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Influence of Health Related Fitness Variables on Academic Achievement of School Boys

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Abstract

The study was designed to find out the relationship between health related fitness variables and academic achievement in school boys. To achieve the purpose of the study 20 male school boys are selected from government school in Chennai. Their age is ranged between 11 to 15 years. The health related fitness variables such as cardiovascular endurance, muscular flexibility, muscular strength and muscular endurances were tested through standard tests and academic achievement was collected from school records. The collected data were analyzed by using Pearson product moment correlation. The result of the study shows that there was no significant relationship between achievement motivation and health related physical fitness variables such as cardiovascular endurance, muscular flexibility, muscular strength, and muscular endurance.

Keywords: Health, Physical Fitness, School Boys, Academic Achievement.

Introduction

Aspects of physical fitness which are associated with improving health. Emphasis is usually given to aerobic endurance flexibility muscle condition, and body composition (Oxford dictionary of sports science & medicine, second edition, 2006). Pertaining to the heart and blood vessels. The ability to sustain a large blood flow to active muscles (Oxford dictionary of sports science & medicine, second edition, 2006). Flexibility is the ability of a limb to move freely around a joint through a full range of motion (Patricia, Anita & Pierre, 2007). Force or tension that a muscle or, more correctly, a muscle group can exert ageist a resistance in one maximal effort. Muscle strength can be measured using a dynamo meter or a manumo meter. See also absolute strength and relative strength (Oxford dictionary of sports science & medicine, second edition, 2006). The ability of a muscle to avoid fatigue. It is reflected by the length of time a muscle can perform repeated muscle actions against a submaximal resistance. It can be determined by the maximum number of repetitions performed at a given percentage of an individual's one repetition maximum (Oxford dictionary of sports science & medicine, second edition, 2006).

Virginia R. Chomitz et al.,(2009), To determine relationships between physical fitness and academic achievement in diverse, urban public school children. This cross-sectional study used public school data from 2004 to 2005. Academic achievement was assessed as a passing score on Massachusetts Comprehensive Assessment System (MCAS) achievement tests in Mathematics (fourth, sixth, and eighth grade, n = 1103) and in English (fourth and seventh grade, n = 744). Fitness achievement was assessed as the number of physical fitness tests passed during physical education (PE). Multivariate logistic regression analyses were conducted to assess the probability of passing the MCAS tests, controlling for students' weight status (BMI z score), ethnicity, gender, grade, and socioeconomic status (school lunch enrollment).The odds of passing both the MCAS Mathematics test and the MCAS English test increased as the number of fitness tests passed increased ($p < .0001$ and $p < .05$, respectively). Results show statistically significant relationships between fitness and academic achievement, though the direction of causation is not known. While more research is required, promoting fitness by increasing opportunities for physical activity during PE, recess, and out of school time may support academic achievement.

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Methodology

The study was designed to find out the relationship between health related fitness variables and academic achievement in school boys. To achieve the purpose of the study 20 male school boys are selected from government school in Chennai. Their age is ranged between 11 to 15 years. The health related fitness variables such as cardiovascular endurance, muscular flexibility, muscular strength and muscular endurances were tested through standard tests and academic

achievement was collected from school records. The collected data were analyzed by using Pearson product moment correlation.

Table I. Mean and Standard Deviation of Selected Variables

	Academic Achievement (In Marks)	Cardiovascular Endurance (In meters)	Muscular Flexibility (In centimeter)	Muscular Strength (number of counts)	Muscular Endurance (number of counts)
MEAN	312.55	1412.50	18.65	12.90	17.50
SD	38.08	199.92	3.26	4.66	5.22

Table II. Pearson product moment correlation different on academic achievement

S. No	Academic Achievement Vs	Obtained 'r'	Required 'r'
1	Cardiovascular Endurance	0.24	0.423
2	Muscular Strength	-0.08	
3	Muscular Endurance	0.23	
4	Flexibility	0.21	

The result of the study shown in table I & II showed that there was no significant relationship between academic achievement and health related physical fitness variables as the obtained 'r' value cardiovascular endurance 0.24 muscular flexibility -0.08 muscular strength 0.23 and muscular endurance 0.21 were lesser than the required 'r' value of 0.423.

Conclusion

It was concluded that there was no significant relationship between the academic achievement and health related physical fitness variables such as cardiovascular endurance, muscular flexibility, muscular strength, and muscular endurance.

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