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A comparative study on the general fitness level of students of selected state board and international board of Chembur region

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Abstract

The motive of this research was to compare the general fitness level among selected state board and international board students of Chembur region. To accomplish the motive of this study, 120 students, both male and female, of 10-12 age group, were randomly selected as subjects for the purpose of this study out of total 1089 students from 4 different schools of Chembur region. 60 students were from the State Board Schools and 60 students were from the International Board Schools. The Descriptive Survey Research Design had been framed for this study. Standardized Tests of the selected general physical fitness components, i.e., Muscular Strength, Muscular Endurance, Cardio Vascular Endurance and Flexibility were conducted on all 120 students. A 't-test' was used for the purpose of understanding, analyzing and interpreting the data collected for this study. The analysis was done by using the IBM SPSS Statistics Software. From the findings of data, it was concluded that there was a significant difference found in the selected general physical fitness variables of State board and International board students.

Keywords: General Fitness, State Board, International Board

Introduction

For years, physical fitness was concerned only to athletes who were seeking every possible tool to improve their performance and to sharpen their competitive skills. But now the fitness movement has moved far beyond organized athletes to every individual in the sense that they wish to sharpen their physical activities to compete in a fast-paced society. Fitness is a quality of life that occurs when the mind, spirit and body work together in harmony. Fitness is the ability to perform or to take up a work with the maximum efforts. Fitness comprises two related concepts: general physical fitness and specific fitness. General physical fitness is the ability to carry out daily tasks with vigor and alertness without undue fatigue and with ample energy to enjoy leisure time pursuit and to meet unforeseen emergencies. General physical fitness, the cornerstone of a healthy lifestyle, encompasses the harmonious coordination of body and mind to perform daily tasks efficiently. For children aged 10 to 12, a pivotal period in their growth, physical fitness profoundly influences their health, academic performance, and overall well-being. In Chembur, Mumbai, where students engage in education under both the Maharashtra State Board and International Boards like IB and CAIE, the approaches to physical education diverge significantly.

The Maharashtra State Board prioritizes fitness by integrating it into the curriculum as a mandatory subject. Students partake in various activities such as sports, yoga, and gymnastics, receiving theoretical knowledge and practical training. Additionally, extracurricular events like sports competitions and fitness camps further promote physical well-being. Despite the emphasis on fitness, the academic load is comparatively lighter. Conversely, International Boards like IB and CAIE also embed physical education within their curriculum but with a broader perspective. Fitness concepts are intertwined with other subjects, encouraging interdisciplinary learning. Co-curricular activities like sports teams and fitness clubs supplement formal education, fostering holistic development. However,

the academic demands are typically higher. Despite these efforts, the efficacy of these curricula in enhancing students' fitness remains uncertain. In Chembur, where diverse educational systems operate, it becomes crucial to evaluate the impact of these approaches on the general fitness of students aged 10 to 12 years.

Hypotheses of the Study: The researcher formulated the following hypotheses which could be tested satisfactorily:

H₁: There will be a significant difference in the selected general physical fitness variable (Muscular Strength) of the students of State board and International board schools of Chembur region.

H₂: There will be a significant difference in the selected general physical fitness variable (Muscular Endurance) of the students of State board and International board schools of Chembur region.

H₃: There will be a significant difference in the selected general physical fitness variable (Cardio Vascular Endurance) of the students of State board and International board schools of Chembur region.

H₄: There will be a significant difference in the selected general physical fitness variable (Flexibility) of the students of State board and International board schools of Chembur region.

Significance of the Study

- The result of this study will encourage the students to focus more on their fitness level in future.
- It will also help to create awareness about fitness among the students and motivate them to participate and involve themselves more in physical activities.
- The study can highlight the importance of physical fitness in school-age children and encourage schools to prioritize physical education and sports activities.
- Moreover, it can be valuable for educational policymakers in making informed decisions about curriculum design and physical education programs.
- This study can serve as a foundation for future research in related areas.
- It can also have implications for the development of educational policies aimed at enhancing the overall well-being of students.

Research Methodology

The methodology of this study consisted of 2 groups of 60 students each, to check their general fitness level by conducting different standardized tests related to selected general fitness variables. Descriptive Survey Research Design had been framed for this study. 120 students, both male and female, of 10-12 age group, were randomly selected as subjects for the purpose of this study out of total 1089 students from 4 different schools of Chembur region. 60 students were from the State Board Schools and 60 students were from the International Board Schools.

Table 1: Selection of Tests

Sr. No.	Variable	Test	Equipment	Unit of Measurement
1.	Muscular Strength	Grip Strength	Hand Dynamometer	Kilograms
2.	Muscular Endurance	Bent Knee Sit Ups	Flat Ground, Mat, Stopwatch, Helper	Number of Sit Ups
3.	Cardio Vascular Endurance	600 Yard Run-Walk	Stopwatch, Whistle, Track or Marked Area	Minutes and Seconds
4.	Flexibility	Sit and Reach	Sit and Reach Box, Flexomeasure	Centimeters

Analysis and Interpretation of Data

The data collected on the selected general physical fitness components, i.e, muscular strength, muscular endurance, cardio vascular endurance and flexibility of State board and International board students as subjects of this study were

analyzed with a 't-test' by using the IBM SPSS Statistics Software. The data were arranged systematically in tabular format associated with graphical representations and were interpreted considering the scientific values.

Table 2: Result of Muscular Strength

Variable	State Board (SB)			International Board (IB)			Mean Gain	't'	Significance
	Mean	SD	S.Em	Mean	SD	S.Em			
Muscular Strength	14.36	3.36	0.43	17.73	3.04	0.39	3.37	+5.75	$p < 0.05$

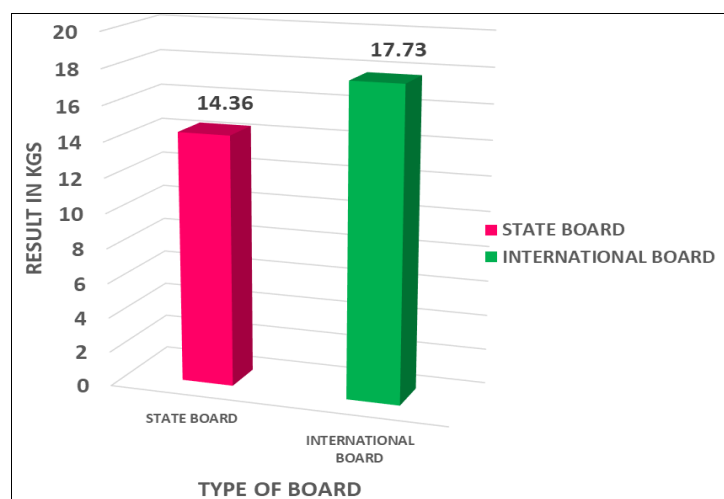


Fig 1: Comparison of Means of Muscular Strength of State Board and International Board Students

From the above table and graph, it is quite evident that there was a significant difference found in the means of muscular strength of State board and International board students. The mean performance of the State board students was 14.36 (SD=3.36) and that of the International board students was 17.73 (SD=3.04). The Mean Gain for the International board students was 3.37.

The result of 't' test showed significant difference in muscular strength of State board and International board students ($t = + 5.75, p < 0.05$). Therefore, hypothesis H₁: "There will be a significant difference in the selected general physical fitness variable (Muscular Strength) of the students of State board and International board schools of Chembur region" is accepted.

Table 3: Result of Muscular Endurance

Variable	State Board (SB)			International Board (IB)			Mean Gain	't'	Significance
	Mean	SD	S.Em	Mean	SD	S.Em			
Muscular Endurance	28.25	5.01	0.65	33.25	5.35	0.69	5.00	+5.29	$p < 0.05$

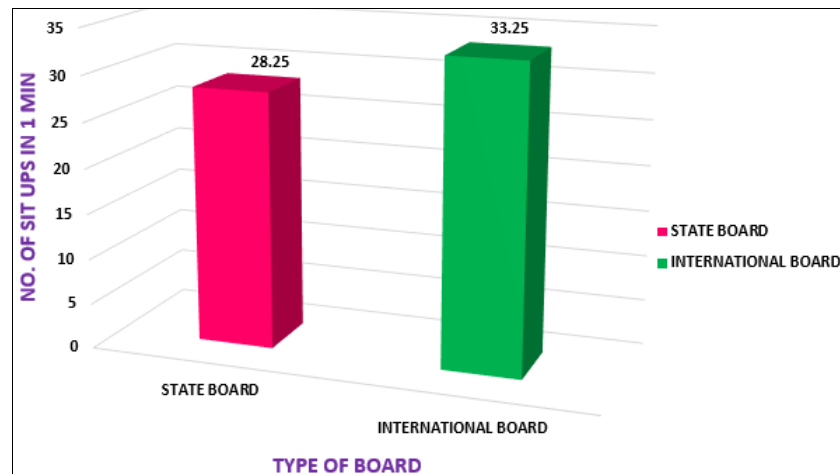


Fig 2: Comparison of Means of Muscular Endurance of State Board and International Board Students

From the above table and graph, it is quite evident that there was a significant difference found in the means of muscular endurance of State board and International board students. The mean performance of the State board students was 28.25 (SD=5.01) and that of the International board students was 33.25 (SD=5.35). The Mean Gain for the International board students was 5.00.

The result of 't' test showed significant difference in muscular endurance of State board and International board students ($t = + 5.29, p < 0.05$). Therefore, hypothesis H₂: "There will be a significant difference in the selected general physical fitness variable (Muscular Endurance) of the students of State board and International board schools of Chembur region" is accepted.

Table 4: Result of Cardio Vascular Endurance

Variable	State Board (SB)			International Board (IB)			Mean Gain	't'	Significance
	Mean	SD	S.Em	Mean	SD	S.Em			
Cardio Vascular Endurance	2.96	0.39	0.05	2.70	0.39	0.05	0.26	+3.69	$p < 0.05$

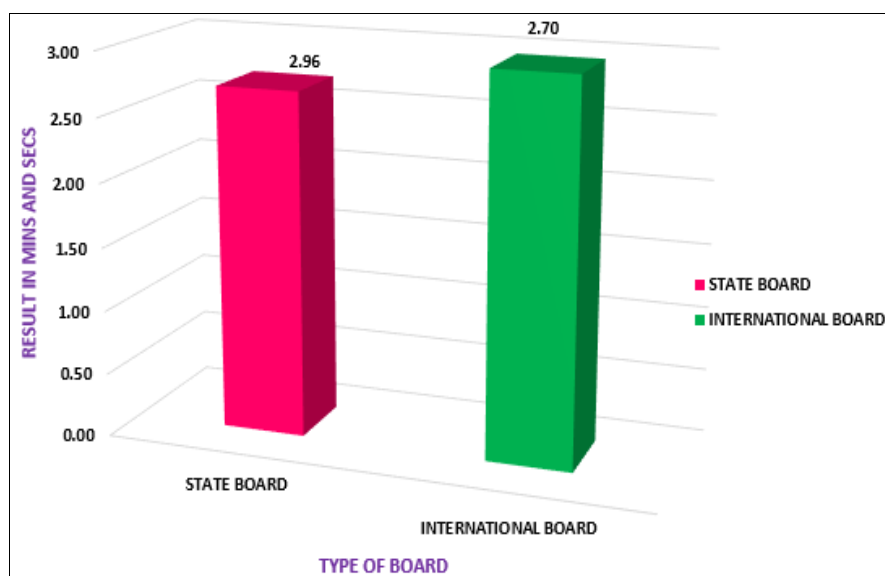


Fig 3: Comparison of Means of Cardio Vascular Endurance of State Board and International Board Students

From the above table and graph, it is quite evident that there was a significant difference found in the means of cardio vascular endurance of State board and International board students. The mean performance of the State board students was 2.96 (SD=0.39) and that of the International board students was 2.70 (SD=0.39). The Mean Gain for the International board students was 0.26. The result of 't' test

showed significant difference in cardio vascular endurance of State board and International board students ($t = + 3.69$, $p < 0.05$). Therefore, hypothesis H₃: "There will be a significant difference in the selected general physical fitness variable (Cardio Vascular Endurance) of the students of State board and International board schools of Chembur region" is accepted.

Table 5: Result of Flexibility

Variable	State Board (SB)			International Board (IB)			Mean Gain	't'	Significance
	Mean	SD	S.Em	Mean	SD	S.Em			
Flexibility	22.12	4.19	0.54	25.32	4.18	0.54	3.20	+4.18	$p < 0.05$

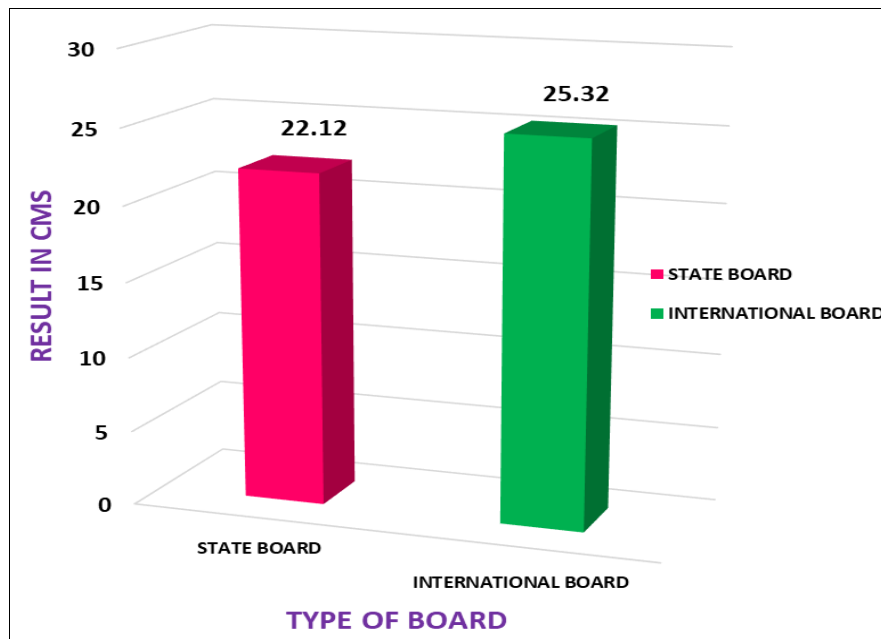


Fig 4: Comparison of Means of Flexibility of State Board and International Board Students

From the above table and graph, it is quite evident that there was a significant difference found in the means of flexibility of State board and International board students. The mean performance of the State board students was 22.12 (SD=4.19) and that of the International board students was 25.32 (SD=4.18). The Mean Gain for the International board students was 3.20. The result of 't' test showed significant difference in flexibility of State board and International board students ($t = + 4.18$, $p < 0.05$). Therefore, hypothesis H₄: "There will be a significant difference in the selected general physical fitness variable (Flexibility) of the students of State board and International board schools of Chembur region" is accepted.

Findings and Conclusions

From the above analysis and interpretation of data, the findings and conclusions were as follows:

There was a significant difference found in the means of selected general physical fitness variable (Muscular strength) of State board and International board students. There was a significant difference found in the means of selected general physical fitness variable (Muscular endurance) of State board and International board students. There was a significant difference found in the means of selected general physical fitness variable (Cardio vascular endurance) of State board and International board students. There was a significant difference found in the means of selected general physical fitness variable (Flexibility) of State board and International board students.

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