

A STUDY OF A CERTAIN PHYSICAL PROFILE OF SCHOOL AGED BOYS

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ABSTRACT

The study's goal was to survey and evaluate chosen physical factors in school-aged boys in comparison to standard norms. For the study, 200 high school boys between the ages of 14 and 18 were chosen. Flexibility, abdominal strength, power, speed, and cardio-respiratory endurance were chosen as the five physical factors to be tested on the subjects. The acquired values were compared to the test's standardised norms. Subjects were chosen at random and data was collected. For data analysis, descriptive and sample t-tests were utilised as statistical approaches. All of the variables deviated significantly from the standardised norms provided for chosen tests, according to the results. The respondents' flexibility and cardio-respiratory ability were determined to be superior to industry standards. They were, however, on the low end of the power, abdominal strength, and speed normative values.

Keywords: Flexibility, Abdominal strength endurance, power, speed, endurance.

INTRODUCTION

The school is regarded as an outstanding location for providing children with daily physical exercise opportunities, instilling in them the importance of regular physical activity and its role in fitness and well-being, and developing skills that support active lifestyles (Active Living Research, 2007). It is critical that schools have a well-designed and well-taught physical education programme in order to influence children's physical, physiological, and psychological well-being. The job of the physical education teacher is critical to the achievement of a successful Physical Education programme. It is critical that the teacher is enthusiastic about helping youngsters reach their health goals. By teaching, inspiring, and engaging students through a variety of educational methods and activities, the teacher should be able to positively influence students' attitudes on the necessity of being active.

The position of a nation's children determines a great deal of its future. Children who are healthy are the cornerstones of a healthy nation. Many world leaders — presidents, prime ministers, and health ministers — have recognised schools as a key setting in which children should acquire physical, emotional, and social well-being behaviour and abilities. No societal institution has a larger impact on the lives of broods than schools, aside from the family. Every day, millions of children and young people throughout the world go to school and spend a substantial amount of time learning, developing attitudes and abilities, and forming behaviours with their peers, other students, and teachers. Many of the behavioural habits formed in childhood and adolescence are carried over into adulthood (Weber, 1984). As a result, schools play a key role in the development of healthier nations all over the world. Because children and adolescents spend a significant portion of their young lives in schools, educational efforts can be put into action on a regular and continuous

basis, schools provide an excellent opportunity for students to acquire knowledge and skills while also increasing activity levels among young people (WHO, 1996).

Although scientific studies have questioned the quality and quantity of Health and Physical Education lessons taught in elementary schools, the importance of physical education in sustaining good health is universally acknowledged (Fairclough & Stratton, 2005, Morgan & Hansen, 2008, Micheli et al., 2011). Recent research has found promising outcomes in enhancing health-related fitness, particularly cardio-respiratory fitness, through school-based interventions (Kriemler et al., 2011). Several, on the other hand, have failed to address the numerous factors that influence behaviour in the classroom, make reference to reliable learning theories or curricular direction in intervention designs, or expressly target gains in all of the health-related fitness components. Furthermore, few studies have planned and tested multi-component programmes that extend learning outside of the classroom and into the home, thereby reducing the program's influence on health outcomes and behaviour change (Dobbins et al., 2009)."

"The World Health Organization (WHO) has issued Global Recommendations on Physical Activity and Health to address children's diminishing physical activity (PA) and physical fitness (PF) levels, as well as the rise in noncommunicable diseases that has resulted" (NCDs). The frequency, duration, intensity, type, and total amount of physical exercise required to prevent NCDs are outlined in these guidelines. The WHO currently recommends that children aged 6 to 17 engage in at least 60 minutes of moderate-to-vigorous physical activity per day, and at least three days per week engage in vigorous physical exercise (high intensity), muscle-strengthening physical activity, and bone-strengthening physical activity (WHO 2010). During leisure time, sedentary activities such as watching television and working on computers should be limited to no more than 2 hours a day."

Childhood and adolescence are critical years in a person's life because they are formative years during which significant physiological and psychological changes occur. During these years, an individual's lifestyle and healthy/unhealthy behaviours become habits, which have a substantial impact on that individual's adult behaviour and health state.

PROCEDURE AND METHODOLOGY

Selection of the subjects

The normative study's testing took place during a ten-month period. 200 boys from Delhi Government School S.K.V Padam Nagar were chosen for the study (a senior group of 100 boys in 11th and 12th grades and a younger group of 100 boys in 9th and 10th grades). The school administration gave their permission to conduct the subjects' physical fitness tests in advance.

Selection of the variables

It was decided to compare physical factors of boys for the purposes of this study. As a result, the following variables were chosen for research:

INDEPENDENT VARIABLES

- 1) Gender – Boys
- 2) Level – Senior & Junior

DEPENDENT VARIABLES

- 1) Physical Variables
 - Flexibility
 - Power
 - Abdominal strength endurance
 - Speed
 - Cardio Respiratory Endurance

Criterion measures

For the aim of gathering data from the sample, the following criterion measures were used:

TABLE**List of Selected Variables**

| S. No. | Variable | Test Item | Unit |
|--------|----------------------------------|--------------------|-------------|
| 1 | Flexibility | Sit and Reach Test | Centimeters |
| 2 | Power | Vertical Jump | Inches |
| 3 | Abdominal Strength and Endurance | Curl- Up | Numbers |
| 4 | Speed | 50 yard Run | Seconds |
| 5 | Cardio Respiratory Endurance | 600 yard Run /Walk | Seconds |

Data collection

The research scholar personally called the principal of a Delhi school to emphasise the necessity for and significance of the investigation. The student requested that the school's principal extend their participation for the research. The school administrators were assured that they would be given normative values and assessments of their students on numerous physical factors. An informed consent form was submitted to the authority, which was duly signed by the principal or the parents of the children being tested prior to the start of the testing programme. The research team went to the school on the days that were allowed to collect data on all of the components. For each test, data was obtained by setting up different stations. Following the completion of a test on one station, the individual advanced to the next station. After setting up the stations, the study team began collecting data in the order listed above.

Statistical technique

Descriptive statistics is a type of statistical analysis that is performed after data is collected from the

individuals chosen for the study (Mean and Standard deviation). With the use of the Sample T test, the collected values from the subjects were compared to established norms. SPSS software version 16.0 was used to apply all statistical procedures.

Result and discussion

Descriptive statistics of physical variables

| Variable | Mean | Std. Deviation |
|--|--------|----------------|
| Flexibility (sit & reach) | 33.53 | 7.722 |
| Power (Vertical jump) | 12.39 | 2.730 |
| Abdominal strength endurance (Curl up) | 23.32 | 6.487 |
| Speed (50 meter) | 9.850 | 1.0552 |
| Cardio respiratory endurance (600 meter) | 194.91 | 38.882 |

The mean and standard deviation values for boys' flexibility were 33.53 and 7.722, respectively, as shown in the table. For the boys group, the mean and standard deviation of physical variable power (vertical jump) were 12.39 and 2.73, respectively. The mean and standard deviation values for abdominal strength were determined to be 23.32 and 6.487, respectively, in the table. Physical variable speed (50mtr) has a mean and standard deviation of 9.85 1.0552. Last but not least, the descriptive values for cardiorespiratory endurance (600 metre) were 194.91 38.882.

The obtained values of all physical variables were compared to the standardised values provided in the study's test method. At the 0.05 threshold of significance, all values were found to be substantially different. With $t = 3.709$ ($p = 0.00$), flexibility was determined to be better. Power, abdominal strength, and speed, on the other hand, were significantly lower than the normal values, with t values of -59.8, -33.37, and 33.64, respectively, compared to the standard values. Their cardio respiratory endurance, however, was much better, with a $t = 27.90$ ($p = 0.00$) value.

| Variable | t | Sig |
|--|--------|-------|
| Flexibility (sit & reach) | 3.709 | 0.000 |
| Power (Vertical jump) | -59.8 | 0.000 |
| Abdominal strength endurance (Curl up) | -33.37 | 0.000 |
| Speed (50 meter) | 33.64 | 0.000 |
| Cardio respiratory endurance (600 meter) | 27.90 | 0.000 |

Conclusions & Recommendations

Based on the findings, their interpretation, and discussion, it was determined that the selected physical variables of school-aged boys deviate significantly from the standardised values of the same tests. It

was also determined that participants performed better than the normal norms in the areas of flexibility and cardiopulmonary endurance. It was also determined that their power, abdominal strength, and speed ability were all on the lower end of the scale when compared to industry standards. The following recommendations are given in light of the findings of the current study: Schoolchildren will be subjected to a particular physical education/training programme in order to address their visible deficit in muscular strength and muscular endurance. In order to have fit citizens, health-related fitness tests should be conducted annually in schools across India. Longitudinal and interventional studies are needed to determine if changes in physical activity and cardiopulmonary fitness can alter the levels of CVD risk variables at these ages and into adulthood. Understanding the link between cardio respiratory fitness and CVD outcomes in children and adolescents could aid in determining whether cardio respiratory fitness can be used as a health marker at these ages or not. It may be useful to define the target group for primary prevention and health promoter policies if optimal values for cardio respiratory fitness health are established at a young age. Schools can help in this area by identifying children with low cardio-respiratory fitness and promoting positive health behaviours including encouraging children to participate in physical exercise and reducing time spent doing sedentary activities. The same strategy can be used to do similar research on numerous age groups. Using several types of physical factors, a similar study can be carried out.

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