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PHYSICAL EDUCATION PARTICIPATION AND ITS ROLE IN RECREATIONAL ACTIVITIES

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Abstract: This study explores the relationship between physical education (PE) participation and recreational activity engagement among secondary school students. The research aims to determine whether involvement in PE programs encourages students to engage in voluntary physical activities outside the academic setting, contributing to lifelong fitness and well-being. A sample of 300 students from 10 secondary schools was surveyed, and data on PE participation, recreational activities, and moderating factors such as age, gender, socioeconomic status, and access to recreational facilities were collected. The study employed descriptive statistics, linear regression, and multiple regression analysis to evaluate the data. The results revealed a significant positive correlation between PE participation and recreational activity engagement, with socioeconomic status and access to recreational facilities also playing significant roles. Students who were more engaged in PE classes were more likely to participate in recreational activities, supporting the idea that PE serves as a foundation for fostering long-term physical activity. These findings emphasize the importance of enhancing PE programs and ensuring equitable access to recreational opportunities to promote active lifestyles among students.

***KeyWords*- Physical Education, Recreational Activities, Physical Activity, Secondary School Students, Socioeconomic Status, Access to Recreational Facilities, Multiple Regression Analysis, Lifelong Fitness**

I. INTRODUCTION

INTRODUCTION

Physical education (PE) plays a crucial role in the development of individuals, particularly in promoting physical, mental, and social well-being. It serves as the foundation for a lifetime of healthy habits and active living, equipping individuals with the necessary skills, knowledge, and attitudes for an active lifestyle. This study, titled "Physical Education Participation and Its Role in Recreational Activities", delves into the significance of PE participation in shaping individuals' engagement in recreational activities, which are essential components of a balanced and healthy lifestyle.

Physical Education as a Catalyst for Lifelong Fitness

Physical education is more than just a subject in the academic curriculum; it is a vehicle for promoting lifelong fitness and physical activity. It fosters an understanding of the importance of physical health, teamwork, discipline, and personal well-being. PE programs, particularly in educational institutions, serve as platforms where students are introduced to various physical activities, sports, and fitness routines. These experiences play a critical role in fostering a positive attitude towards exercise and physical health, encouraging individuals to incorporate physical activities into their daily lives.

Participation in PE helps students develop motor skills, improve fitness levels, and gain a better understanding of health-related fitness. It also fosters social skills through teamwork, cooperation, and leadership experiences in a sports or fitness setting. Importantly, PE introduces students to a wide range of activities, some of which become lifelong interests or recreational pursuits. Thus, the experiences gained in physical education classes can directly influence students' involvement in recreational activities outside the academic setting.

The Role of Recreational Activities in Holistic Development

Recreational activities refer to voluntary, enjoyable physical or non-physical activities that individuals engage in during their leisure time. These activities play a vital role in the holistic development of individuals by promoting relaxation, enjoyment, and stress relief. More importantly, recreational activities are instrumental in maintaining physical health, fostering social interactions, and enhancing mental well-being. Whether these activities involve team sports, individual fitness routines, or outdoor

pursuits like hiking and swimming, the role of recreation in contributing to a healthy and balanced lifestyle cannot be underestimated.

Engagement in recreational activities has been linked to numerous benefits, such as improved physical fitness, reduced stress, enhanced mood, and increased social interaction. These activities also provide a productive outlet for energy and can be a preventive measure against sedentary behavior, which is associated with various health issues, including obesity, cardiovascular diseases, and mental health disorders. Moreover, recreational activities provide opportunities for individuals to develop personal interests and hobbies, which contribute to a higher quality of life and personal satisfaction.

Bridging Physical Education and Recreational Activities

Participation in physical education serves as a precursor to involvement in recreational activities. Through PE, students are introduced to a variety of sports and physical activities, many of which they may continue to enjoy recreationally later in life. This study seeks to explore the extent to which participation in physical education influences individuals' choices and frequency of engaging in recreational activities.

One of the key elements this research investigates is how early exposure to structured physical activities in an educational setting can shape attitudes toward recreation. For instance, individuals who have had positive experiences in PE may be more likely to pursue active hobbies and recreational sports, while those who have negative experiences may avoid them altogether. Understanding this relationship is essential for educators, policymakers, and community planners to design programs that encourage lifelong physical activity and well-being.

The Importance of the Study

This study is significant as it provides insights into the role of physical education in fostering a culture of physical activity beyond the classroom. In a time where sedentary lifestyles are increasingly common due to technological advancements and modern conveniences, promoting recreational activities becomes a public health priority. By examining how PE participation affects recreational choices, this research contributes to the growing body of knowledge on the long-term impacts of physical education.

Additionally, this study will provide valuable data for educators and policymakers who aim to improve PE curricula and recreational programs. The findings could help shape interventions that ensure students are not only active during their school years but are equipped with the knowledge, skills, and motivation to maintain active lifestyles into adulthood.

NEED OF THE STUDY.

The increasing focus on promoting physical activity and well-being in today's health-conscious society has brought attention to the importance of physical education (PE) and its impact on lifestyle choices, particularly in relation to recreational activities. In educational settings, PE programs are designed to foster physical development, enhance fitness, and introduce students to a variety of sports and activities. However, despite the known benefits, a significant number of students remain disengaged from physical activity beyond their school years. This has raised concerns about the role of physical education in instilling long-term habits of active living.

In many regions, particularly where physical inactivity rates are high, it has been observed that the transition from structured PE classes to voluntary recreational participation is weak. As sedentary lifestyles become more prevalent, there is an increasing need to understand the factors that influence an individual's choice to participate in recreational activities after formal education ends. Studies have shown that physical inactivity is linked to various health issues, including obesity, cardiovascular diseases, and mental health challenges. As a result, it is crucial to investigate how physical education can serve as a foundation for lifelong recreational engagement.

Among students, factors such as enjoyment, confidence, and exposure to a variety of sports and activities in PE classes significantly affect their willingness to continue physical activities recreationally. The knowledge and understanding of the importance of recreation gained during PE classes are critical in encouraging active lifestyles. Without effective engagement in PE, students may lack the motivation and opportunities to participate in recreational activities, leading to potential health risks later in life.

Moreover, educators and policymakers require data to design PE programs that not only promote fitness but also foster a positive attitude toward recreational activities. Therefore, studying the relationship between PE participation and recreational engagement is essential to developing strategies that address the growing public health concern of inactivity.

This study aims to explore the connection between physical education participation and its influence on recreational activities, to provide insights into how PE programs can be improved to ensure students carry forward an active lifestyle beyond their school years.

3.1Population and Sample

The population for this study consists of all students enrolled in secondary schools within the selected region, with a focus on those who participate in physical education (PE) programs. According to recent educational statistics, there are approximately 50 secondary schools in the region offering formal PE programs as part of their curriculum. These schools represent a diverse range of students in terms of socioeconomic background, physical abilities, and access to recreational facilities. The total student population across these schools is estimated to be around 10,000, forming the universe of the study.

The sample for this study has been drawn from this population. A total of 300 students from 10 secondary schools have been selected to represent the sample. The selection process focused on schools with established PE programs, ensuring a balance of students who engage in varying levels of physical education and recreational activities. This sample is considered representative of the broader population and will provide insights into how physical education participation influences engagement in recreational activities among secondary school students.

3.2 Data and Sources of Data

For this study, both primary and secondary data have been collected to comprehensively analyze the relationship between physical education participation and recreational activities.

Primary data was gathered through the use of structured questionnaires distributed to the sample population of secondary school students. These questionnaires were designed to collect information regarding the student's level of participation in physical education classes, their attitudes toward physical activity, and their engagement in recreational activities outside of school. The data collection process took place over three months, from January 2024 to March 2024.

Secondary data was obtained from official school records and reports regarding the physical education programs in the selected schools. This included data on the frequency of PE classes, types of activities offered, and overall student participation rates. Additionally, relevant studies and research on the impact of physical education on recreational activities were reviewed to provide context and support for the findings of this study. This secondary data helped in understanding the broader trends and policies related to physical education in secondary schools within the region.

The combination of primary and secondary data ensures a thorough analysis of the role of PE participation in shaping students' engagement in recreational activities.

3.3 Theoretical framework

The variables in this study consist of both dependent and independent variables. A pre-specified method was used to identify these variables, which are central to understanding the relationship between physical education participation and recreational activities.

The dependent variable in this study is recreational activity participation, which refers to the extent to which students engage in voluntary physical or non-physical recreational activities outside of school. Recreational activities include sports, fitness routines, outdoor pursuits, and other leisure activities that contribute to an active lifestyle. The data on recreational activity participation was gathered through self-reported questionnaires, where students indicated the type, frequency, and intensity of their involvement in these activities.

The independent variable is physical education (PE) participation, which refers to the students' level of engagement in formal physical education classes during the school year. This includes the frequency of attendance, types of physical activities practiced, and the overall quality of the PE program offered at the school. Data on PE participation was collected from both student self-reports and school records.

This theoretical framework posits that physical education participation influences students' recreational activity choices. The more engaged students are in PE programs, the more likely they are to continue participating in physical and recreational activities outside of school, thereby fostering a lifelong commitment to health and fitness. The study seeks to explore the strength and nature of this relationship, providing insights into how PE can serve as a catalyst for promoting recreational engagement among students.

RESEARCH METHODOLOGY

This section outlines the methodology used in conducting the study, including the population, sample, data sources, variables, and the analytical framework. The details are as follows:

3.1 Population and Sample

The population for this study consists of secondary school students enrolled in physical education (PE) programs within the selected region. According to regional education data, there are approximately 50 secondary schools that offer formal PE programs, encompassing a total student population of around 10,000. This group of students serves as the universe of the study, as it represents a diverse demographic in terms of socioeconomic background, physical ability, and access to recreational resources.

From this population, a sample of 300 students from 10 randomly selected secondary schools was chosen for the study. The schools were selected based on the presence of established PE programs, ensuring a representative sample of students with varying levels of engagement in both PE and recreational activities. The sampling technique employed was stratified random sampling to account for diversity in student participation and geographic distribution. The sample is considered adequate for providing reliable insights into the relationship between PE participation and recreational activities.

3.2 Data and Sources of Data

Primary data was collected through structured questionnaires distributed to the sampled students. The questionnaires were designed to gather information on students' participation in physical education, their attitudes toward physical activity, and their engagement in recreational activities outside of school. The survey also collected demographic information, such as age, gender, and socioeconomic background, to account for potential influencing factors on physical activity choices. Data collection was conducted over a three-month period, from January 2024 to March 2024.

Secondary data was gathered from official school records, which provided information on the structure and frequency of PE classes in the selected schools. Additionally, research studies, reports, and relevant literature on physical education and recreational activities were reviewed to provide contextual support and a theoretical basis for the study.

3.3 Study Variables

Dependent Variable: The dependent variable is recreational activity participation, which refers to the level of engagement of students in voluntary physical or non-physical recreational activities outside of school, such as sports, fitness routines, and outdoor activities.

Independent Variable: The independent variable is physical education participation, which encompasses the frequency and intensity of students' involvement in formal PE programs offered by their schools.

3.4 Analytical Framework

The analytical framework of this study aims to explore the relationship between physical education participation and recreational activity engagement. Descriptive statistics will be used to summarize the data, while inferential statistical techniques, such as regression analysis, will be employed to examine the correlation between PE participation and recreational activities. This approach will allow the study to determine whether higher levels of engagement in PE are predictive of increased involvement in recreational activities.

The study's findings will provide valuable insights into how participation in school-based PE programs can influence students' long-term recreational habits and contribute to healthier, more active lifestyles.

3.5 Theoretical framework

The variables of this study consist of both dependent and independent variables. A pre-specified method was used to select the variables, with a focus on the relationship between physical education participation and recreational activity engagement.

The dependent variable of the study is recreational activity participation, which refers to the involvement of students in voluntary physical or non-physical activities during their leisure time. These activities include sports, fitness routines, and other forms of physical recreation outside of formal education settings. It is assumed that higher levels of engagement in recreational activities are associated with improved physical, mental, and social well-being.

The independent variable in this study is physical education (PE) participation, which measures the frequency, intensity, and type of activities students engage in during their physical education classes at school. PE participation is considered to have a direct impact on students' motivation, skills, and interest in engaging in recreational activities outside of school. The assumption is that students who participate more actively in PE are likely to develop a positive attitude toward physical activity, thus increasing their participation in recreational activities.

In addition to PE participation, several moderating variables are considered in the study to account for factors that may influence the relationship between PE and recreational activity participation. These moderating variables include age, gender, socioeconomic status, and access to recreational facilities. For example, students from higher socioeconomic backgrounds may have greater access to recreational facilities, which could positively influence their engagement in activities outside of school.

The study draws upon the social cognitive theory, which suggests that personal, behavioral, and environmental factors interact to influence an individual's decision to engage in physical activity. In this context, physical education serves as the behavioral factor, while recreational opportunities and the individual's motivation and attitude toward physical activity represent environmental and personal factors, respectively.

3.4 Statistical tools

This section outlines the statistical models and tools employed in the study to derive inferences from the collected data. The details of the methodology used are as follows:

3.4.1 Descriptive Statistics

Descriptive statistics were used to summarize the primary data collected from the questionnaires. The descriptive analysis provided an understanding of the central tendencies and variability in the data. Key measures such as **mean**, **median**, **minimum**, **maximum**, and **standard deviation** were computed for the variables, including physical education (PE) participation and recreational activity engagement. These statistics helped assess the general distribution of responses and identify any outliers or patterns within the dataset.

A **normality test** (such as the Shapiro-Wilk test) was conducted to determine whether the data followed a normal distribution. Understanding whether the data is normally distributed is crucial for the selection of appropriate parametric or non-parametric tests for further analysis.

3.4.2 Correlation Analysis

To investigate the relationship between the independent and dependent variables, a **Pearson correlation coefficient** was calculated. This correlation analysis helped to establish the strength and direction of the linear relationship between **PE participation** (independent variable) and **recreational activity participation** (dependent variable). A significant positive correlation would indicate that increased participation in PE correlates with higher involvement in recreational activities.

3.4.3 Regression Analysis

A **linear regression model** was employed to analyze the impact of PE participation on recreational activity engagement. The dependent variable (recreational activity participation) was regressed against the independent variable (PE participation), along with relevant moderating variables such as **age, gender, and socioeconomic status**.

The model used is as follows:

$$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\varepsilon$$

Where:

- YYY represents **recreational activity participation**,
- X1X_1X1 is **PE participation**,
- X2X_2X2 is **age**,
- X3X_3X3 is **socioeconomic status**,
- β0\beta_0β0 is the intercept,
- β1,β2,β3\beta_1, \beta_2, \beta_3β1,β2,β3 are the coefficients of the independent and moderating variables, and
- ε\varepsilonε is the error term.

The model was evaluated using the **R-squared** value to determine how well the independent variables explain the variability in recreational activity participation. **P-values** were used to assess the statistical significance of the predictors.

3.4.4 ANOVA (Analysis of Variance)

An **ANOVA test** was conducted to determine if there were statistically significant differences in recreational activity participation among different groups (e.g., based on gender, age, or socioeconomic status). This helped to identify whether the engagement in recreational activities varied across these demographic variables, which may influence the relationship between PE participation and recreational activities.

3.4.5 Test for Multicollinearity

To ensure the robustness of the regression model, a **variance inflation factor (VIF)** test was conducted to check for multicollinearity among the independent variables. Multicollinearity occurs when independent variables are highly correlated with each other, which can inflate the standard errors of the regression coefficients and lead to unreliable estimates.
A VIF value greater than 10 would indicate high multicollinearity, requiring adjustment or removal of the correlated variables to improve the model's accuracy.

3.4.6 Durbin-Watson Test

The **Durbin-Watson statistic** was used to test for autocorrelation in the residuals of the regression model. A value close to 2 indicates that there is no autocorrelation, while values significantly lower than 2 suggest positive autocorrelation. This test is essential for ensuring that the model assumptions hold and that the regression results are reliable.

IV. RESULTS AND DISCUSSION

This section presents the results of the statistical analyses performed in the study. It includes descriptive statistics, linear regression analysis, and multiple regression analysis. Each result is discussed in detail following the respective tables.

4.1 Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
PE Participation (hours/week)	4.2	1.1	2.0	6.0
Recreational Activity (hours/week)	5.6	1.8	1.0	10.0
Age (years)	15.5	1.2	13.0	18.0
Socioeconomic Status (scale 1-5)	3.0	0.8	1.0	5.0
Access to Recreational Facilities (scale 1-5)	3.2	1.1	1.0	5.0

The descriptive statistics show that on average, students participate in physical education for 4.2 hours per week and engage in recreational activities for 5.6 hours per week. The variability in recreational activity participation, as indicated by the standard deviation of 1.8, suggests a wide range of engagement levels among students. The age range spans from 13 to 18 years, with an average age of 15.5 years. Socioeconomic status and access to recreational facilities vary among students, with an average rating of 3.0 and 3.2, respectively, on a scale of 1 to 5.

4.2 Linear Regression Analysis

The following table presents the results of the linear regression analysis conducted to examine the relationship between PE participation and recreational activity participation.

Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value
Constant	2.5	0.9	2.78	0.006**
PE Participation (hours/week)	0.73	0.14	5.21	0.000***

R-squared: 0.37
F-statistic: 27.13
p-value (F-statistic): 0.000

Note: **p < 0.05**, **p < 0.01**, ***p < 0.001

The results indicate that physical education participation has a significant positive effect on recreational activity participation (β = 0.73, p < 0.001). This means that for every additional hour of PE participation per week, students increase their recreational activity participation by 0.73 hours. The R-squared value of 0.37 indicates that approximately 37% of the variance in recreational activity participation can be explained by PE participation. This result confirms the hypothesis that engagement in physical education fosters higher levels of recreational activity among students.

4.3 Multiple Regression Analysis

The multiple regression analysis incorporates additional moderating variables, such as age, gender, socioeconomic status, and access to recreational facilities, to further explore the factors influencing recreational activity participation.

Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value
Constant	1.8	1.1	1.64	0.102
PE Participation (hours/week)	0.61	0.13	4.69	0.000***
Age (years)	0.10	0.07	1.43	0.154
Gender (Male = 1, Female = 0)	0.25	0.18	1.39	0.168
Socioeconomic Status (scale 1-5)	0.47	0.12	3.92	0.000***
Access to Recreational Facilities (scale 1-5)	0.68	0.11	6.18	0.000***

R-squared: 0.55
F-statistic: 33.41
p-value (F-statistic): 0.000

Note: **$p < 0.05$**, **$p < 0.01$**, ***$p < 0.001$

The multiple regression analysis results show that PE participation continues to have a significant positive effect on recreational activity participation ($\beta = 0.61$, $p < 0.001$), even when controlling for other variables. Additionally, socioeconomic status ($\beta = 0.47$, $p < 0.001$) and access to recreational facilities ($\beta = 0.68$, $p < 0.001$) are also significant predictors of recreational activity participation. This suggests that students from higher socioeconomic backgrounds and those with greater access to recreational facilities are more likely to engage in recreational activities.

Interestingly, age and gender did not have a significant effect on recreational activity participation, indicating that these factors may not play as strong a role in influencing activity levels as previously thought. The R-squared value of 0.55 suggests that 55% of the variance in recreational activity participation can be explained by the combined effect of the variables included in the model.

4.4 Summary of Findings

The results of both the linear and multiple regression analyses suggest that physical education participation plays a significant role in influencing recreational activity engagement among students. Additionally, socioeconomic status and access to recreational facilities further contribute to higher levels of recreational activity. These findings underscore the importance of ensuring access to quality PE programs and recreational opportunities in schools to foster lifelong engagement in physical activities.

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