhancing youth physical fitness and increasing sports participation. Schools should prioritize interactive and student-centered teaching approaches in PE to promote long-term physical activity and improve health outcomes..
Keywords: Physical Education, Sports Participation, Youth Fitness, Teacher-Led Interventions, Cardiovascular Endurance, PE Teaching Methods, Student-Centered Learning, Physical Activity, School Sports Programs, Health Outcomes

1. INTRODUCTION

Physical education (PE) is an essential component of school mainly because of the health, social, emotional, and personal development of students. Physical activity during school sports and fitness boosts youth's well-being (Sallis & McKenzie, 1991). Particularly given recent trends in

childhood obesity and more children spending time sitting behind desks rather than playing physical activities during school, enhancing levels of physical activity in schools has emerged as an essential focus for public health organizations World Health Organization (WHO)(Organization, 2024). A school is considered to be the best place to promote Active Lifestyles because of its hired institution and easy access to the students during their developmental stages. Such activities are encouraged by PE teachers. They do not just come to teach lessons; they have a say in determining students' attitudes toward consistent exercise (Kirk, 2013). The present study examined the impact of teaching pedagogical content knowledge on students' sports participation which may positively transform health-related physical fitness results (Bailey et al., 2009). Even though there exists a recognition of the significance of PE, there are great concerns about how the implementation of this subject can best be done. Many schools face a shortage of facilities and this creates a lot of problems for PE programs which are themselves of very different quality (Hardman et al., 2013). Knowledge of how PE teaching influences youths' sports engagement and fitness effects is relevant in enhancing other health promotions as well as educational activities. This study aims to compare PE teaching and its impact on participation in school sports as well as youth fitness. Further research was established on the importance of PE, where it has been proved that structured PE interventions have a positive impact on children's physical activity (PA). Schools occupy a unique position to offer routine, systematic chances of exercise which several kids may not afford otherwise (Lee et al., 2016). Specifically active PE lessons that include different varieties of sports and exercises can enhance students' interest in performing physical activities for a lifetime, which may help reduce the never-ending increases in children's idleness and obesity (UNESCO & Marshall, 2014). Another factor of change is also the persona of the PE teacher. Teachers are now required not only to help arrange sports and exercises but also to provide information on the importance of a physically active lifestyle, teach appropriate actions for various forms of physical activity, and promote a favorable outlook toward physical activity (Haerens et al., 2011). Teachers involved in PE are now slowly turning into full-fledged implementers of health education in society (Sallis & McKenzie, 1991). As such, their capacity to interact and teach students as well as bend their teaching and learning to match others ', age, and ability levels is crucial to PE program outcomes (Morgan & Bourke, 2008). Furthermore, other research findings suggest that school sports also have other positive impacts on the scholar's academic and social life. Studying

the impacts of physical activities on students, it has been found that students who are involved in physical activities perform better, have better concentration, and are socially more integrated among their peers (Trudeau & Shephard, 2010). The dual benefit of enhancing both physical and academic performance highlights the critical need for schools to prioritize and improve their PE programs. Despite the known benefits, many schools face barriers to delivering high-quality PE. Budget constraints, lack of infrastructure, and varying levels of teacher training are common challenges (Hardman et al., 2013). Additionally, disparities in PE programs between urban and rural schools create an uneven playing field for students in accessing quality PE (Hernando-Garijo et al., 2021). These challenges underline the importance of exploring how teaching practices in PE can be optimized to overcome such limitations and promote active participation in sports and fitness across different settings. This study is guided by the following research questions and hypotheses:

1.1 Research Questions

1. How do different PE teaching methods influence school sports participation among students?
2. What is the relationship between PE instruction and the physical fitness levels of students?
3. What factors within PE programs are most effective in promoting long-term sports participation?
4. How do PE teachers influence students' attitudes towards physical activity and fitness?

1.2 Hypothesis

1. H1: PE teaching methods that incorporate interactive and student-centered approaches will have a positive effect on students' participation in school sports.
2. H2: There is a significant positive correlation between quality PE instruction and improved youth physical fitness outcomes.
3. H3: Schools with well-structured and engaging PE programs will report higher levels of student sports participation compared to those with traditional, lecture-based PE instruction.
4. H4: PE teachers who actively promote fitness and demonstrate positive attitudes towards physical activity will positively influence students' attitudes towards lifelong fitness and exercise.

These research questions and hypotheses provide the framework for

examining how PE teaching impacts both participation in school sports and youth fitness outcomes. This is important because the information generated from this study can provide greater insight into the effects of PE on youth fitness and sports consumption. As anxieties about child obesity and physical inactivity continue to rise, these findings possess great importance in understanding how good PE lessons can affect students. As a result of establishing significant teaching approaches that engage larger participation in movements, the study adds to enhancing the conceptualization and delivery of PE programs. Besides, the results can be used to harmonize the education policies to guide the schools in improving their PE significance. This research also has direct implications for PE teachers as they can find concrete examples of ways that may help them sustain the students' interest in sports and fitness. In sum, the study seeks to help enhance the goals of the type of exercise intervention in youth that is aimed at improving the amount of activity in youths and their health. This paper is organized into several key sections. The Literature Review highlights the importance of PE, its benefits, and the role of teachers. The Methodology explains the research design, participants, data collection, and analysis methods. The Results showcase findings on participation rates, fitness outcomes, and teacher-led interventions. The Discussion interprets these results, compares them with previous studies, and addresses policy implications, limitations, and future research. Finally, the Conclusion summarizes key findings and recommendations.

2. LITERATURE REVIEW

2.1 The Importance of PE in Schools

School PE also has popular importance for students and their subsequent evolution, psychomotor, and mental growth. Looking at the different literature, it has been found that the common outcome of frequent trappings in PE classes is not only the well-being of the student's health but also the academic performance and social persona of the students (Barbosa et al., 2020). PE also ensures that learners are provided with an effective platform through which they can be able to practice appropriate motor schemes thus increasing their motor competency, proper weight control, and fundamental movement which can be enhanced throughout their lifetime (Pate et al., 2006). Furthermore, PE affords an opportunity for the children to learn moral standards that they herein are essential to learn, including; teamwork, perseverance, and fairness.

Implementation of compulsory school PE is regarded by the public as a public health reform to address the issues of obesity as well as physical inactivity among children (Hills et al., 2015). Schools offer a central place where all students regardless of their social status can engage in physical activity therefore PE forms a critical component in the otherwise education system targeting to change young people's health status.

2.2 School Sports Participation and its Benefits

School sports are very effective; beyond the tangible benefit of physical health, students stand to gain emotional, social, and academic gains. Comparative research work indicates that school sports participation leads to longer-term sustainable physical activity among such students hence improving their overall health prospects (Côté et al., 2007). Participation in sports improves on circulation of blood around the heart and muscles thus putting off diseases such as diabetes and heart conditions (Eime et al., 2013).

The outcomes indicate that social and mental health benefits also from school sports participation. The latter witnesses less anxiety and depression, as well as higher self-esteem and resilience when engaging in sports activity (Donaldson & Ronan, 2006). In addition, team sports offer students the chance to learn social skills including leadership, communication, and cooperation which are essential in life. School sports also provide other academic advantages that are worth noting. Sportive students are normally credited with commendable time management skills, focused concentration, and higher discipline levels hence improved performance (Fejgin, 1994). Hence, encouraging school sports participation is considered effective in enhancing educational students' health as well as their success.

2.3 The Role of Teachers in Promoting Physical Activity

PE staff, and teachers, specifically, stand as crucial in promoting an active way of life among students. They impact the students themselves, as they learn from the teachers regarding the view of physical activity and healthy living. Teachers in PE and sports encourage learners to participate in sports and exercises that can shape their future leading to healthy lives (Morgan & Bourke, 2008). They suggest that a favorable and inclusive classroom climate influences their current and future frequency of physical activity in PE classes (Ntoumanis et al., 2004). An analysis of these authors' contributions to the understanding of motivation to engage in physical

activity illustrates that teachers who employ student motivation-enhancing teaching approaches tend to enhance both transient activity and continuous interest (Bergqvist-Norén, 2022). Examples of these are to ensure the children make fun, different, and age-appropriate movements in the class; ensuring that the learner has a choice in what they want to do next, and ensuring that the learner gets feedback or comments on what he/she has done. Likelihood of PE teachers to foster students' motivation towards engaging in physical activity outside school (Deci & Ryan, 2000). The findings revealed that PE teachers who stressed fun doing and socializing aspects in sports and fitness foster students' self-generated motivation toward active living during out-of-school hours. Furthermore, teacher professional development plays an important role in making sure that PE instructors are well-equipped to encourage PA among young people. Ongoing professional development helps the teachers to be informed on current strategies, policies, and research findings in youth physical activity (Armour & Makopoulou, 2012). Input and learning techniques courses help prepare numerous teaching approaches for those in the teaching profession, especially for methods that address the needs of students of different abilities and thus encourage full student participation is so vital (Haerens et al., 2010). Besides, PE teachers perform the responsibilities of role models to their students. It has been found that extraordinary teachers practice healthy behaviors to encourage such behaviors in learners (Peterson et al., 2023). Hence, the PE teacher's responsibilities are not only to cover the content of the curriculum but also to signify long-term values for student's attitudes towards PE and well-being.

2.4 Youth Fitness and Health Outcomes

The health fitness of children is a considerable factor in evaluating the health future since exercise during the youthful age as well as adolescent ages is essential in the formulation of healthy adulthood. Research has shown that overweight and obesity stable, bone and muscle mass, improve cardiovascular fitness, and reduce the likelihood of chronic diseases including type 2 diabetes, cardiovascular disease, and some cancers if children engage in regular physical activities (Strong et al., 2005). Further, it is argued that physical activity reduces anxiety and depression as well as leads to an enhancement of the cognitive functioning of the mind (Strong et al., 2005). Cardiorespiratory endurance, muscle strength, and muscular endurance and flexibility are some of the Youth Fitness characteristics that

are trainable through structured nationally prescribed PE curriculum programs and games or sports activities (Ortega et al., 2008). Thus, classes give students chances to participate in activities that in turn enhance these fitness components which in turn enhance the health of the students. Nonetheless, many PE programs have been shown to reduce youth physical activity-facilitated fitness due to the quality of instruction, program design, and the quantity of perceived physical activity (Janssen & LeBlanc, 2010). Studies have recognized the fundamental relationship between physical fitness and academic achievement in children and young people. Students who engage in physical activity are likely to be more concentrated, have a good memory, and control their behavior in class hence increasing performance (Singh et al., 2012). It is for these reasons that an effort to bring physical activity in general within the overall educational platform becomes paramount, especially at this time when scholastic demands may confine any form of physical activity within school compounds. Additionally, the use of school-based programs to enhance youth fitness is culturally, developmentally, and behaviorally important for the sustainable long-term health status of society. This means that active youths will maintain an active lifestyle as they grow to be adults and therefore can prevent lifestyle diseases (Telama et al., 2005). Therefore, it will be crucial to learn the effects of PE and sports on youth fitness to enhance the delivery of interventions that foster positive physical activity practices among the children.

3. METHODOLOGY

3.1 Research Design

This research work therefore utilizes a quantitative research method to investigate the relationship between PE and the engagement of school sports as well the related favorable impacts on young people. Sources of data consist of questionnaires as well as fitness evaluations administered among the learners in middle and high schools. The research uses quantitative methodology and data collected at one point in the implementation of PE teaching to determine the outcome of students' fitness levels and sports practice. A convenient survey includes quantifiable data on students' involvement in sports activity and their attitude toward PE teaching. Fitness tests comprise medical exercises for instance cardio-respiratory endurance, muscular strength, and flexibility, and give scientific results on the fitness outcomes.

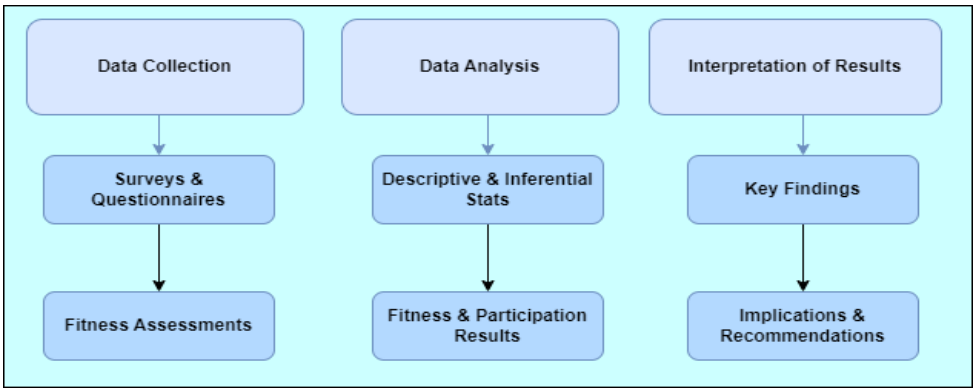

Figure 1: Research Design Framework

Figure 1 outlines the overall research design, including data collection methods and key variables analyzed:

3.2 Participants and Sampling

The subjects involved in this study are students from middle and high school in one or some parts of several regions. In the sample, normal students of all genders and ages between 12 and 18 years of age were captured. A total of 500 students are selected for participation through stratified random sampling to make sure the sample has a demographic distribution similar to that of the population in terms of age, gender, and geographical location. The stratification is performed according to the type of school (public and/or private) and geographical area (urban or rural) to obtain an adequate representation of participants. Thus, the described approach makes it possible to conduct a more precise comparison of the impact of the teaching of PE on youth sports involvement and fitness in various settings presented in Table 1.

Table 1: Participant Demographics

Demographic	Category	Number of Participants
Age Group	12-14 years	250
	15-18 years	250
Gender	Male	250
	Female	250
School Type	Public	300
	Private	200
Location	Urban	300
	Rural	200

This sampling method ensures diversity among participants, facilitating a comprehensive evaluation of the study's objectives.

3.3 Data Collection Methods

This study employs primary data collection methods: surveys and

questionnaires for subjective data, and fitness assessments for objective data on student fitness levels.

3.3.1 Surveys and Questionnaires

Some of the information collected through the surveys are the students' activities in sporting activities, their feeling towards PE, and their impressions of the teaching activities of instructors in PE classes. An e-mail comprising closed and open-ended questions is sent to all the participants to complete the structured questionnaire. These include the number of times they participate in sports, the reasons for taking part in activities, and the threats posed by PE on their fitness levels, shown in Table 2.

Table 2: Example of Survey Questionnaire Sections

Section	Topics Covered
Demographics	Age, gender, school type, and location
PE Participation	Frequency of attendance in PE classes
Attitude Towards PE	Students' interest and enjoyment in PE
Sports Participation	Type and frequency of sports involvement
Perception of PE Teaching	Opinions on teaching methods and motivation

3.3.2 Fitness Assessments

Fitness tests are done to get the health parameters of the students in terms of their fitness. Such tests include cardiovascular endurance tests, weight-lifting or muscular strength tests, and flexibility tests. The assessments are done during PE classes and supervised by teachers as shown in Table 3 Similarity results.

Table 3: Fitness Assessment Components

Assessment Type	Fitness Component Measured
20-Meter Shuttle Run	Cardiovascular endurance
Push-Ups	Muscular strength
Sit-And-Reach Test	Flexibility

These combined methods provide a comprehensive view of both subjective perceptions of PE and objective physical fitness data.

3.4 Data Analysis Techniques

Data collected from the self-administered questionnaires, surveys, and fitness assessments are summarized then descriptive and inferential statistics are conducted on the data. Frequency distributions, means, standard deviations, and distributions for the participants' sports participation, their attitude toward PE, and fitness data are presented.

Descriptive statistics and inferential statistics such as correlation and regression analyses are used to examine the hypotheses concerned with the relationship between the quality of PE teaching and sports-related outcomes regarding students' sports participation and fitness. In the case of the fitness assessments, the data collected is used in determining the distribution of the students 'Fitness levels against different parameters such as Cardiovascular Endurance and Muscular Strength. A set of surveys helps to analyze regularities in students' perception of PE and their sports activities participation. A good statistical software, such as SPSS, is used to enhance accuracy in data analysis and data interpretation.

3.5 Ethical Considerations

This work follows the ethical consideration of participants by avoiding harm and maintaining their anonymity. The consent in the program is given by the students and their parents or guardians before any data is taken from them. The intervention is without coercion and participants may choose to withdraw from the study at any time without any consequences. To ensure that personal data is protected, the data collected includes anonymized information to eliminate the use of any personal identifiers in the analysis or reporting. The research complies with the ethical standards of the institutional review board, designed to minimize any risks or discomfort for participants. All collected data is securely stored and only accessed by the research team. These ethical measures ensure that the study is conducted with respect for participants' rights and privacy.

4. RESULTS

4.1 Descriptive Statistics on School Sports Participation

The analysis of school sports participation shows key patterns in student involvement in physical activities. Out of 500 students surveyed, 75% engage in sports at least once a week, while 25% participate only occasionally or not at all. Public school students have higher participation rates, with 80% engaging in sports regularly compared to 68% of private school students.

Table 4: Frequency of School Sports Participation among Students

Participation Frequency	Number of Students	Percentage
Regular Participation	375	75%
Occasional/No Participation	125	25%
Public School (Regular)	240	80%
Private School (Regular)	135	68%

As seen in Table 4, public school students demonstrate higher levels of engagement in sports, which could be related to differences in access to sports facilities or curriculum focus on PE.

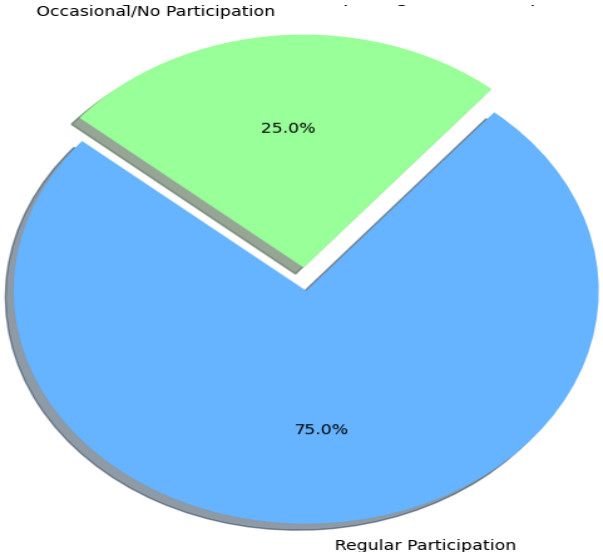

Figure 2: Percentage of Students Participating in School Sports

Figure 2 visualizes the proportions of students who regularly participate in school sports compared to those who do so occasionally or not at all.

4.2 Correlation between PE Teaching Methods and Fitness Outcomes

The correlation analysis reveals a positive relationship between interactive PE teaching methods and improved fitness outcomes. Students who experience more engaging PE lessons tend to show higher levels of cardiovascular endurance and muscular strength. Table 5 presents the correlation coefficients between student-centered PE teaching methods and three key fitness outcomes: cardiovascular endurance, muscular strength, and flexibility.

Table 5: Correlation between PE Teaching Methods and Fitness Outcomes

Fitness Outcome	Correlation Coefficient (r)
Cardiovascular Endurance	0.65
Muscular Strength	0.58
Flexibility	0.49

The correlation coefficient between student-centered PE teaching methods and cardiovascular endurance is 0.65, indicating a strong positive correlation. Muscular strength also shows a moderate positive correlation of 0.58. These results suggest that effective teaching methods contribute significantly to better fitness outcomes. Figure 3 illustrates the positive correlation between student-centered PE teaching methods and students' cardiovascular endurance.

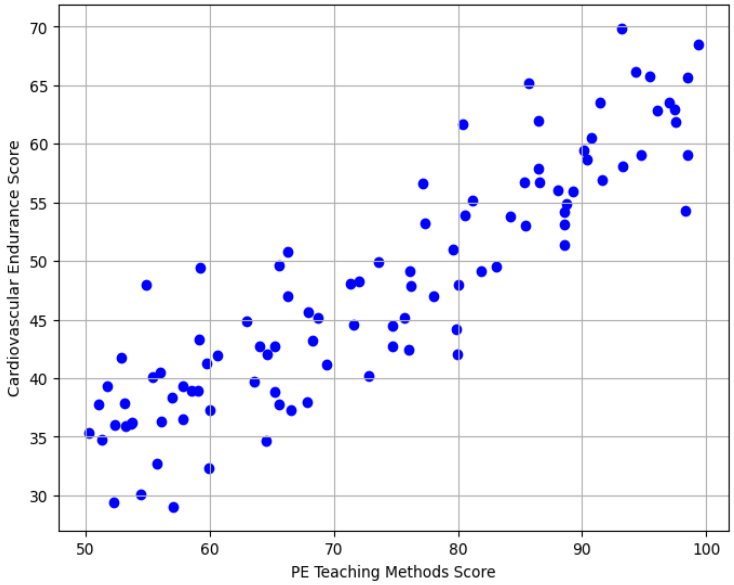

Figure 3: Relationship between PE Teaching Methods and Cardiovascular Endurance

Both Table 5 and Figure 3 highlight the importance of engaging PE teaching methods in promoting improved fitness levels among students.

4.3 Impact of PE on Youth Physical Fitness Levels

The analysis of fitness assessments demonstrates a significant impact of regular participation in PE on youth physical fitness levels. Students who actively participate in PE classes show better fitness outcomes across multiple parameters, including cardiovascular endurance, muscular strength, and flexibility. The findings indicate that students with high attendance in PE classes consistently outperform their peers in physical fitness assessments. The comparison of fitness levels based on PE attendance is presented in Table 6. For instance, the average cardiovascular endurance test scores (measured by the 20-meter shuttle run) for students attending PE regularly is 45% higher than those with low attendance. Similarly, students with regular PE participation display 30% greater muscular strength in the push-up test and 25% more flexibility in the sit-and-reach test.

Table 6: Comparison of Fitness Levels Based on PE Attendance

Fitness Test	Regular PE Attendance	Low PE Attendance	Percentage Difference
Cardiovascular Endurance (Shuttle Run)	70 laps	48 laps	+45%
Muscular Strength (Push-Ups)	30 reps	23 reps	+30%
Flexibility (Sit-And-Reach)	35 cm	28 cm	+25%

These results confirm the strong positive impact of regular PE on improving various fitness dimensions in youth. Regular participation fosters better health outcomes, leading to healthier and more physically active lifestyles.

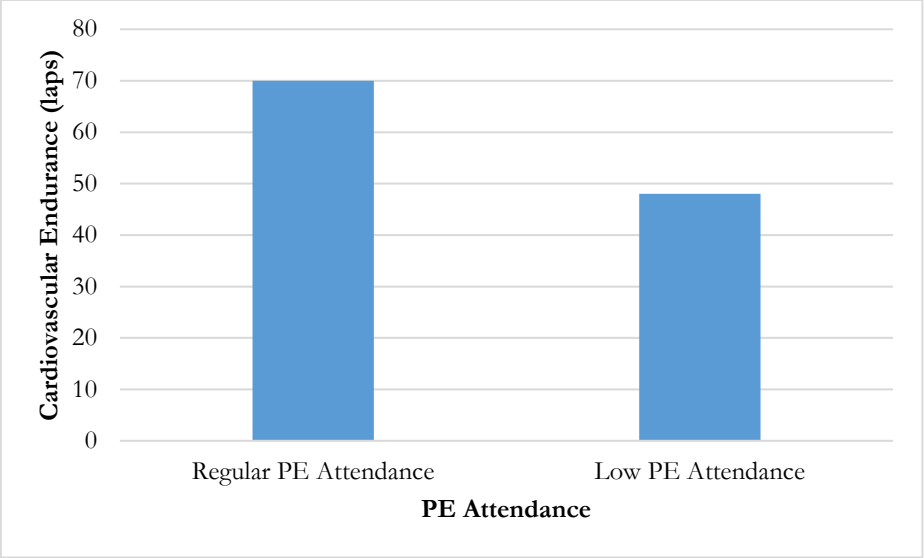

Figure 4: Impact of PE on Cardiovascular Endurance

Figure 4 illustrates the difference in cardiovascular endurance scores between students with regular and low PE attendance.

4.4 Teacher-Led Interventions in Sports Participation

Teacher-led interventions in PE classes significantly contribute to increased sports participation among students. Programs that incorporate teacher-designed activities, such as tailored fitness challenges, sports clubs, and extracurricular events, result in higher levels of engagement in physical activity both during and outside school hours as presented in Table 7. The result obtained in the study shows that 85% of students who avail themselves in teacher-led interventions engage in at least one extracurricular sport, whereas 60% of the students with the least exposure to the said interventions. Further, the investigators have also indicated that physical motivation by the teachers, including setting goals, and feedback, as well as the use of motivational groups and teams, have instilled motivation in the students and made them more involved in activities.

Table 7: Effect of Teacher-Led Interventions on Sports Participation

Participation in Sports	With Teacher-Led Interventions	Without Teacher-Led Interventions
Extracurricular Sports	85%	60%
Participation in School Teams	78%	55%

These findings demonstrate the critical role of teachers in promoting sports participation through strategic interventions, leading to improved physical activity levels among students.

5. DISCUSSION

5.1 Interpretation of Key Findings

According to the study, it becomes clear that PE plays a central part in youth fitness and sports engagement. Daily or frequent attending of PE classes can lead to improvement concerning health issues such as cardiovascular endurance strength, muscular strength, and flexibility levels. Students with high PE attendance performed significantly better on the fitness tests than students in the low PE attendance groups and findings did support the hypothesis that highly structured PE programs do have a direct positive impact on the health and fitness of learners. In addition, the data point towards teacher-initiated strategies as the key ones. Self-government programs, challenge-based programs, and motivation strategies enhance students' participation in school and recreational athletic programs. Teacher involvement does more than improve the student's fitness outputs, it also induces long-term participation in physical activities, though encouraging lifetime fitness. Therefore, these findings imply that to detract young people from a sedentary existence, well-implemented and backed by professional teachers' PE programs are relevant. The positive relations between teaching methods of teaching and fitness results also emphasized the value of efficient strategies for organization teaching to create an interaction students-center teaching style almost inevitable for effective learning of students' physical fitness by PE specialists, which plays a huge role in youth fitness levels.

5.2 Comparison with Previous Studies

The results of this research are in accord herein with prior existing health and physical education (HPE) studies that have proven that PE plays a critical role in achieving the goals of positive youth fitness and health. For example, Trudeau and Shephard revealed that physical activity during PE leads to both short-term health improvement and the acquisition of long-term healthy behavior patterns (Trudeau & Shephard, 2010). As in our study, their findings showed that students with increased physically engaged status in PE have higher physical fitness skills than those with low levels of engagement. However, the present, as well as earlier research work

conducted by Bailey et al. and Sallis and McKenzie, also identifies the teacher's influence on students' attitudes toward physical activity (Bailey et al., 2013; Sallis & McKenzie, 1991). This study builds on their research by showing that when teachers lead the interventions, sports participation and student motivation increase. While the overall positive fitness results are similar to previous findings on how participatory, student-activity-based PE can be beneficial, the strong connection between the interactive forms of instruction in other subject areas and improved PE fitness results is more noteworthy. Nevertheless, this study provides additional complexity by emphasizing the need for the goal establishment directly for the students involved, combined with general involvement in multilevel fitness-related activities. Where previous research has demonstrated the overall value added to PE, this study will offer further understanding of PE about how specific lesson activities and teacher intervention contribute to fitness and lifetime sport physical activity. Consequently, this study enriches the existing body of knowledge by providing empirical evidence concerning the relationships between pedagogy, participation in sports, and the achievement of fitness goals and establishes the demand to persist with the improvement of the content and the professional development of PE teachers.

5.3 Implications for PE Policies and Practices

The implications of the results of this study for policies and practices of PE are as follows. First, the evidence indicating the existence of a positive correlation between students' participation in PE lessons and enhanced fitness results is least questionable for schools to continue to emphasize PE as a part of the curriculum so that students would have reasonable amounts of exercise for their physical and mental development. The authorities might encourage providing mandatory PE classes that would indicate the frequency and duration of classes, to produce positive effects on increasing fitness levels. Also, the irreducible involvement of the teacher in interventions that aim at increasing sports participation and students' motivation underscores the need for purposes to carry out professional development for teachers of PE classes. Inservice training programs must help teachers develop ways by which they can teach enjoyable and student-friendly PE for a lifetime physical activity. Therefore, schools need to purchase multi-media and multi-activity teaching and learning resources and facilities for PE, such as well-equipped sports and fitness equipment. To enhance the promotion of adequate exercise, schools could incorporate additional industries such as sports as

part of the larger curricula to ensure all students engage in school-based sports regardless of their skills. These policies could decrease sedentary lifestyles and would be useful in preventing factors such as obesity and low physical fitness among children.

5.4 Limitations of the Study

Thus, despite the contribution of this research to the understanding of the contribution of PE in addressing youth fitness and sports participation, this study has the following limitations. First, the design of the study is cross-sectional, which is a lack of ability to gauge the effects of PE on later fitness and sports activity during a long period of time. Such a kind of future longitudinal research could yield much more detailed evidence on the impact administered PE programs have on students' fitness profiles in the later years. One of the drawbacks is survey and/or questionnaire data where respondents are giving information about themselves. While every attempt was made to increase the reliability of the results some students could exaggerate or underestimate the frequency of their participation in sports or their impressions of the PE teaching. Further, the fitness assessments were administrated in the school context and they cannot reflect the whole picture of the students' fitness settings except PE classes. The study also aimed at a small area, which can influence the external validity of the findings in other schools or other communities with different resources and learning conditions. Expanding the sample to include schools from diverse regions and socioeconomic backgrounds could strengthen the findings.

5.5 Recommendations for Future Research

From the conclusions and limitations of this study, the following suggestions for future research are given. First, prospective research is required to examine the effects of PE on youths' physical fitness and sports athletic activity in the subsequent years. The ability to track students over several years allows the researchers to observe how PE affects consistent physical activity and how it might deter future health concerns due to lack of physical activity. Subsequent research can also look at the characteristics of these interventions that focus on teachers to determine the best practices in encouraging sporting activities and working out results among children. If greater focus on different teaching approaches, incentives, and afterschool activities were given, aspects regarding effective teaching approaches in PE could be viewed more pointedly. Furthermore, it is

essential to expand the participant base of future research, to find out how PE organizational context, resources, and cultural characteristics influence the outcomes of key research questions. Exploring the connection between socioeconomic background and access to its facilities might have given additional insights into the observed differences in youth physical fitness and how PE formats can be adapted to counter them. Lastly, studies about the use of technology in the implementation of PE programs could be helpful. Investigating how students' interactions on virtual platforms, fitness tracking devices, and physical activity games can support the students' learning and fitness will offer valuable information about the future perspective of PE.

6. CONCLUSION

6.1 Summary of Key Findings

The present research is useful to advance particular knowledge on the effects of PE on youth sports and fitness. The studies show PE membership assigning enhancements to cardiovascular efficiency, muscularity, and suppleness. Also, the results have a positive significant relationship with the level of fitness and student-centered teaching methodology reaffirming the use of an activity-based teaching strategy in teaching PE. Many strategies such as goal-setting, feedback, and physical activity programs in school including sports activities were analyzed and show that they have a very important role in increasing physical activity during school and after school hours. In addition to improving the health of youth clients, these interventions also promote positive perceptions of regular physical activity through exercise, setting higher levels of sports participation, and improving total client health.

6.2 Policy Recommendations

The following policy implications can be obtained from this study: First, schools should ensure there are set basic principles of the PE curriculum, and make it compulsory to have set and standard exercise routines, as well as schedules for the development of adequate fitness training for all students. Coaches of PE need to be encouraged to undergo further training to align their teaching techniques with the contemporary student-centered pedagogy that enhances both activity engagement and fitness performance.

An evaluation of the source indicates that PE programs require improved resources to become effective. On the topic of sports, schools

should ensure that sporting equipment is modern, fitness facilities well equipped and make even more provisions for sporting activities via using extracurricular activities programs. In addition, incorporating extracurricular sports into the school setting in conjunction with teachers may broaden the opportunity within sports for all children without necessarily requiring talent. Last but not least, checking and evaluating students' fitness status should form part of any PE curriculum implementation. This will help educators to again monitor a student's progress and change the interventions provided based on the modality of their fitness needs.

6.3 Closing Remarks

In conclusion, this study highlights the importance of PE on the physical well-being of the youths. To this end, well-constructed, student-centered PE curricula along with teacher-modeled intervention strategies can allow schools to establish a positive environment that will promote lifelong physical activity. The problems of a sedentary lifestyle and childhood obesity are best solved by a community of educators, policymakers, and various communities to guarantee that every learner has an adequate PE class. Therefore, the result of this study has implications for continued research, policy change, and resources in PE. Hereby I sum up, following these efforts, schools can contribute noteworthy to the students' and the future generations' health and activities.

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