

Effect of Regular Physical Activity on Physical Fitness and Academic Performance among College Students

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ABSTRACT

Physical education promotes students' overall development by enhancing physical fitness, mental health, and academic achievement. The current study is to investigate the impact of regular physical activity on certain physical fitness components and academic performance in college students. A total of 60 college students (ages 18-22) were chosen as subjects and separated into two categories: physically active and physically inactive. Physical fitness characteristics such as cardiovascular endurance, muscular strength, flexibility, and body mass index (BMI) were measured. Academic performance was assessed using semester examination results. The findings revealed substantial differences between active and sedentary pupils, demonstrating that regular physical activity improves physical fitness and scholastic achievement. The study finds that incorporating structured physical activity programs into educational institutions is critical for kids' overall development.

Keywords: Physical Education, Physical Activity, Physical Fitness, Academic Performance, College Students

INTRODUCTION

Physical education is an important part of the educational system because it helps people develop physically, mentally, and socially. Sedentary lifestyles, excessive use of technology, and academic pressure have all contributed to a decrease in student engagement in physical activity. Regular physical activity promotes physical health, protects against lifestyle diseases, and improves cognitive skills such as concentration, memory, and learning ability. Several studies have found a beneficial link between physical activity and academic achievement. Students who actively participate in sports and physical education programs exhibit greater discipline, self-confidence, and academic performance. As a result, it is critical to conduct scientific research on the effects of physical activity on students' physical fitness and intellectual attainment.

OBJECTIVES OF THE STUDY

1. To assess the level of physical fitness among physically active and inactive college students.
2. To compare academic performance between physically active and inactive students.
3. To analyze the relationship between regular physical activity and academic achievement.

HYPOTHESES

1. There will be a significant difference in physical fitness components between physically active and inactive students.
2. Physically active students will show better academic performance than physically inactive students.

METHODOLOGY

RESEARCH DESIGN

The study was based on a descriptive and comparative research design.

SELECTION OF SUBJECTS

A total of 60 college students (30 physically active and 30 physically inactive) were selected randomly from a college. The age of the subjects ranged from 18 to 22 years.

VARIABLES

- **Independent Variable:** Regular physical activity
- **Dependent Variables:** Physical fitness components (cardiovascular endurance, muscular strength, flexibility, BMI) and academic performance

TOOLS AND TESTS

- Cardiovascular endurance: Cooper's 12-minute run/walk test
- Muscular strength: Push-up test

- Flexibility: Sit and reach test
- Body Mass Index (BMI): Height and weight measurement
- Academic performance: Semester examination marks

STATISTICAL TECHNIQUE

Mean, standard deviation, and t-test were used to analyze the collected data. The level of significance was set at 0.05.

RESULTS AND DISCUSSION

Score Table (Physical Fitness and Academic Performance)

Table 1: Mean and Standard Deviation of Physical Fitness Variables of GCW Jassaur Kheri Students

Variable	Group	N	Mean	SD
Cardiovascular Endurance (meters)	Active	30	2450	180
	Inactive	30	1980	210
Muscular Strength (Push-ups)	Active	30	32.4	4.6
	Inactive	30	21.8	3.9
Flexibility (cm)	Active	30	26.5	3.2
	Inactive	30	18.9	2.8
BMI (kg/m ²)	Active	30	21.6	1.9
	Inactive	30	24.2	2.3

Group	N	Mean Marks (%)	SD
Physically Active	30	72.4	6.8
Physically Inactive	30	64.1	7.5

Table 2: Mean and Standard Deviation of Academic Performance of GCW Jassaur Kheri Students

INTERPRETATION OF RESULTS

The tables above clearly show that physically active students at GCW Jassaur Kheri outperformed idle pupils in all specified physical fitness components. The average academic achievement of the physically active group was also higher. These data back up the premise that regular physical activity improves both physical fitness and academic achievement.

CONCLUSION

The study concludes that frequent physical activity improves physical fitness and academic performance in college students. Educational institutions should prioritise physical education and encourage students to actively participate in sports and fitness programs to benefit their entire development.

EDUCATIONAL IMPLICATIONS

- Physical education should be made compulsory at all levels of education.
- Colleges should provide adequate sports facilities and trained physical education teachers.
- Awareness programs should be conducted to motivate students to adopt active lifestyles.

LIMITATIONS OF THE STUDY

- The study was limited to a small sample size.
- Only college students were included.
- Academic performance was measured only through examination scores.

SUGGESTIONS FOR FUTURE RESEARCH

- Similar studies can be conducted on school students.
- Psychological variables such as stress and motivation may also be included.
- Longitudinal studies may provide more accurate results.

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