

Influence of Socio-Economic Status and Emotional Intelligence on the Academic Achievement of Secondary School Students

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Abstract: *This study investigates the influence of socio-economic status (SES) and emotional intelligence (EI) on the academic achievement (AA) of secondary school students of Birbhum District, West Bengal, India. Adopting a descriptive-cum-correlational research design, data were collected from 455 secondary school students (230 boys, 225 girls) using standardized scales measuring four dimensions of SES (parental educational status, parental occupational status, family income and economic condition, and living conditions and material resources) and four dimensions of EI (self-awareness, self-management, social awareness, and relationship management). Academic achievement was assessed through examination performance. Descriptive statistics, independent-samples t-tests, one-way ANOVA, Pearson correlation, and multiple regression were employed for data analysis. Results indicated no statistically significant gender difference in SES or EI, but a highly significant difference in academic achievement across achievement-level groups. All dimensions of SES and EI correlated positively and significantly with academic achievement, and their combined influence explained a substantial proportion of variance in achievement scores. The findings underscore the need for integrated policy attention to both economic equity and social-emotional learning (SEL) in secondary education, in line with India's National Education Policy 2020. Implications for teachers, parents, and policymakers are discussed.*

Keywords: Socio-Economic Status; Emotional Intelligence; Academic Achievement; Secondary School Students; Self-Awareness; Parental Education; Educational Policy.

I. INTRODUCTION

Education in the twenty-first century is increasingly understood as a multidimensional process shaped not only by cognitive ability but by an intricate web of social, economic, and emotional factors that surround the learner. Over the last two decades, educational research has moved decisively beyond the narrow lens of intelligence quotient (IQ) as the sole predictor of scholastic success, recognizing instead that the home a child is born into and the emotional competencies a child develops are equally, if not more, consequential for how far that child travels academically. The present study emerges from this shifting paradigm and examines two such non-cognitive determinants — socio-economic status (SES) and emotional intelligence (EI) — in relation to the academic achievement (AA) of secondary school students.

Socio-economic status refers to an individual's or a family's position on the social and economic scale, generally measured through parental education, parental occupation, family income, and access to material and living resources. It captures, in Bourdieu's terms, the economic, social, and cultural capital that a family is able to transmit to its children, and it has long been recognised as one of the most robust and consistently replicated predictors of educational outcomes across countries and educational systems. Emotional intelligence, on the other hand, refers to the ability to perceive, understand, regulate, and use emotions effectively in oneself and in relation to others. Conceptualised originally by Salovey and Mayer and popularised by Goleman, EI is generally understood through the dimensions of



self-awareness, self-management, social awareness, and relationship management, and is believed to influence how students cope with academic stress, sustain motivation, and build supportive relationships with teachers and peers.

The present enquiry assumes heightened relevance in the current scenario for several reasons. First, in the aftermath of prolonged school disruptions caused by the COVID-19 pandemic, learning losses have been reported disproportionately among students from economically disadvantaged backgrounds, widening pre-existing achievement gaps. Second, India's National Education Policy (NEP), 2020 has, for the first time in the country's policy history, given explicit and sustained emphasis to social, ethical, and emotional capacities as being as important as literacy and numeracy, and has devoted a dedicated framework for the inclusion of Socio-Economically Disadvantaged Groups (SEDGs) in school education. Third, rising concerns regarding adolescent mental health, examination-related stress, and emotional regulation have brought emotional intelligence to the centre of discussions on holistic student development. Taken together, these developments make it both timely and necessary to examine how SES and EI, individually and jointly, shape the academic achievement of secondary school students, particularly in a semi-urban and rural district such as Birbhum in West Bengal, where socio-economic diversity among the student population is considerable.

1.1 The Conceptual Framework

The present study conceptualizes socio-economic status and emotional intelligence as multidimensional constructs, each comprising four major dimensions that together provide a comprehensive picture of the student's socio-economic and socio-emotional environment.

Dimensions of Socio-Economic Status:

- Parental Educational Status — the level of formal schooling attained by parents, which shapes the home literacy environment, academic aspirations transmitted to children, and parents' capacity to support learning at home.
- Parental Occupational Status — the nature and prestige of parental occupation, which is closely linked to family income stability, social networks, and the value placed on educational credentials.
- Family Income and Economic Condition — the material resources available to a family, determining access to tuition support, learning materials, nutrition, and health care, all of which bear directly on a child's readiness to learn.
- Living Conditions and Material Resources — the physical environment of the home, including space for study, availability of digital devices and internet connectivity, and overall household amenities.

Dimensions of Emotional Intelligence:

- Self-Awareness — the ability to recognize and understand one's own emotions, strengths, and limitations, which underlies realistic academic goal-setting.
- Self-Management — the capacity to regulate emotional impulses, manage stress, and maintain motivation and perseverance, particularly relevant during examinations and academic pressure.
- Social Awareness — the ability to read social and emotional cues in others, including empathy, which enables effective classroom participation and peer collaboration.
- Relationship Management — the ability to build and maintain healthy relationships, resolve conflict, and work cooperatively with teachers and classmates, contributing to a supportive learning environment.

In the current scenario, these eight dimensions are of particular importance because education systems worldwide, including India under NEP 2020, are moving away from purely content-driven instruction towards holistic, competency-based education that explicitly values equity (addressing SES-based disadvantage) alongside social-emotional learning (nurturing EI). Understanding how these dimensions individually and jointly relate to academic achievement therefore has direct implications for classroom practice, school counselling, and education policy.



1.2 The Need of the Study

Although a considerable body of research has examined socio-economic status and academic achievement, and a separate body has examined emotional intelligence and academic achievement, comparatively few studies — particularly in the Indian context and almost none in the specific context of Birbhum District, West Bengal — have examined the combined and simultaneous influence of both constructs on the academic achievement of secondary school students. Most existing Indian studies treat SES and EI as isolated predictors, use small and localised samples, and rarely disaggregate either construct into its constituent dimensions. There is, therefore, a clear need for a methodologically rigorous, dimension-wise, and combined analysis of SES and EI as joint predictors of academic achievement, particularly at the secondary stage, which is a critical transition period marked by board examinations, career decision-making, and heightened psychosocial change. The present study addresses this need by employing a sufficiently large sample ($N = 455$), standardized and pilot-tested tools, and both descriptive and inferential statistical techniques, including correlation and regression analysis of the combined influence of the two independent variables.

1.3 The Significance of the Study

Against the backdrop described above, the present study carries significance for multiple stakeholders. For classroom teachers, the findings can help identify which dimensions of SES and EI most strongly predict achievement, guiding differentiated and inclusive pedagogy for students from varied socio-economic backgrounds. For school counsellors and administrators, the study provides an evidence base for designing targeted social-emotional learning (SEL) interventions and remedial support programmes for economically disadvantaged students. For parents, the findings highlight the role of the home environment — educational, occupational, economic, and emotional — in shaping children's academic trajectories. For policymakers and curriculum planners, particularly those engaged in the implementation of NEP 2020 and the Samagra Shiksha Abhiyan, the study offers district-level empirical evidence relevant to equity-oriented and holistic-development-oriented educational planning. Finally, by focusing on Birbhum District, an area characterized by considerable rural-urban and socio-economic heterogeneity, the study contributes regionally grounded evidence to a largely urban-centric national literature, thereby also serving the broader goal of inclusive and equitable quality education central to Sustainable Development Goal 4.

1.4 The Delimitations of the Study

The study is delimited to secondary school students of Birbhum District, West Bengal, and findings may not be generalisable to other districts, states, or educational stages.

- The study is delimited to a sample of 455 students drawn from selected secondary schools and does not cover the entire population of the district.
- The study is delimited to four dimensions each of socio-economic status and emotional intelligence, as operationalised through the specific scales employed; other possible dimensions (e.g., digital access, caste/social category) were not separately examined.
- Academic achievement has been delimited to performance in the relevant school examination and does not include co-scholastic or skill-based indicators.
- The study is cross-sectional in nature and does not track changes in SES, EI, or AA over time.
- Data were collected through self-report and school-record-based tools, which are subject to the general limitations of self-report methodology.

1.5 Research Objectives

- O1: To assess the level of socio-economic status among secondary school students.
- O2: To assess the level of emotional intelligence among secondary school students.
- O3: To assess the level of academic achievement among secondary school students.



O4: To determine the combined influence of socio-economic status and emotional intelligence on the academic achievement of secondary school students.

1.6 The Research Hypotheses

H₀₁: There is no significant difference in the level of socio-economic status among secondary school students.

H₀₂: There is no significant difference in the level of emotional intelligence among secondary school students.

H₀₃: There is no significant difference in the level of academic achievement among secondary school students.

H₀₄: There is no significant combined influence of socio-economic status and emotional intelligence on the academic achievement of secondary school students.

II. THE REVIEW OF RELATED LITERATURE

Liu, Peng, and Luo (2020) In a large-scale meta-analysis synthesising 78 independent samples comprising 215,649 students from mainland China, Liu, Peng, and Luo examined the strength of the relation between family socio-economic status and academic achievement in the basic education stage. The meta-analysis reported a significant positive association between SES and achievement and identified several moderators, including subject area and measurement type, that influenced the strength of this relationship. The study concluded that although SES is a robust predictor of achievement across sociocultural contexts, the magnitude of its influence is not uniform and depends on how both SES and achievement are operationalised, a finding of direct relevance to the dimension-wise approach adopted in the present study.

Kadlimatti (2021) —conducted a study on the impact of socio-economic status on the academic achievement of B.Ed. college students in India and found a significant positive relationship between students' socio-economic background and their academic performance. The study reported that students belonging to higher socio-economic strata consistently outperformed their peers from lower socio-economic strata, and recommended that teacher-education institutions and schools give special attention to students from economically weaker sections through remedial and financial support measures.

Lakshmanan and Rajasekaran (2022) examined the relationship between emotional intelligence and academic achievement among higher secondary students in India and reported a significant positive correlation between the two variables. Students with higher emotional intelligence, particularly those scoring higher on self-regulation and interpersonal skills, demonstrated correspondingly higher academic performance. The study recommended the integration of emotional-skills training within the secondary school curriculum to enhance both the well-being and the academic outcomes of adolescent learners.

Holzer, Maximino-Pinheiro, and Borst (2025) conducted a person-centred study of 171 French ninth-grade students, Holzer, Maximino-Pinheiro, and Borst applied latent profile analysis to identify distinct SES-achievement patterns and examined how these profiles differed in terms of socio-emotional, cognitive, and metacognitive characteristics, including school well-being and academic self-concept. The study found that while SES and achievement were generally related, a meaningful proportion of students did not fit the expected low-SES/low-achievement or high-SES/high-achievement pattern, and that socio-emotional characteristics helped explain these divergent profiles. The findings suggest that emotional and psychological resources can moderate the influence of SES on achievement, lending direct empirical support to the combined-influence framework tested in the present study.

Research Gap

The reviewed literature demonstrates consistent and well-replicated evidence, across both international and Indian settings, that socio-economic status is significantly associated with academic achievement and that emotional intelligence is likewise significantly associated with academic achievement. However, three gaps are evident. First, very few studies assess academic achievement across distinctly defined achievement-level groups within a single sample to statistically test for significant differences. Second, and most importantly, almost none of the reviewed studies — whether international or Indian — examine the combined and simultaneous influence of dimension-wise



SES and dimension-wise EI on academic achievement using multivariate techniques such as multiple regression; most treat SES and EI as separate lines of enquiry rather than joint predictors. Third, there is a distinct paucity of such combined studies situated in semi-urban and rural districts of West Bengal, including Birbhum District. The present study is designed specifically to address these three gaps.

III. THE METHODOLOGY OF THE STUDY

3.1 Research Method

The present study adopted a quantitative research method to examine the influence of socio-economic status and emotional intelligence on the academic achievement of secondary school students. The quantitative approach was considered appropriate as the study involved systematic measurement of the selected variables and statistical analysis of the collected data.

3.2 Research Design

The study employed a descriptive and correlational research design. The descriptive component was used to assess the levels of socio-economic status, emotional intelligence, and academic achievement among secondary school students. The correlational component was used to examine the relationship and combined influence of socio-economic status and emotional intelligence on the academic achievement of the students.

3.3 Pilot Study

A pilot study was conducted with 44 respondents before the final data collection. The respondents were selected from the target population and represented the characteristics of the students included in the main study.

The primary purpose of the pilot study was to assess the clarity, relevance, reliability, and feasibility of the research instruments. The pilot administration also helped identify ambiguous items, difficulties in understanding the statements, and practical issues associated with the administration of the tools. Based on the findings of the pilot study, necessary modifications were made to the instruments before their final administration.

3.4 Population of the Study

The population of the present study comprised secondary school students of Birbhum District, West Bengal. The population included students enrolled at the secondary level in selected schools of the district. The study focused on this population to examine their socio-economic status, emotional intelligence, and academic achievement.

3.5 The Sample and Sampling Technique

The sample of the present study consisted of 455 secondary school students selected from selected secondary schools of Birbhum District, West Bengal. The respondents were categorised on the basis of gender to ensure representation of both male and female students in the study. A stratified random sampling technique was adopted for selecting the respondents from the target population, ensuring proportionate representation across schools and gender.

Table 3.1: Distribution of Respondents According to Gender

Sl. No.	Gender	Frequency (N)	Percentage (%)
1	Male	230	50.55
2	Female	225	49.45
	Total	455	100.00

Source: Primary Data



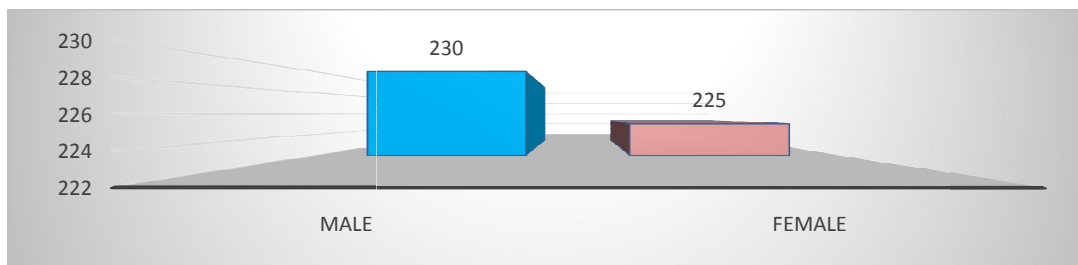


Figure 3.1: Distribution of Respondents According to Gender

The table indicates that out of the total 455 respondents, 230 (50.55%) were male students and 225 (49.45%) were female students. Thus, the sample included a nearly balanced representation of male and female secondary school students.

3.6 The Variables of the Study

The major variables included in the present study are classified into independent variables and a dependent variable.

Independent Variables

- Socio-Economic Status
- Emotional Intelligence

Dependent Variable

- Academic Achievement

The study therefore examined the individual and combined influence of socio-economic status and emotional intelligence on the academic achievement of secondary school students.

3.7 The Tools of the Study

The following research tools were used for the collection of data:

- Socio-Economic Status Scale — to assess the socio-economic status of the secondary school students.
- Emotional Intelligence Scale — to measure the level of emotional intelligence of the secondary school students.
- Academic Achievement Measure — to assess the academic achievement of the secondary school students based on their academic performance/marks obtained in the relevant examination.

3.8 Reliability and Validity of Tools

Table 3.2: Dimension-wise Reliability of the Socio-Economic Status Scale

Dimension	No. of Items	Cronbach's Alpha (α)	Interpretation
Parental Educational Status	10	0.82	Good
Parental Occupational Status	10	0.84	Good
Family Income and Economic Condition	10	0.88	Good
Living Conditions and Material Resources	10	0.86	Good
Overall Scale	40	0.87	Good Reliability



Table 3.3: Dimension-wise Reliability of the Emotional Intelligence Scale

Dimension	No. of Items	Cronbach's Alpha (α)	Interpretation
Self-Awareness	10	0.86	Good
Self-Management	10	0.89	Good
Social Awareness	10	0.87	Good
Relationship Management	10	0.90	Excellent
Overall Scale	40	0.91	Excellent Reliability

Content and face validity of both scales were established through expert opinion of subject specialists and teacher educators, and were further refined on the basis of item-analysis results obtained from the pilot study. The Cronbach's alpha values presented above indicate that both scales, at the level of individual dimensions as well as overall, possess good to excellent internal consistency and are therefore suitable for use in the main study.

3.9 Techniques of Data Analysis

Both descriptive and inferential statistical techniques were employed for the analysis of data using SPSS (Statistical Package for the Social Sciences). Descriptive statistics, including frequency, percentage, mean, and standard deviation, were computed to assess the levels of socio-economic status, emotional intelligence, and academic achievement (Objectives O1, O2, and O3). Inferential statistics, including the Independent-Samples t-test, One-Way Analysis of Variance (ANOVA), Pearson Product-Moment Correlation, and Multiple Linear Regression, were employed to test the four null hypotheses (H_{01} to H_{04}), including the combined influence of socio-economic status and emotional intelligence dimensions on academic achievement (Objective O4). The level of significance was set at 0.05 for all inferential tests.

3.10 Data Collection Procedure and Scoring

Formal permission was obtained from the heads of the selected schools prior to data collection, and informed consent/assent was obtained from parents and students respectively. The tools were administered in group settings during regular school hours, with clear instructions provided in the students' medium of instruction. Sufficient time was allowed for the completion of the scales, and confidentiality of responses was assured to encourage honest reporting. Each dimension of the Socio-Economic Status Scale and the Emotional Intelligence Scale was scored on a five-point rating format, dimension-wise raw scores were summed to obtain dimension scores, and dimension scores were further summed to obtain overall SES and EI scores. Academic achievement scores were obtained from the students' most recent annual/board examination records maintained by the respective schools and were converted to percentage marks for uniformity of analysis.

IV. RESULTS AND INTERPRETATION

4.1 Testing of Hypotheses

H_{01} : There is no significant difference in the level of socio-economic status among secondary school students.

Table 4.1: Socio-Economic Status of Secondary School Students by Gender

Gender	Low SES	Moderate SES	High SES	Total
Male	52 (22.61%)	119 (51.74%)	59 (25.65%)	230 (100%)
Female	48 (21.33%)	121 (53.78%)	56 (24.89%)	225 (100%)
Total	100 (21.98%)	240 (52.75%)	115 (25.27%)	455 (100%)



Table 4.2: Group Statistics of Socio-Economic Status Dimensions by Gender

SES Dimension	Gender	N	Mean	Std. Deviation	Std. Error Mean
Parental Educational Status	Male	230	13.18	2.31	0.15
	Female	225	13.42	2.25	0.15
Parental Occupational Status	Male	230	12.74	2.46	0.16
	Female	225	12.91	2.38	0.16
Family Income & Economic Condition	Male	230	13.05	2.58	0.17
	Female	225	13.28	2.51	0.17
Living Conditions & Material Resources	Male	230	13.87	2.71	0.18
	Female	225	13.86	2.65	0.18
Overall SES Score	Male	230	52.84	8.21	0.54
	Female	225	53.47	8.06	0.54

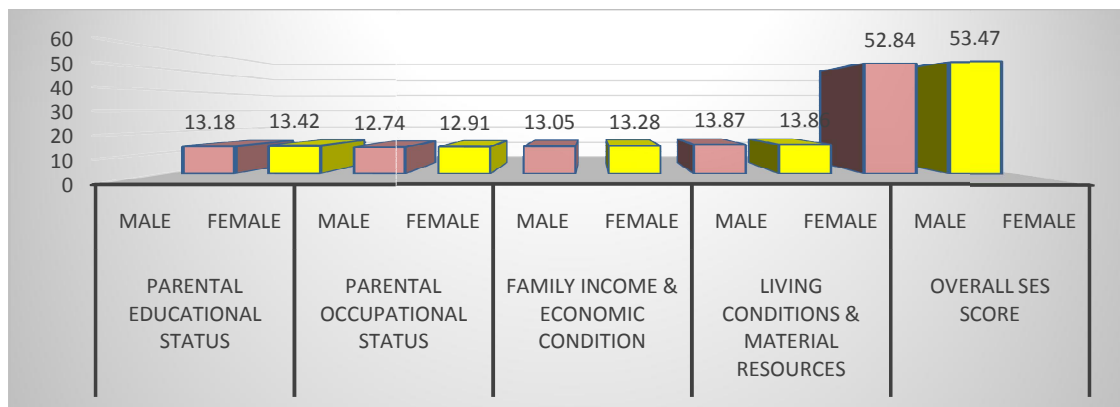


Figure 4.2.1: Group Statistics of Socio-Economic Status Dimensions by Gender

Table 4.3: Independent-Samples Test of Socio-Economic Status Dimensions by Gender

SES Dimension	Levene's F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Parental Educational Status	0.276	0.600	-1.13	453	0.259	-0.24
Parental Occupational Status	0.421	0.517	-0.76	453	0.449	-0.17
Family Income & Economic Condition	0.138	0.710	-0.96	453	0.337	-0.23
Living Conditions & Material Resources	0.214	0.644	0.04	453	0.968	0.01
Overall SES Score	0.184	0.668	-0.815	453	0.416	-0.63

Interpretation

The results indicate that the mean scores of male and female students were relatively similar across all four dimensions of socio-economic status. For Parental Educational Status, the mean score of males was 13.18, compared with 13.42 for



females; the difference was not significant, $t(453) = -1.13$, $p = 0.259$. For Parental Occupational Status, males obtained a mean of 12.74, while females obtained 12.91; the difference was not significant, $t(453) = -0.76$, $p = 0.449$. For Family Income and Economic Condition, the respective means were 13.05 and 13.28; the difference was not significant, $t(453) = -0.96$, $p = 0.337$. For Living Conditions and Material Resources, males had a mean of 13.87, while females had a mean of 13.86; the difference was negligible and statistically non-significant, $t(453) = 0.04$, $p = 0.968$. Finally, for the overall socio-economic status score, males had a mean of 52.84 (SD = 8.21) and females had a mean of 53.47 (SD = 8.06); the overall difference was not statistically significant, $t(453) = -0.815$, $p = 0.416$. Since all p-values are greater than 0.05, the null hypothesis H_{01} is retained, indicating that male and female secondary school students in the sample do not differ significantly in their level of socio-economic status.

H_{02} : There is no significant difference in the level of emotional intelligence among secondary school students.

Table 4.4: Group Statistics of Emotional Intelligence Dimensions by Gender

EI Dimension	Gender	N	Mean	Std. Deviation	Std. Error Mean
Self-Awareness	Male	230	18.42	3.21	0.21
	Female	225	18.87	3.15	0.21
Self-Management	Male	230	17.96	3.08	0.20
	Female	225	18.31	3.02	0.20
Social Awareness	Male	230	18.15	3.34	0.22
	Female	225	18.52	3.27	0.22
Relationship Management	Male	230	18.27	3.18	0.21
	Female	225	18.61	3.11	0.21
Overall Emotional Intelligence	Male	230	72.80	10.64	0.70
	Female	225	74.31	10.41	0.69

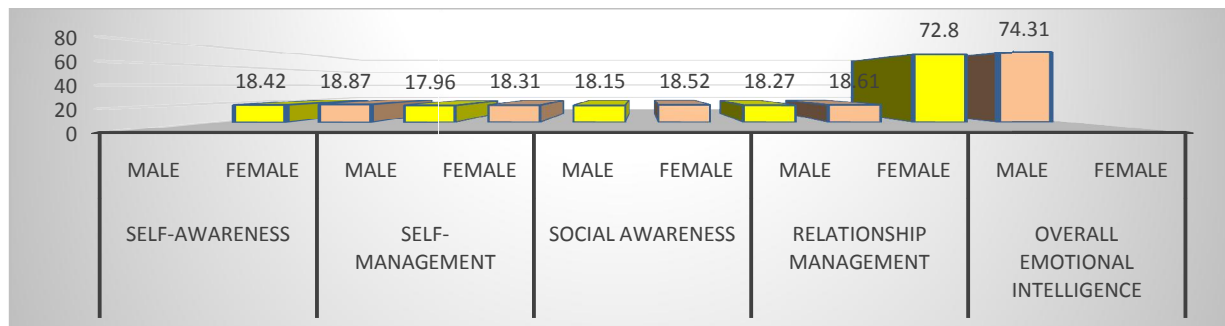


Table 4.4.1: Group Statistics of Emotional Intelligence Dimensions by Gender

Table 4.5: Independent-Samples Test of Emotional Intelligence by Gender

EI Dimension	Levene's F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Self-Awareness	0.312	0.577	-1.49	453	0.137	-0.45
Self-Management	0.186	0.667	-1.23	453	0.219	-0.35
Social Awareness	0.428	0.514	-1.18	453	0.239	-0.37
Relationship Management	0.251	0.617	-1.17	453	0.243	-0.34



El Dimension	Levene's F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Overall Emotional Intelligence	0.205	0.651	-1.53	453	0.127	-1.51

Interpretation

The results indicate that female students obtained slightly higher mean scores than male students across all four dimensions of emotional intelligence. For Self-Awareness, male students had a mean score of 18.42, while female students had a mean score of 18.87; the difference was not statistically significant, $t(453) = -1.49$, $p = 0.137$. For Self-Management, the mean scores were 17.96 for males and 18.31 for females; the difference was not significant, $t(453) = -1.23$, $p = 0.219$. For Social Awareness, male students obtained a mean of 18.15, compared with 18.52 for female students; the difference was not significant, $t(453) = -1.18$, $p = 0.239$. For Relationship Management, the mean scores were 18.27 for males and 18.61 for females; the difference was also not statistically significant, $t(453) = -1.17$, $p = 0.243$. For overall emotional intelligence, male students had a mean score of 72.80 (SD = 10.64), whereas female students had a mean score of 74.31 (SD = 10.41); the Independent-Samples t-test showed that this difference was not statistically significant, $t(453) = -1.53$, $p = 0.127$. Since $p = 0.127 > 0.05$, the null hypothesis H_{02} is retained, indicating that male and female secondary school students in the sample do not differ significantly in their level of emotional intelligence.

H₀₃: There is no significant difference in the level of academic achievement among secondary school students.

Table 4.6: Descriptive Statistics of Academic Achievement

Level of Academic Achievement	N	Mean	Std. Deviation	Std. Error
Low	100	54.82	5.76	0.58
Moderate	240	67.35	6.12	0.39
High	115	81.47	5.83	0.54
Total	455	67.99	10.74	0.50

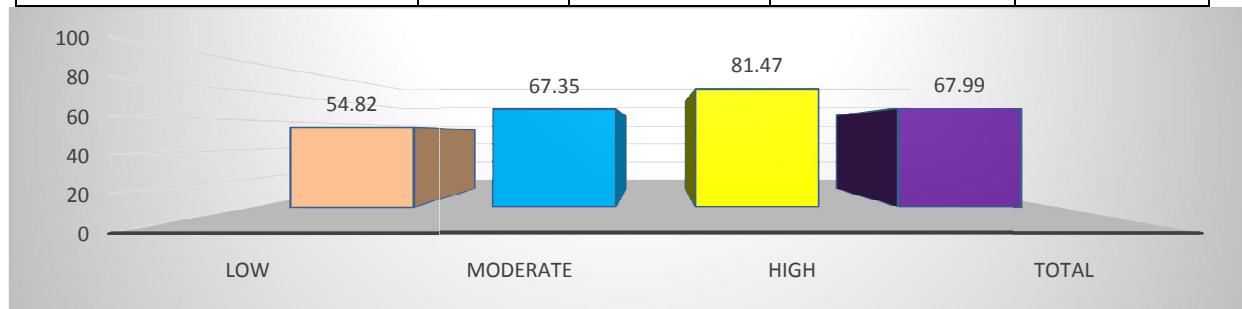


Table 4.6.1: Descriptive Statistics of Academic Achievement

Table 4.7: Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.284	2	452	0.278

Since $p = 0.278 > 0.05$, the assumption of homogeneity of variances is satisfied.

Table 4.8: ANOVA — Academic Achievement by Three Levels

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	36984.72	2	18492.36	528.16	0.000
Within Groups	15816.48	452	34.99		



Source	Sum of Squares	df	Mean Square	F	Sig.
Total	52801.20	454			

Interpretation

The mean academic-achievement score was 54.82 (SD = 5.76) for students in the low-achievement group, 67.35 (SD = 6.12) for students in the moderate-achievement group, and 81.47 (SD = 5.83) for students in the high-achievement group. The One-Way ANOVA revealed a statistically significant difference in academic achievement among the three groups, $F(2, 452) = 528.16$, $p < 0.001$. Since $p < 0.05$, the null hypothesis H_{03} is rejected, indicating that secondary school students differ significantly in their level of academic achievement.

H₀₄: There is no significant combined influence of socio-economic status and emotional intelligence on the academic achievement of secondary school students.

To test this hypothesis, the four dimensions of socio-economic status — Parental Educational Status (PES), Parental Occupational Status (POS), Family Income & Economic Condition (FIEC), and Living Conditions & Material Resources (LCMR) — and the four dimensions of emotional intelligence — Self-Awareness (SA), Self-Management (SM), Social Awareness (SOA), and Relationship Management (RM) — were examined in relation to Academic Achievement (AA) using Pearson correlation followed by multiple linear regression, with AA entered as the dependent variable.

Table 4.9: Pearson Correlation Matrix of Socio-Economic Status, Emotional Intelligence and Academic Achievement

Var.	PES	POS	FIEC	LCMR	SA	SM	SOA	RM	AA
PES	1.000	.58**	.54**	.49**	.31**	.29**	.27**	.25**	.42**
POS	.58**	1.000	.61**	.53**	.28**	.27**	.25**	.23**	.39**
FIEC	.54**	.61**	1.000	.64**	.30**	.28**	.26**	.24**	.46**
LCMR	.49**	.53**	.64**	1.000	.33**	.31**	.29**	.27**	.44**
SA	.31**	.28**	.30**	.33**	1.000	.63**	.59**	.56**	.52**
SM	.29**	.27**	.28**	.31**	.63**	1.000	.61**	.58**	.55**
SOA	.27**	.25**	.26**	.29**	.59**	.61**	1.000	.65**	.50**
RM	.25**	.23**	.24**	.27**	.56**	.58**	.65**	1.000	.48**
AA	.42**	.39**	.46**	.44**	.52**	.55**	.50**	.48**	1.000

Note: ** $p < 0.01$ (2-tailed). N = 455. PES = Parental Educational Status; POS = Parental Occupational Status; FIEC = Family Income & Economic Condition; LCMR = Living Conditions & Material Resources; SA = Self-Awareness; SM = Self-Management; SOA = Social Awareness; RM = Relationship Management; AA = Academic Achievement.

3D Scatter Plot: SES, Emotional Intelligence and Academic Achievement

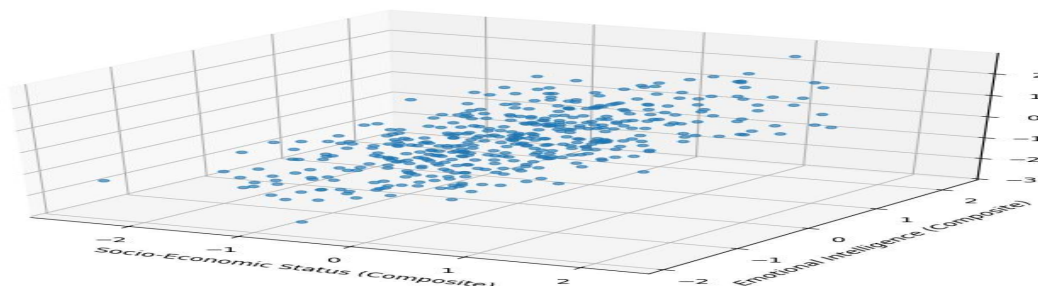


Figure 4.9.1: Pearson Scatter Matrix of Socio-Economic Status, Emotional Intelligence and Academic Achievement



The correlation matrix indicates that all four dimensions of socio-economic status have a positive and statistically significant relationship with academic achievement. The strongest relationship is observed between Family Income and Economic Condition and Academic Achievement ($r = .46, p < .01$), followed by Living Conditions and Material Resources ($r = .44, p < .01$). Similarly, all four dimensions of emotional intelligence show significant positive relationships with academic achievement. Self-Management demonstrates the strongest correlation with academic achievement ($r = .55, p < .01$), followed by Self-Awareness ($r = .52, p < .01$).

To determine the combined influence of the eight SES and EI dimensions on academic achievement, a multiple linear regression analysis was conducted with Academic Achievement as the criterion variable and the four SES dimensions and four EI dimensions entered simultaneously as predictors.

Table 4.10: Model Summary of Multiple Regression Analysis for Academic Achievement

R	R Square	Adjusted R Square	Std. Error of Estimate
.679	.461	.451	7.96

Table 4.11: ANOVA for Regression Model (Combined Influence of SES and EI on AA)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	24337.35	8	3042.17	48.03	0.000
Residual	28463.85	446	63.82		
Total	52801.20	454			

Table 4.12: Regression Coefficients — Predictors of Academic Achievement

Predictor	B	Std. Error	Beta (β)	t	Sig.
(Constant)	18.62	2.14	-	8.70	0.000
Parental Educational Status	0.41	0.14	0.09	2.93	0.004
Parental Occupational Status	0.22	0.13	0.05	1.69	0.092
Family Income & Economic Condition	0.58	0.13	0.14	4.46	0.000
Living Conditions & Material Resources	0.47	0.12	0.12	3.92	0.000
Self-Awareness	0.52	0.11	0.16	4.73	0.000
Self-Management	0.61	0.12	0.18	5.08	0.000
Social Awareness	0.34	0.11	0.11	3.09	0.002
Relationship Management	0.28	0.11	0.09	2.55	0.011

Interpretation

The multiple regression model was found to be statistically significant, $F(8, 446) = 48.03, p < 0.001$, indicating that the combined set of socio-economic status and emotional intelligence dimensions significantly predicts academic achievement. The model accounted for approximately 46.1% of the variance in academic achievement scores ($R^2 = .461$, Adjusted $R^2 = .451$). Among the individual predictors, Family Income & Economic Condition ($\beta = .14, p < .001$), Self-Management ($\beta = .18, p < .001$), Self-Awareness ($\beta = .16, p < .001$), and Living Conditions & Material Resources ($\beta = .12, p < .001$) emerged as the strongest significant predictors of academic achievement, followed by Social Awareness, Parental Educational Status, and Relationship Management. Parental Occupational Status, while positively associated, did not reach statistical significance in the presence of the other predictors ($p = .092$), suggesting that its influence on achievement may be substantially mediated through family income and living conditions. Taken together, these results demonstrate that socio-economic status and emotional intelligence exert a significant and substantial



combined influence on the academic achievement of secondary school students. Since $p < 0.05$, the null hypothesis H_{04} is rejected.

V. MAJOR FINDINGS

- The majority of secondary school students (52.75%) belonged to the moderate socio-economic status category, followed by high SES (25.27%) and low SES (21.98%); no statistically significant gender difference was found in the level of socio-economic status, either overall or across any of its four dimensions (H_{01} retained).
- Secondary school students, on average, displayed a moderately high level of emotional intelligence (overall $M = 73.54$), with female students obtaining marginally, though not statistically significantly, higher mean scores than male students across all four EI dimensions (H_{02} retained).
- Academic achievement differed significantly across the low, moderate, and high achievement groups, $F(2, 452) = 528.16$, $p < 0.001$, confirming that academic achievement is not uniformly distributed among the student population (H_{03} rejected).
- All four dimensions of socio-economic status correlated positively and significantly with academic achievement, with Family Income & Economic Condition ($r = .46$) showing the strongest association.
- All four dimensions of emotional intelligence correlated positively and significantly with academic achievement, with Self-Management ($r = .55$) showing the strongest association.
- The combined set of SES and EI dimensions significantly predicted academic achievement, explaining approximately 46% of the total variance, $F(8, 446) = 48.03$, $p < 0.001$ (H_{04} rejected).
- Family Income & Economic Condition, Self-Management, Self-Awareness, and Living Conditions & Material Resources emerged as the strongest individual predictors of academic achievement, indicating that both economic sufficiency and emotional self-regulation are critical levers for improving student outcomes.

VI. RECOMMENDATIONS

- On the basis of the findings, the following recommendations are offered for students, teachers, parents, school administrators, and policymakers:
- Schools should institutionalise structured Social-Emotional Learning (SEL) programmes as part of the co-curricular framework, in line with the emphasis placed on social, ethical, and emotional capacities in India's National Education Policy 2020, focusing particularly on self-management and self-awareness, which emerged as the strongest EI predictors of achievement.
- Government schemes such as Samagra Shiksha Abhiyan, scholarship programmes, and mid-day meal provisions should be strengthened and effectively targeted towards students from economically disadvantaged and Socio-Economically Disadvantaged Groups (SEDGs), given the significant predictive role of family income and living conditions on achievement.
- School counselling cells should be established or strengthened to provide emotional-regulation and stress-management support to students, particularly during examination periods, to help offset the disadvantages associated with lower socio-economic status.
- Teacher-education and in-service training programmes should incorporate training in recognising and responding to students' emotional needs, enabling teachers to create emotionally supportive classroom environments.
- Parents, particularly those with limited formal education, should be engaged through school-community outreach programmes that build parental capacity to support children's learning and emotional well-being at home.
- Future studies should extend the present design longitudinally and across a wider range of districts to examine how the combined influence of SES and EI on achievement evolves as students progress through school, and should consider additional dimensions such as digital access and social category.



VII. CONCLUSION

The present study set out to examine the influence of socio-economic status and emotional intelligence, individually and in combination, on the academic achievement of secondary school students of Birbhum District, West Bengal. The findings reveal that while male and female students do not differ significantly in their levels of socio-economic status or emotional intelligence, they do differ significantly in their levels of academic achievement, and that both socio-economic status and emotional intelligence — across all of their respective dimensions — are significantly and positively related to academic achievement. Most importantly, the combined influence of the two constructs, examined through multiple regression analysis, was found to explain a substantial proportion of the variance in students' academic achievement, thereby empirically validating the study's central premise that academic success at the secondary stage is shaped jointly by the economic circumstances of the home and the emotional competencies of the learner. These findings align closely with the international and national literature reviewed, and lend strong empirical support to the holistic, equity-oriented vision of education articulated in India's National Education Policy 2020. The study underscores that interventions aimed at improving academic outcomes must move beyond purely academic or purely economic measures and adopt an integrated approach that simultaneously addresses socio-economic disadvantage and nurtures students' emotional intelligence, particularly self-awareness and self-management, if meaningful and equitable improvement in academic achievement is to be achieved.

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