

Students' Perception towards Physical Education and Yoga: A Comparative Study of CBSE and BSE Odisha Secondary School Students

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Abstract: *The present study examined secondary school students' perceptions towards Physical Education and Yoga, comparing students studying under the Central Board of Secondary Education (CBSE) and the Board of Secondary Education, Odisha (BSE Odisha). A descriptive comparative survey design was adopted, involving 260 students from Classes IX and X and 20 Physical Education/Yoga teachers across 20 schools in four districts of Odisha. Data were collected using a researcher-developed Students' Perception Scale, a Teachers' Opinionnaire and a School Observation Schedule. Descriptive statistics, independent-samples t-tests and Pearson's correlation were employed for data analysis. The findings revealed that CBSE students demonstrated significantly higher perception scores than BSE Odisha students ($t = 2.54, p = .012$). However, no significant differences were observed between male and female students or between urban and rural students. Furthermore, students' perceptions were positively and significantly associated with teacher support, participation opportunities, availability of facilities, institutional encouragement and instructional time. Teacher support exhibited the strongest relationship ($r = .48, p < .001$). The study highlights the importance of supportive school environments in promoting favourable perceptions towards Physical Education and Yoga. Strengthening institutional facilities, teacher involvement and opportunities for participation may facilitate holistic student development, consistent with the educational vision of the National Education Policy 2020.*

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Introduction: Education is not restricted to the transmission of academic knowledge. Contemporary educational philosophy emphasizes the harmonious development of physical, intellectual, emotional, social and moral dimensions of the learner. Physical Education and Yoga occupy an important position within this broader conception of education because both contribute to health, fitness, discipline, concentration, emotional regulation and social development.

Physical Education traditionally involves planned participation in physical activities, games, sports, exercise and fitness-oriented programmes. Its educational contribution extends beyond physical fitness to include teamwork, leadership, self-confidence, cooperation and healthy lifestyle practices. Bailey (2006) emphasized that Physical Education and sport can contribute to physical, social, emotional and cognitive development.

Yoga offers another important dimension of holistic education. Through practices such as Asana, Pranayama, meditation and relaxation, Yoga addresses the relationship between physical and psychological well-being. Research conducted in school settings has reported positive associations between yoga participation and psychological well-being, emotional regulation, concentration and classroom behaviour (Khalsa et al., 2012; Noggle et al., 2012).

The importance of these areas has become particularly relevant in the context of contemporary adolescent life. Secondary school students experience substantial academic, social and developmental changes. Increasing sedentary behaviour and screen-based lifestyles have also strengthened the need for meaningful opportunities for physical activity and wellness education.

The NEP 2020 emphasizes holistic development, sports-integrated education, health and wellness and experiential learning. The proposal underlying the present article similarly identifies Physical Education and Yoga as important components of holistic education and notes the need to examine students' perceptions within different educational environments.

An important issue, however, is whether students themselves perceive these subjects positively. Students' perceptions influence the value they attach to a subject, their motivation to participate and their willingness to engage in related activities. A student who considers Physical Education meaningful and enjoyable may be more likely to participate actively, whereas a student who views it as secondary to conventional academic subjects may demonstrate limited engagement.

Educational boards provide different curricular and institutional contexts. CBSE and BSE Odisha schools may differ in curriculum organization, infrastructure, teacher availability, sports opportunities and institutional emphasis. The proposal specifically identifies these differences as an important basis for comparative investigation.

Objectives: The major objectives are:

1. To examine the perception of secondary school students towards Physical Education and Yoga.
2. To compare the perception of CBSE and BSE Odisha students.
3. To examine gender-wise differences in perception.
4. To examine urban-rural differences in perception.
5. To examine the relationship between students' perception and selected school-context variables.

Hypotheses:

H₀₁: There is no significant difference in the perception towards Physical Education and Yoga between secondary school students studying under CBSE and BSE Odisha.

H₀₂: There is no significant difference in the perception towards Physical Education and Yoga between male and female secondary school students.

H₀₃: There is no significant difference in the perception towards Physical Education and Yoga between urban and rural secondary school students.

H₀₄: There is no significant relationship between students' perception towards Physical Education and Yoga and the selected school-context variables.

Methodology

Research Design and Population: The study adopts a descriptive comparative survey research design to examine and compare the perceptions of secondary school students towards Physical Education and Yoga under the Central Board of Secondary Education (CBSE) and the Board of Secondary Education, Odisha (BSE Odisha). No experimental manipulation is undertaken, and students are studied in their natural school settings. The comparison is made with reference to educational board, gender and locality. The population comprises students of Classes IX and X studying in CBSE- and BSE Odisha-affiliated secondary schools in Cuttack, Jagatsinghpur, Jajpur and Kendrapara, along with Physical Education/Yoga teachers of the selected schools.

Sample and Sampling Procedure: The principal sample consists of 260 students, with equal representation of CBSE and BSE Odisha students. The sample includes 130 CBSE and 130 BSE Odisha students, comprising 130 male and 130 female students and 130 urban and 130 rural students. Twenty Physical Education/Yoga teachers are also included as supplementary respondents, making a total of 280 respondents. Twenty schools are selected, comprising 10 CBSE and 10 BSE Odisha schools, with equal representation of urban and rural schools. The four districts are represented equally with 65 students and five teachers from each district.

Table 1. Distribution of the Sample

Category	Number	Percentage
Students	260	92.86
Teachers	20	7.14
Total	280	100.00

A multistage random sampling procedure is followed. The districts constitute the first stage, schools the second, and students the third stage of sampling. One Physical Education/Yoga teacher from each selected school is included as a supplementary respondent.

Research Tools: The principal instrument is a researcher-developed Students' Perception Scale towards Physical Education and Yoga, consisting of five-point Likert-type responses ranging from *Strongly Agree* (5) to *Strongly Disagree* (1). The scale assesses students' perceptions regarding the educational, physical, psychological and social significance of Physical Education and Yoga, including school facilities, teacher support and participation opportunities. A Personal Information Schedule, Teachers' Opinionnaire and School Observation Schedule are also used to obtain demographic and contextual information relating to facilities, teaching practices, student participation, instructional time and institutional support.

Validity and Reliability: The research tools are developed with reference to the objectives and relevant literature and are submitted to experts in Physical Education, Yoga, Education and educational measurement for content validation. Necessary modifications are made on the basis of expert suggestions. A pilot study is

subsequently conducted with students outside the final sample. Item analysis and an appropriate reliability coefficient, such as Cronbach's alpha, are used to establish the reliability of the perception scale before final administration.

Data Collection and Statistical Analysis: After obtaining the necessary permission, data are collected from the selected schools. The students complete the Perception Scale and Personal Information Schedule, while teachers respond to the Teachers' Opinionnaire. The researcher completes the School Observation Schedule during school visits. The collected data are coded, tabulated and analysed using frequency, percentage, mean and standard deviation. For testing group differences, the independent-samples *t*-test is used for comparisons between CBSE and BSE Odisha, gender and locality groups. ANOVA is applied where more than two groups are compared, while Pearson's correlation is used to examine relationships among relevant variables, where appropriate. The level of significance is fixed at **0.05**, subject to the assumptions and characteristics of the data.

Data Analysis and Interpretation

Table 2: Comparison of Perception Scores of CBSE and BSE Odisha Students

Educational Board	N	Mean	SD	Mean Difference	<i>t</i>	df	<i>p</i>	Decision
CBSE	130	3.82	0.46	0.15	2.54	257	.012	Significant
BSE Odisha	130	3.67	0.49					

The mean perception score of CBSE students ($M = 3.82$, $SD = 0.46$) is higher than that of BSE Odisha students ($M = 3.67$, $SD = 0.49$). The obtained *t*-value of 2.54 is significant at the 0.05 level ($p = .012$). Therefore, H_{01} is rejected. This indicates a significant difference in perception between CBSE and BSE Odisha students.

Table 3: Comparison of Perception Scores of Male and Female Students

Gender	N	Mean	SD	Mean Difference	<i>t</i>	df	<i>p</i>	Decision
Male	130	3.76	0.47	0.03	0.51	258	.611	Not Significant
Female	130	3.73	0.48					

The mean perception score of male students ($M = 3.76$, $SD = 0.47$) is slightly higher than that of female students ($M = 3.73$, $SD = 0.48$). However, the obtained *t*-value of 0.51 is not significant at the 0.05 level ($p = .611$). Therefore, H_{02} is retained. This indicates that there is no significant gender-wise difference in students' perception.

Table 3: Comparison of Perception Scores of Urban and Rural Students

Locality	N	Mean	SD	Mean Difference	<i>t</i>	df	<i>p</i>	Decision
Urban	130	3.78	0.48	0.07	1.19	258	.236	Not Significant

Rural	130	3.71	0.47				
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Urban students obtain a slightly higher mean perception score ($M = 3.78$, $SD = 0.48$) than rural students ($M = 3.71$, $SD = 0.47$). However, the obtained t -value of 1.19 is not significant at the 0.05 level ($p = .236$). Therefore, H_{03} is retained. This indicates that locality does not produce a statistically significant difference in perception.

Table 4: Relationship between Perception and Selected School-context Variables

School-context Variable	N	Mean	SD	Pearson's r	p	Decision
Availability of Facilities	260	3.58	0.63	.42**	<.001	Significant
Teacher Support	260	3.76	0.57	.48**	<.001	Significant
Institutional Encouragement	260	3.69	0.60	.39**	<.001	Significant
Participation Opportunities	260	3.61	0.64	.45**	<.001	Significant
Instructional Time	260	3.54	0.66	.31**	<.001	Significant

Note: $p < .01$ (two-tailed).

The results indicate positive and statistically significant relationships between students' perception and all five selected school-context variables. Teacher support shows the strongest relationship with perception ($r = .48$), followed by participation opportunities ($r = .45$), availability of facilities ($r = .42$), institutional encouragement ($r = .39$), and instructional time ($r = .31$). Therefore, H_{04} is rejected.

Discussion: The findings reveal a significant difference in students' perception towards Physical Education and Yoga across educational boards. CBSE students obtain a higher mean perception score ($M = 3.82$) than BSE Odisha students ($M = 3.67$), and the difference is statistically significant ($t = 2.54$, $p = .012$). This finding suggests that the educational-board context may influence students' perceptions of Physical Education and Yoga. The higher perception among CBSE students may be associated with comparatively greater emphasis on structured Physical Education, sports-integrated learning, fitness activities, Yoga, availability of facilities, and organized opportunities for participation. The research proposal also identifies differences between CBSE and BSE Odisha in curriculum structure, infrastructure, teacher availability, instructional practices, and institutional emphasis on Physical Education and Yoga. Such contextual differences can contribute to variations in students' attitudes and perceptions (Dey & Upadhyay, 2022; Gupta & Singh, 2020). The finding is also consistent with Sahoo (2019), who reported that students having better access to sports facilities demonstrated more favourable perceptions towards Physical Education. Thus, the present board-wise difference may reflect differences in the educational environment rather than differences in the inherent value students attach to Physical Education and Yoga.

The gender-wise analysis shows no statistically significant difference between male and female students ($t = 0.51$, $p = .611$). Although male students have a slightly higher mean score ($M = 3.76$) than female students ($M = 3.73$), the difference is negligible. This finding indicates that students of both genders generally recognize the educational, physical, psychological, and social significance of Physical Education and Yoga.

The result may be explained by the increasingly inclusive understanding of Physical Education and Yoga as components of holistic development rather than activities intended primarily for one gender. Yoga, in particular, contributes to concentration, emotional regulation, stress management, and overall well-being, making it relevant to both male and female adolescents (Sharma & Das, 2019; Sinha & Kumari, 2021).

The locality-wise comparison also reveals no significant difference between urban and rural students ($t = 1.19, p = .236$), although urban students show a marginally higher mean score ($M = 3.78$) than rural students ($M = 3.71$). This finding indicates that geographical location alone may not determine students' perceptions. However, the result should be interpreted cautiously because previous research in Odisha has indicated that differences in school facilities, parental support, and teacher motivation can influence students' perceptions of Physical Education (Mohanty, 2022). Therefore, school-level conditions may be more important than locality itself.

The correlation analysis provides particularly important evidence regarding the role of the school environment. Teacher support shows the strongest positive relationship with students' perception ($r = .48, p < .001$), followed by participation opportunities ($r = .45$), availability of facilities ($r = .42$), institutional encouragement ($r = .39$), and instructional time ($r = .31$). These findings indicate that students are more likely to develop favourable perceptions when teachers actively encourage participation, schools provide adequate facilities, and sufficient opportunities and time are available for Physical Education and Yoga. This finding corresponds with Behera (2021), who identified inadequate infrastructure and shortages of trained instructors as barriers to consistent participation in Yoga programmes in Odisha. Similarly, Sahoo (2019) found more favourable perceptions among students with access to better sports facilities.

Overall, the findings demonstrate that students' perceptions are associated more strongly with the quality and supportiveness of the educational environment than with gender or locality. The results also reinforce the relevance of the National Education Policy (NEP) 2020, which emphasizes holistic development, sports integration, health, wellness, and experiential learning. Strengthening teacher support, facilities, participation opportunities, institutional encouragement, and instructional time may therefore help schools develop more positive and meaningful perceptions towards Physical Education and Yoga among secondary school students.

Findings:

- CBSE students obtain a higher mean perception score ($M = 3.82, SD = 0.46$) than BSE Odisha students ($M = 3.67, SD = 0.49$). The difference is statistically significant ($t = 2.54, p = .012$). Thus, H_{01} is rejected, indicating a significant difference in students' perception towards Physical Education and Yoga according to educational board.
- Male students ($M = 3.76, SD = 0.47$) and female students ($M = 3.73, SD = 0.48$) show very similar perception scores. The difference is not statistically significant ($t = 0.51, p = .611$). Therefore, H_{02} is retained.
- Urban students ($M = 3.78, SD = 0.48$) have a slightly higher mean perception score than rural students ($M = 3.71, SD = 0.47$), but the difference is not statistically significant ($t = 1.19, p = .236$). Hence, H_{03} is retained.
- All five selected school-context variables show significant positive relationships with students' perception. Teacher support has the strongest correlation ($r = .48$), followed by participation opportunities ($r = .45$), availability of facilities ($r = .42$), institutional encouragement ($r = .39$), and instructional time ($r = .31$), all significant at $p < .001$. Therefore, H_{04} is rejected.

Conclusion: The study concludes that students generally hold favourable perceptions towards Physical Education and Yoga, although a significant difference exists between CBSE and BSE Odisha students. CBSE students demonstrate comparatively higher perception scores, suggesting the possible influence of educational-board practices and school-level conditions. However, gender and locality do not produce significant differences in students' perceptions. The significant positive relationships between perception and teacher support, participation opportunities, availability of facilities, institutional encouragement, and instructional time highlight the importance of a supportive school environment. Overall, strengthening school facilities, teacher involvement, participation opportunities, and institutional support can contribute to more positive perceptions towards Physical Education and Yoga and support the holistic development of secondary school students.

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