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Study of shoulder strength and core strength among different school board students in Aligarh Region

Vikas Baboo[1*], Dr. Deepak Raghav[2]

[1]*Research Scholar, Department of Physical Education, Swami Vivekanand Subharti University, Meerut (U.P.)
[2]Assistant Professor, Department of Physical Education, Swami Vivekanand Subharti University, Meerut (U.P.)

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ABSTRACT

***Introduction*:** The objective of this study was to investigate the shoulder strength and core strength among different school board students in Aligarh Region. Another purpose of the study was to find out the shoulder strength and core strength among different school board students in Aligarh Region. ***Methods*:** The selection of subjects of the study wear 600 boys and girls from school students of different education boards in Aligarh Region (Aligarh, Hathras, Kasganj, Etah). 150 subjects (75 Boys and 75 Girls) wear selected from each District in Aligarh Region. Further 75 boys and 75 girls wear equally divided into 25 students for selected each education board i.e. Central Board of Secondary Education (C.B.S.E.), Indian Certificate of Secondary Education (I.C.S.E.) and Board of High School & Intermediate Education Uttar Pradesh (B.H.S.I.E.U.P.) were selecting through cluster sampling. The age level of subjects was range from 14 to 17 years. All the subjects were the residents of Aligarh Region. A stand and progressive matrices organizational selected shoulder strength among different school board students in Aligarh Region, Tennis Ball Throw and core strength among different school board students in Aligarh Region, Medicine ball Throw was used. To find out significant different of shoulder strength and core strength among different school board students in Aligarh Region, the one-way analysis of variance was used. The level of significance was set at .05 levels. ***Results and Discussion*:** The result reveals the one-way analysis of variance that there was insignificant ($p<.05$) for shoulder strength and core strength among different school board students in Aligarh Region.

Keywords: Shoulder Strength, Core Strength, Different School Board and Students

INTRODUCTION

Physical fitness represents one of the most essential aspects of an individual's harmonious development. It is not simply a biological condition but also a cultural phenomenon that carries immense complexity and significance. Historically, physical fitness has been associated with health, survival, and the complete development of human potential. It is regarded as an ornament to youth, a source of resilience in old age, and an asset for individuals across all social classes. The value placed on fitness within a society reflects the traits and priorities of that society.

Today, nearly every nation in the world emphasizes the importance of fitness and sports to enhance population health and to secure the well-being of future generations. Physical fitness is generally defined as the capacity to perform daily tasks with vigor, without undue fatigue, and with sufficient energy to enjoy leisure pursuits. It also encompasses the ability to meet unforeseen physical challenges. The core components of fitness include muscular strength, muscular endurance, cardiovascular endurance, speed, agility, flexibility, balance, and coordination. Collectively, these qualities form the basis of motor fitness and athletic capability (**Dr. Prem S. Meena, 2024**).

In contemporary society, physical fitness is recognized as a key determinant of quality of life. The medical community emphasizes that it is far more effective to maintain health through regular exercise than to attempt to regain it after illness. Fitness serves as both a preventive and therapeutic measure, reducing the risk of chronic diseases such as obesity, diabetes, cardiovascular disease, and mental health disorders.

A physically fit individual is better equipped to endure the stresses of modern life be it occupational demands, academic pressures, or unexpected physical challenges. Fitness contributes to greater productivity, enhanced self-confidence, and improved mental resilience. Basic movements such as running, lifting, climbing, and jumping require a combination of strength, endurance, coordination, and flexibility. Sports and exercise cultivate these attributes systematically.

Importantly, fitness is not confined to professional athletes; it is equally critical for children, adolescents, and older adults. For youth, fitness establishes lifelong habits of health and discipline. For the elderly, it ensures independence, mobility, and a higher quality of life.

METHODOLOGY

The selection of subjects of the study wear 600 boys and girls from school students of different education boards in Aligarh Region (Aligarh, Hathras, Kasganj, Etah). 150 subjects (75 Boys and 75 Girls) wear selected from each District in Aligarh Region. Further 75 boys and 75 girls wear equally divided into 25 students for selected each education board i.e. Central Board of Secondary Education (C.B.S.E.), Indian Certificate of Secondary Education (I.C.S.E.) and Board of High School & Intermediate Education Uttar Pradesh (B.H.S.I.E.U.P.) were selecting through cluster sampling. The age level of subjects was range from 14 to 17 years. All the subjects were the residents of Aligarh Region. A stand and progressive matrices organizational selected shoulder strength among different school board students in Aligarh Region, Tennis Ball Throw and core strength among different school board students in Aligarh Region, Medicine ball Throw was used. To find out significant different of shoulder strength and core strength among different school board students in Aligarh Region, the one-way analysis of variance was used. The level of significance was set at .05 levels.

FINDINGS OF THE STUDY

Shoulder Strength:

Table no.-01 Analysis of variance of shoulder strength among different school board students in Aligarh Region

Source of Variance	df	SS	MSS	F-ratio	Significance Level	Value of Significance (2, 597)
Between Group	2	2040.819	1020.409	2.594	.05	3.01
Within Group	597	234871.348	393.419			

The values shown in table no. 01 clearly show that the calculated F-value is much lower than the value required for significance. Hence it is stated that, no significance relationship exist among the means of different school board students in Aligarh Region in relation to their shoulder strength.

The scores are also illustrated in the figure no.-01

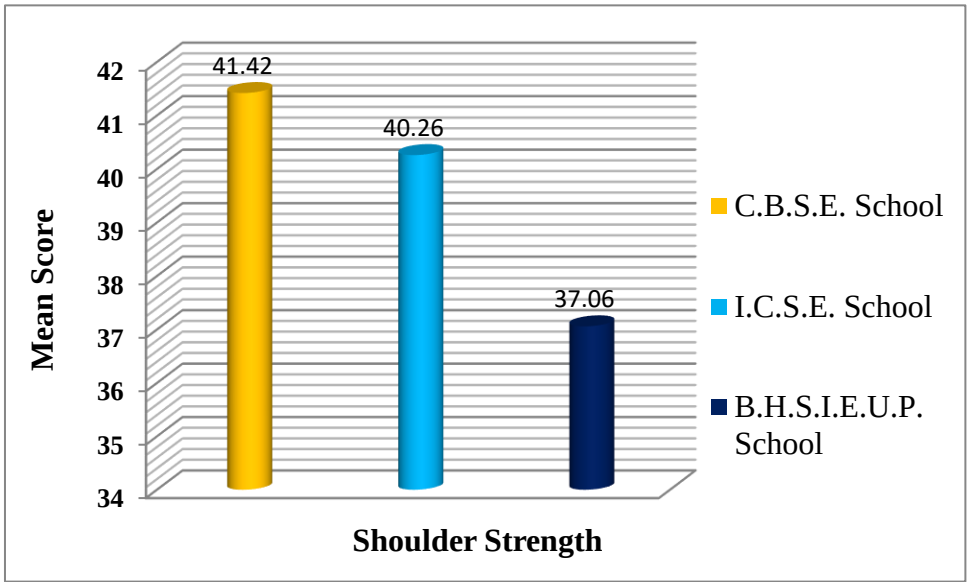

Figure no.-01: Graphical presentation of mean difference for strength among different school board students in Aligarh Region

Core Strength:

To find out core strength among different school board students in Aligarh Region, analysis of variance was used and presented in table no.-02.

Table no.-02 Analysis of variance of core strength among different school board students in Aligarh Region

Source of Variance	df	SS	MSS	F-ratio	Significance Level	Value of Significance (2, 597)
Between Group	2	.334	.167	.139	.05	3.01
Within Group	597	718.798	1.204			

The values shown in table no. 02 clearly show that the calculated F-value is much lower than the value required for significance. Hence it is stated that, no significance relationship exist among the means of different school board students in Aligarh Region in relation to their core strength.

The scores are also illustrated in the figure no.-02

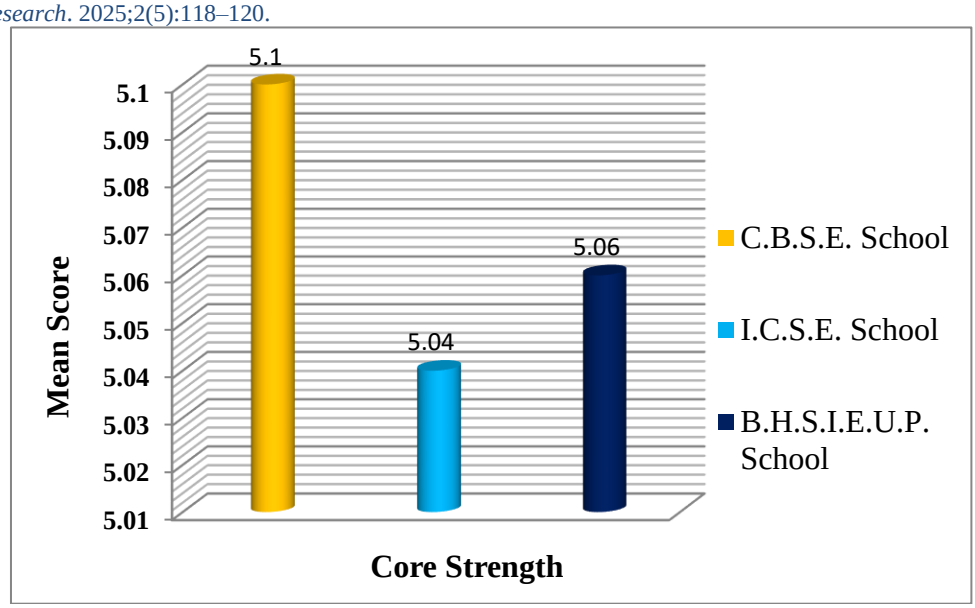

Figure no.-02: Graphical presentation of mean difference for core strength among different school board students in Aligarh Region

DISCUSSION OF THE RESULTS

The present investigation was designed to know the shoulder strength and core strength among the students of different school boards in Aligarh Region. The purpose of this study was revealed some specific differences for shoulder strength and core strength among the students of different school boards in Aligarh Region. The research scholars did not intend to explore personal life of students. Various tools have been used to find out the important differences in aspects of various shoulder strength and core strength of students to achieve the purpose of this research.

The result of the study revealed insignificant difference among the mean scores of different school board students in Aligarh Region in relation to shoulder strength and core strength. The This fact can be attributed to the different school board students, as all the students live in Aligarh Region and study in different school board (C.B.S.E., I.C.S.E. and B.H.S.I.E.U.P. School), due to which no differences have been found in the shoulder strength and core strength of all these students. The result of present study is also on the line of the studies conducted by Pike J. & M. Singh (2022), "Shoulder arthroplasty (TSA) is a surgical technique commonly used to treat patients with arthritis and rotator cuff deficiency". Decleve P., Van Cant J. & Cools A. M. (2021), "Reliability of the Modified CKCUEST and correlation with shoulder strength in adolescent basketball and volleyball players". Burnett Rachel & et al (2011), "Investigating the Associations between Core Strength, Postural Control and Fine Motor Performance in Children".

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