



## INNOVATIONS IN PHYSICAL EDUCATION FOR ENHANCING FITNESS LEVELS AND ITS IMPACT ON ACADEMIC PERFORMANCE

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### ABSTRACT

Physical education has been substantially reduced and in some cases completely eliminated in response to pressures to improve academic test scores. Evidence shows that students who are physically active and fit tend to perform better in the classroom thus daily physical education does not adversely affect academic performance. Fitness is defined as the ability to perform strenuous activity without excessive fatigue showing evidence of traits that limit the risks of developing diseases and disorders which affect a person's functional capacity. The objectives of this study were: 1) To assess the obesity and fitness levels of students in educational institutions 2) To compare the fitness levels with academic performance using standardized test scores.

**Keywords:** Improve academic test scores, Active and Fit, Functional Capacity, Obesity and Fitness

### INTRODUCTION:

Obesity can adversely impact a variety of conditions, such as hypertension, asthma, diabetes, sleep apnea, bone disorders and gall bladder diseases (Trost, 2011, Oregon state university, USA). Research has shown the connection between physical inactivity and improper diet to obesity (Eaton, 2008). The more time an individual spends in sedentary activities, the more likely they are to gain unhealthy weight (Nelson, 2006; Patrick, 2004). Leading a healthy lifestyle which includes a proper diet and an adequate amount of physical activity has been shown to have numerous health benefits including increased longevity and decreased risks for many diseases (Danaei, 2009). Recent studies have specifically looked at associations between body mass index (BMI) and academic correlations (Roberts, 2010; Chomitz, Ph.D., 2009; Welk, 2009). The purpose of this study was to assess the relationship between physical fitness and academic performance of students. The objectives of this study were: a) to assess the levels of physical fitness among college students B) to assess the relationship between physical fitness and academic performance. In order to achieve the study objectives, a large data of students (955) in Govt. G.M. Science College, Jammu underwent physical fitness assessments and academic performance testing.

### RESEARCH METHODOLOGY AND DATA ANALYSIS:

Students of the college participated in a health-related physical fitness assessment performed by physical education department of the institution. The physical fitness was measured in fitness-gram which is a physical fitness assessment, and it is the physical fitness measurement tool to use criterion-referenced standards called "Healthy Fitness Zones" (HFZ), by age and gender. The Fitness gram measures components of health-related physical fitness that have been identified as important to overall health. These components are measured by four sub-tests and BMI calculation: Curl-ups, trunk lifts, push-ups (strength and endurance) and shoulder stretches (flexibility) which were performed by the students. The results of these sub-tests place each student either within or outside the Healthy Fitness Zone (HFZ). BMI, which is a measurement that calculates an individual's body mass based upon height, weight, age and gender factors, was collected. Calculations were completed using CDC Growth Charts (CDC, 2010) and Nutrient Requirements and Recommended Dietary Allowances for Indian (NRRDAI), Indian Council of Medical Research (ICMR, 1990).

TABLE No. 1  
PED FITNESS SUBTESTS AND IAT ACADEMIC MEASURES

Test number	Fitness Subtests	Academic Measures (IAT)
1.	Curl Up = 0.52	0.50
2.	Push-up = 0.32	0.29
3.	Shoulder stretch = 0.48	0.43
4.	Trunk Lift = 0.28	0.26

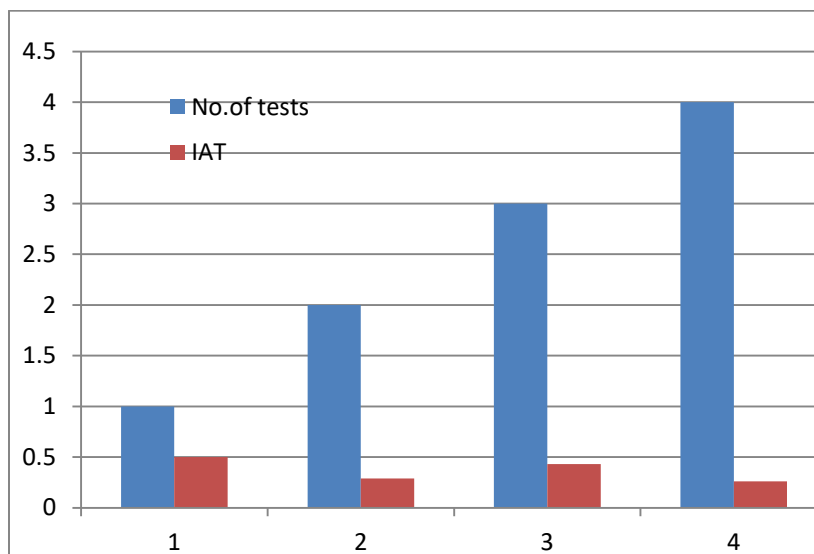


Figure 2. No. of tests v/s IAT Academic Measures

## CONCLUSIONS

Optimal physical-education programs engage students on a daily basis in cognitively, socially demanding physical activity and provide opportunities for physically strenuous play in order to inspire and instill lasting healthy behavioral patterns. Results of this study are consistent with previous research that has demonstrated the importance of Physical fitness with regard to boosting academic performance. These results will assist researchers, educational administrators and other interested policymakers in understanding student obesity. Study findings provide a growing body of evidence to law makers and administrators to emphasize the importance of physical activity at college level. Increasing the levels of physical activity may reduce the prevalence of student obesity, and may also improve the academic performance. Higher Education Department in a position to promote proper nutrition, appropriate physical activity and other healthy choices through college nutrition programs, physical and health education, recess, nursing services and even the regular classroom.

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