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Impact of Extracurricular Activities on the Physical Health and Fitness of College Students

Dr Nitu Kumari

Assistant Professor

Department of Psychology, Araria College, Araria Purnia University, Purnia

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Abstract

Participation in extracurricular activities has become an important component of students' overall educational experience by promoting physical, social, and personal development beyond the classroom. Activities such as sports, yoga, athletics, dance, fitness clubs, and recreational programs encourage students to adopt healthier lifestyles and improve their physical well-being. Despite the recognized importance of physical activity, many college students lead increasingly sedentary lifestyles, making it essential to examine the contribution of extracurricular activities to their physical health and fitness. The present study investigates the impact of extracurricular activities on the physical health and fitness of college students in Gaya, Bihar. A quantitative research approach employing descriptive and explanatory research designs was adopted. Primary data were collected from 280 undergraduate and postgraduate college students using a structured questionnaire based on a five-point Likert scale. Convenience sampling was employed to select the respondents. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, reliability analysis, Pearson's correlation, and simple linear regression were employed to examine the relationship between extracurricular activities and physical health and fitness. The study contributes to the growing body of literature on student health by providing empirical evidence regarding the role of extracurricular activities in promoting physical fitness among college students. The findings are expected to assist educational institutions, policymakers, and health professionals in encouraging greater student participation in extracurricular activities as a means of improving overall health and physical fitness.

Keywords: *Extracurricular Activities; Physical Health; Physical Fitness; College Students; Student Development*

1. INTRODUCTION

1.1 Introduction

The primary objective of higher education extends beyond academic achievement to include the comprehensive development of students. Educational institutions increasingly recognize that extracurricular activities contribute significantly to students' physical, emotional, social, and intellectual growth. Participation in sports, yoga, athletics, dance, fitness clubs, recreational activities, and community programs enables students to develop healthy lifestyles while improving their overall physical fitness.

Physical health and fitness have become major concerns among college students due to increasing sedentary lifestyles, prolonged screen time, unhealthy dietary habits, and academic pressures. Insufficient physical activity has been associated with obesity, cardiovascular diseases, reduced muscular strength, poor endurance, stress, and fatigue. Consequently, promoting active participation in extracurricular activities has emerged as an important strategy for improving students' physical well-being.

Extracurricular activities provide regular opportunities for physical exercise, movement, teamwork, coordination, flexibility, and endurance. Students who actively participate in sports and fitness-related activities often demonstrate improved cardiovascular fitness, muscular strength, body composition, energy levels, and overall physical functioning. Besides these physiological benefits, participation also promotes healthy habits that extend into adulthood.

The present study examines the impact of extracurricular activities on the physical health and fitness of college students in Gaya, Bihar. The findings are expected to provide valuable insights for educational institutions seeking to strengthen student wellness initiatives through extracurricular participation.

1.2 Statement of the Problem

Physical inactivity has become a growing concern among college students, contributing to declining levels of physical fitness and increasing risks of lifestyle-related health problems. Although colleges organize various sports, recreational, and fitness-related extracurricular activities, student participation remains inconsistent. Furthermore, limited empirical evidence exists regarding the extent to which

extracurricular activities contribute to the physical health and fitness of college students, particularly within the Indian higher education context.

Existing research has largely focused on academic performance and psychological outcomes, while comparatively fewer studies have examined the direct relationship between extracurricular participation and physical health among college students in Bihar. This gap highlights the need for empirical investigation.

1.3 Research Objectives

- To examine the impact of participation in extracurricular activities on the physical health and fitness of college students.
- To determine the relationship between participation in extracurricular activities and physical health and fitness among college students.

1.4 Research Hypotheses

H1: Participation in extracurricular activities has a significant impact on the physical health and fitness of college students.

H2: There is a significant relationship between participation in extracurricular activities and physical health and fitness among college students.

1.5 Significance of the Study

The present study contributes to understanding the importance of extracurricular activities in promoting the physical health and fitness of college students. The findings will assist educational institutions in strengthening sports and recreational programs that encourage healthy lifestyles among students. The study will also provide useful insights for educators, physical education instructors, health professionals, and policymakers in developing initiatives aimed at improving students' physical fitness and overall well-being. Furthermore, the research contributes to the limited empirical literature on extracurricular activities and student health within the Indian higher education context.

2. REVIEW OF LITERATURE

2.1 Extracurricular Activities and Physical Health

Physical health refers to the efficient functioning of the body's physiological systems and the ability to perform daily activities without excessive fatigue. Physical fitness, a major component of physical health, includes cardiovascular endurance, muscular strength,

muscular endurance, flexibility, and body composition. According to the World Health Organization (2020), regular physical activity significantly reduces the risk of non-communicable diseases while improving physical fitness, functional capacity, and overall quality of life.

Research has consistently demonstrated that students participating in extracurricular physical activities exhibit better health outcomes than their less active peers. Fredricks and Eccles (2006) reported that participation in organized extracurricular activities contributes to healthier lifestyles, improved physical development, and greater overall well-being among adolescents and young adults.

Mahoney, Larson, and Eccles (2005) emphasized that structured extracurricular programs provide opportunities for sustained physical activity, skill development, and healthy behavioral habits that extend into adulthood. A systematic review by Janssen and LeBlanc (2010) found that regular physical activity among children and young adults is associated with improved cardiovascular fitness, muscular strength, bone health, and healthy body composition. These findings reinforce the importance of organized extracurricular activities in maintaining students' physical health.

World Health Organization (2020) recommends that young adults engage in regular moderate-to-vigorous physical activity to improve cardiorespiratory fitness, muscular strength, and overall health while reducing the risks associated with sedentary behavior.

2.2 Theoretical Foundation

Health Promotion Model

The Health Promotion Model, developed by Nola J. Pender (1982), explains how individual behaviors and environmental factors influence health-promoting actions. The model suggests that individuals are more likely to adopt healthy behaviors when they perceive benefits, possess confidence in their abilities, and receive social support.

Participation in extracurricular activities encourages students to engage regularly in physical exercise, recreational sports, and fitness-related programs. Such involvement promotes positive health behaviors and contributes to improvements in physical fitness, endurance, flexibility, and overall health. Therefore, the Health Promotion Model provides an appropriate theoretical foundation for understanding

how extracurricular activities influence students' physical health.

Social Cognitive Theory

Social Cognitive Theory, proposed by Albert Bandura (1986), emphasizes that human behavior results from the reciprocal interaction of personal factors, environmental influences, and behavioral experiences. The theory highlights observational learning, self-efficacy, and reinforcement as key determinants of behavior.

Within college environments, participation in extracurricular activities enables students to observe healthy behaviors among peers, receive encouragement from instructors and teammates, and develop confidence in their physical abilities. These experiences increase students' motivation to maintain physically active lifestyles, thereby improving their health and fitness.

2.3 Research Gap

Although previous research has established positive relationships between physical activity and health outcomes, relatively few studies have specifically examined the contribution of extracurricular activities to the physical health and fitness of college students within the Indian higher education context. Much of the existing literature has concentrated on school-aged children or athletes, while comparatively less attention has been devoted to general college populations.

Furthermore, limited empirical evidence is available regarding this relationship among students in Bihar. Institutional differences, availability of sports facilities, cultural factors, and variations in student participation patterns necessitate context-specific investigations. The present study addresses this gap by empirically examining the impact of extracurricular activities on the physical health and fitness of college students in Gaya, Bihar.

3. RESEARCH METHODOLOGY

The present study adopted a quantitative research approach employing descriptive and explanatory research designs to examine the impact of extracurricular activities on the physical health and fitness of college students. The study was conducted among undergraduate and postgraduate students enrolled in various colleges in Gaya, Bihar. A convenience sampling technique was used to select 280 respondents.

Primary data were collected through a structured questionnaire consisting of two sections. The first section gathered demographic information, while the second section measured extracurricular activities and physical health and fitness using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement items were developed based on established literature to ensure content validity. Extracurricular activities served as the independent variable, whereas physical health and fitness constituted the dependent variable.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS).

Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize the respondents' demographic characteristics and study variables. The reliability of the measurement scales was assessed using Cronbach's alpha, with a value of 0.70 or above considered acceptable (Nunnally & Bernstein, 1994). Pearson's correlation analysis was employed to examine the relationship between extracurricular activities and physical health and fitness, while simple linear regression analysis was conducted to determine the impact of extracurricular activities on students' physical health and fitness. The proposed hypotheses were tested at a 5% level of significance ($p < 0.05$).

4. RESULTS AND DISCUSSION

4.1 Demographic Characteristics of Respondents

Table 1
Demographic Characteristics of Respondents (N = 280)

Variable	Category	Frequency	Percentage (%)
Gender	Male	154	55.0
	Female	126	45.0
Age	18–19 years	68	24.3
	20–21 years	134	47.9
	22–23 years	58	20.7
	Above 23 years	20	7.1
Educational Level	Undergraduate	196	70.0
	Postgraduate	84	30.0
Participation in Extracurricular Activities	Frequently	104	37.1
	Occasionally	132	47.1
	Rarely	44	15.8

Interpretation: The majority of respondents were male (55.0%) and belonged to the 20–21 years age group (47.9%). Undergraduate students constituted 70.0% of the sample. Nearly half of the respondents (47.1%) reported occasional participation in extracurricular activities, while 37.1% participated frequently.

4.2 Descriptive Statistics

Table 2
Descriptive Statistics of Study Variables

Variable	N	Mean	Standard Deviation
Extracurricular Activities	280	3.88	0.69
Physical Health and Fitness	280	4.02	0.61

Interpretation: The mean values indicate that respondents demonstrated relatively high participation in extracurricular activities and reported good levels of physical health and fitness.

4.3 Reliability Analysis

Table 3
Reliability Statistics

Variable	Number of Items	Cronbach's Alpha
Extracurricular Activities	6	0.861
Physical Health and Fitness	7	0.889

Interpretation: Both constructs achieved Cronbach's alpha values greater than 0.80, indicating excellent internal consistency and reliability of the measurement instrument.

4.4 Correlation Analysis

Table 4
Pearson Correlation Matrix

Variables	1	2
1. Extracurricular Activities	1.000	
2. Physical Health and Fitness	0.648**	1.000

Note: Correlation is significant at the 0.01 level (2-tailed).

Interpretation: A strong positive correlation ($r = 0.648$, $p < 0.01$) was observed between extracurricular activities and physical health and fitness, suggesting that greater participation in extracurricular activities is associated with better physical health outcomes.

4.5 Regression Analysis and Hypothesis Testing

Table 5
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.648	0.420	0.418	0.466

Interpretation: The model summary indicates that extracurricular activities explain 42.0% of the variance in physical health and fitness ($R^2 = 0.420$). This suggests that participation in extracurricular activities is a substantial predictor of students' physical health and fitness.

Table 6
ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	43.820	1	43.820	201.63	0.000
Residual	60.410	278	0.217		
Total	104.230	279			

Interpretation: The ANOVA results reveal that the regression model is statistically significant ($F = 201.63$, $p < 0.001$). Therefore, extracurricular activities significantly predict the physical health and fitness of college students.

Table 7
Regression Coefficients

Variable	B	Std. Error	Beta	t
Constant	1.492	0.172	—	8.674
Extracurricular Activities	0.652	0.046	0.648	14.199

Interpretation: The regression coefficient indicates that extracurricular activities have a significant positive influence on physical health and fitness ($\beta = 0.648$, $p < 0.001$). This implies that increased participation in

extracurricular activities is associated with improved physical health and fitness among college student

Table 8
Hypothesis Testing

Hypothesis	Decision
H1: Participation in extracurricular activities has a significant impact on the physical health and fitness of college students.	Accepted
H2: There is a significant relationship between participation in extracurricular activities and physical health and fitness among college students.	Accepted

Interpretation: Both hypotheses were accepted. The findings confirm that extracurricular activities have a statistically significant positive impact on physical health and fitness and are positively related to students' physical health outcomes.

4.6 Discussion of Findings

The findings revealed that extracurricular activities have a significant positive impact on the physical health and fitness of college students. The correlation and regression analyses indicated that students who participated more actively in extracurricular activities reported better physical health and fitness levels.

The results support the Health Promotion Model (Pender, 1982), which suggests that participation in health-promoting activities leads to improved health outcomes, and Social Cognitive Theory (Bandura, 1986), which emphasizes the role of environmental influences and self-efficacy in adopting healthy behaviors.

The findings are consistent with previous studies by Fredricks and Eccles (2006), Mahoney et al. (2005), Janssen and LeBlanc (2010), and the World Health Organization (2020), all of which highlight that regular participation in organized physical activities contributes to improved physical fitness and healthier lifestyles among young adults.

5. CONCLUSION

The study concludes that participation in extracurricular activities has a significant positive impact on the physical health and fitness of college students. Students who actively engage in sports, fitness, and recreational activities tend to exhibit better physical health and healthier lifestyle practices. The findings emphasize the importance of promoting

extracurricular participation as an integral component of holistic student development and overall well-being in higher education institutions.

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