



ISSN: 2456-0057

IJPNPE 2025; 10(2): 152-155

Impact Factor (RJIF): 5.91

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www.journalofsports.com

Received: 25-06-2025

Accepted: 28-07-2025

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Differences in socio-economic status among football, cricket, volleyball and track & field athletes: A case study

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DOI: <https://www.doi.org/10.22271/journalofsport.2025.v10.i2c.3084>

Abstract

Socioeconomic status is a significant factor in determining the participation of children and youths in sports. Past studies on the socio-economic differences among athletes of different sports have barely been covered. Hence, using a quantitative approach, this study seeks to assess and compare the socio-economic status among athletes engaged in four different sports. Subjects were recruited from the Birbhum district of West Bengal, and they have represented local sports clubs in district-level competitions. The study found significant differences in socio-economic status among football, cricket, volleyball and track & field athletes. Moreover, track & field athletes were found to be socio-economically backwards compared to football, cricket and volleyball athletes. On the other hand, cricketers were found socio-economically better than football, volleyball and track & field athletes.

Keywords: Birbhum, West Bengal, socioeconomic status, athletes, football, cricket, volleyball and track & field

1. Introduction

Socio-economic status, in other words, class position, of the family is determined by a number of factors such as occupation, education, income, wealth and place of residence. This family's socio-economic status may influence the individuals' opportunity, desire to excel, choice of activity and success. Such is also the case in sports, as sociological research in sports has revealed that the socio-economic status (SES) of the family is an important facilitator for participation of young adults in physical activities (Lou *et al.*, 2024) [5].

Past studies have shown a positive relation between socio-economic status (SES) and participation in sports, as SES provides greater access to sports facilities, organised sports, transport expenses and other access to sports-related resources (Graduate School, Emilio Aguinaldo College, Paco, Manila, Philippines & Che, 2024; Hassan, 2016) [2, 3]. However, other research studies have found lower SES backgrounds as barriers, for example, limited access to sports spaces and organised sports (Graduate School, Emilio Aguinaldo College, Paco, Manila, Philippines, & Che, 2024) [2].

Although the past studies have covered the significant role of the family's socio-economic status in determining the sports participation of children and youths, they have primarily focused on the effect of SES on sports participation. However, the academic attention on the relationship between socio-economic status and sports participation found being neglected by past researchers. Past studies have found the family's socio-economic status (SES) to be a significant determinant for physical activity participation of young adults. Hence, athletes from different SES backgrounds may have different sports participation patterns or trends. There is no exception with the athletes playing these four locally popular sports within the Birbhum district of West Bengal.

The Birbhum district of West Bengal, located in the eastern province of India, is characterised by its rich cultural heritage and diverse population living in both urban and rural areas. The district comprises various communities, including tribal groups, each with unique traditions and social structures.

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The district is also embroidered with popular sports culture such as cricket, volleyball, track and field and football.

Using a quantitative approach, the present study seeks to assess and compare the socio-economic status among athletes engaged in four different sports, football, cricket, volleyball and track & field, within the Birbhum district of West Bengal.

2. Materials and Methods

2.1 Subjects' background

A total of 114 subjects, 30 subjects each from football, cricket and track and field and 24 from volleyball, were selected for the study. The subjects aged between 17 and 27 have represented a local sports club in district-level competitions in the Birbhum district of West Bengal.

2.2 Data collection procedure

To understand the socioeconomic background of the athletes, a questionnaire developed by OP Aggarwal, SK Bhasin, AK Sharma, P Chhabra, K Aggarwal and OP Rajouri (Aggarwal *et al.*, 2005) ^[1] was used for this study. This questionnaire is familiar with the Indian population and has already established validity and reliability.

Before data collection, the purpose of the study and the time required to fill out the questionnaire were explained to athletes. After getting consent from the club administrator, the head coach and the athletes, the SES questionnaire was administered to a group of athletes.

2.2 Analytical Procedure

Descriptive and one-way ANOVA were used to determine significant differences in SES among football, cricket, volleyball and track & field athletes. In order to find the statistical result, the Jamovi software was used for data analysis.

3. Results of the study

The study's findings have been presented in the following Figures and tables along with their interpretations and discussions.

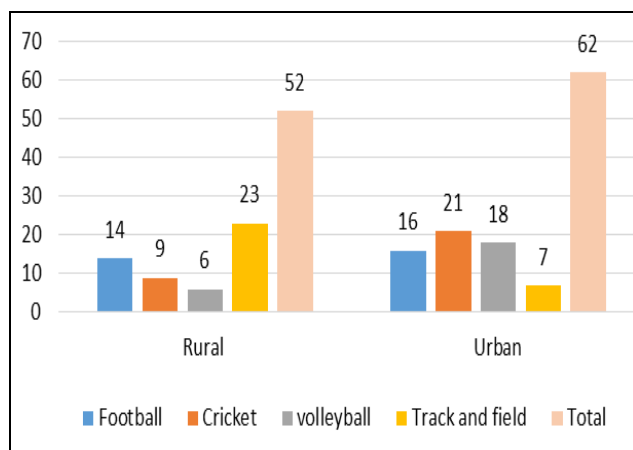


Fig 1: Rural-Urban differences

Figure 1 depicts the rural and urban participation differences in four sports. The above figure shows that urban athletes are more involved in cricket and volleyball than rural athletes; on the other hand, rural athletes are more involved in track and field than urban athletes.

One-way ANOVA was used to analyse the data, and in all the cases, .05 levels were fixed as the significance level to test the hypothesis.

Table 1: Group Descriptive

	Sports Group	N	Mean	SD	SE
SES (Socio-economic status)	Football	30	48.7	7.61	1.390
	Cricket	30	54.4	8.69	1.586
	Track and Field	30	44.2	4.28	0.782
	Volleyball	24	50.8	6.32	1.290

The result in the above table depicts the mean score of footballers-48.7, cricket-54.4, Track and Field-44.2 and Volleyball-50.8, respectively. This indicates that the cricket players have the highest socio-economic status (Mean = 54.4), while track and field has the lowest (Mean = 44.2). The differences in mean scores suggest potential group-level variations in socio-economic status.

Table 2: Normality Test

Normality Test (Shapiro-Wilk)		
	W	p
SES (Socio-economic status of the family)	0.992	0.739

Note: A low p-value suggests a violation of the assumption of normality

Table 2 shows the normality of the data for the present study. Since $p > 0.05$, the data do not violate the normality assumption. Normality is assumed.

Table 3: Homogeneity (Levene's)

Homogeneity of Variances Test (Levene's)				
	F	DF1	DF2	P
SES (Socio-economic status)	7.59	3	Table 3	<.001

In the above table-3, the p-value is significant, so we reject the assumption of equal variances across groups. This violation requires using a robust alternative to standard ANOVA, hence, Welch's ANOVA was used.

Table 4: One-Way ANOVA

One-Way ANOVA (Welch's)				
	F	DF1	DF2	P
SES (Socio-economic status)	14.2	3	57.5	<.001

The above Welch's ANOVA result is statistically significant ($F=14.2$, $p<.001$), as the p value is less than 0.05, which indicates that the group means are heterogeneous. This suggests that one group differs significantly from the others regarding socio-economic status. Hence, the null hypothesis of no difference among the means of four groups-the football, cricket, volleyball, and track & field athletes-was rejected at the 5% level. This means there is a significant difference among the four groups. In other words, the four groups are not the same in terms of the socioeconomic status of their family (SES).

Table 5: Post Hoc Analysis-Games-Howell

Comparison	Mean Difference	P-Value	Interpretation
Football vs Cricket	-5.67	0.045	Significant ($p<.05$)
Football vs Volleyball	-2.06	0.700	Not significant
Football vs T&F	4.50	0.034	Significant ($p<.05$)
Cricket vs Volleyball	3.61	0.302	Not significant
Cricket vs T&F	10.17	< .001	Highly significant
Volleyball vs T&F	6.56	< .001	Highly significant

Since the F-value was significant, a post hoc test was applied to compare the means of the four groups. The result shown in

Table 5 provides such a comparison. The result of the post hoc test shows “not significant” in group mean difference between football and volleyball, and between cricket and volleyball, as the p-value for the mean difference was found significant at 0.700 and 0.302, respectively, which is more than the 0.05 significance level. Hence, the null hypothesis of no difference was accepted in this case. This means there is no significant difference between football and volleyball, and between cricket and volleyball players in terms of SES.

On the other hand, the result showed “significant” mean difference between football and cricket, between football and track and field, between cricket and track & field, and between volleyball and track & field athletes, as the p-value for this mean difference is $P=0.045$, $P=0.045$, $P=0.001$, $P=0.001$, respectively, which is less than 0.05. Hence, the null hypothesis of no difference was rejected. This means there is a significant difference between football, cricket, volleyball and track and field athletes in terms of SES.

Overall, Cricket players have significantly higher socio-economic status than Football ($P=.045$) and Track and Field ($p<.001$). Moreover, Track and Field athletes consistently show lower socioeconomic status across comparisons. On the other hand, Football vs Volleyball and Cricket vs Volleyball are not statistically significant.

Table 4: Socio-economic status of the families of football, cricket, track and field and volleyball athletes

Type of sports	Group mean of SES	SES Status*
Football	48.7	Upper Middle
Cricket	54.4	Upper Middle
Track and Field	44.2	Lower Middle
Volleyball	50.4	Upper Middle

Note: SES is based on the SES Index developed by OP Aggarwal, SK Bhasin, AK Sharma, P Chhabra, K Aggarwal, and OP Rajouri (2005) ^[1]

Tables 1 and 4 indicate that the group mean of track & field athletes is significant compared to that of football, cricket and volleyball. In addition, Table 4 represents the socio-economic status of the families of four different groups of athletes. It depicts that the track & field athletes come under the “lower middle” category of socio-economic status as compared to the other three groups, which come under the “upper middle” category of Socio-economic status.

4. Discussion of the study

In this study, the socio-economic status of the families of athletes playing football, cricket, volleyball and track & field belonging to the Birbhum district of West Bengal has been studied. This study revealed a significant difference among the athletes playing football, cricket, volleyball and track & field in terms of the socio-economic status of their families. However, the between-group comparison showed no significant difference between football and volleyball and between cricket and volleyball athletes.

In contrast, the result shown in Table 4, based on the socio-economic status of the family (SES) Index developed by Aggarwal *et al.* (2005) ^[1], indicated that the families of track & field athletes were under the “lower middle” class category and the other three groups under the “upper middle” class category. This further suggests that the track & field athletes are socio-economically backwards compared to the three other football, cricket and volleyball athletes. This observed pattern may be due to the nature of track and field sports, particularly running events, which are continuous, long-

endurance type, hard, monotonous and require vigorous running practices and a strong mindset. This is perhaps why athletes from socio-economically weaker countries such as Jamaica, Kenya, and Ethiopia dominate the global stage in long-distance running events.

Moreover, the findings revealed that the cricket athletes had a higher socio-economic status than all others. On the other hand, track and field athletes were from backgrounds of lower socio-economic status. This later finding contradicts the findings of Mehr Ali *et al.* (2012) ^[6], who suggest that children from higher socioeconomic backgrounds participate in sports more than others (Mehr Ali *et al.*, 2012) ^[6]. However, in the present study, particularly with track and field athletes, the socio-economically disadvantaged athletes participate more than the socio-economically advantaged athletes.

Together, the findings of this study are consistent to some extent with the study by Rasoolsab & BK on players playing kho-kho, volleyball, hockey, kabaddi, and basketball in the Karnataka University intercollegiate competition; the researchers found a significant difference in overall socio-economic status between kho-kho, volleyball, hockey, kabaddi, and basketball players. They revealed that the basketball players had a higher socioeconomic status than the kho-kho, volleyball, hockey, and kabaddi players (Rasoolsab.

5. Conclusion

The present study found a significant difference in socio-economic status among football, cricket, volleyball and track & field athletes. Moreover, track & field athletes were found to be socio-economically backwards compared to football, cricket and volleyball athletes. On the other hand, cricketers were found socio-economically better than football, volleyball and track & field athletes. In addition, the between-group comparison revealed significant differences between football and cricket, football and track & field, cricket and track & field, and volleyball and track & field.

Acknowledging the limitations of the observed pattern regarding the socio-economic backgrounds of the athletes, the result of this study may not be generalised to a larger extent, as the study was case-specific and had a small sample size collected within the Birbhum district of West Bengal.

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