

# Emotional Intelligence and Academic Performance among Higher Secondary Students: Insights and Implications for Quality Education

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**Abstract** - Contemporary education increasingly recognises the importance of non-cognitive competencies that support traditional academic measures. This study examines the relationship between Emotional Intelligence (EI) and academic performance among higher secondary students, with particular attention to identifying the EI dimensions that influence performance. Using a correlational design, EI was assessed among 322 students from higher secondary schools in the Tiruchirappalli district with the Emotional Intelligence Inventory (EII-MM) by Mangal & Mangal, 3rd ed., 2025. Pearson's correlation analysis indicated a modest but significant positive association between total EI and academic performance ( $r = .145$ ,  $p = .009$ ). Interpersonal Awareness ( $r = .124$ ,  $p = .026$ ) and Interpersonal Management ( $r = .144$ ,  $p = .010$ ) were significantly related to academic performance, whereas the intrapersonal dimensions showed no statistical association. No significant differences were observed based on gender or family type. These findings underscore the relevance of interpersonal emotional competencies in academic contexts. They also highlight the value of integrating social-emotional learning (SEL) opportunities into the higher secondary curriculum to enhance students' holistic development, academic outcomes, and overall quality of education.

**Key Words:** emotional intelligence, academic performance, higher secondary education, social-emotional learning, quality education, educational policy.

## 1. INTRODUCTION

*What genuinely prepares young people for life in the 21st century?* This question remains central to educators around the world. For many years, schools have relied mainly on standardised tests and academic scores, often assuming that cognitive intelligence alone predicts a student's future success (MacCann et al., 2020). Foundational research, however, shows that this narrow view overlooks important social-emotional competencies that help individuals manage the complex social and professional demands of modern life (Salovey & Mayer, 1990; Goleman, 1995).

Emotional intelligence (EI), which refers to the capacity to recognise, understand, and regulate emotions in oneself and others, has therefore become increasingly relevant in education. Although research shows that EI supports student functioning and academic performance, it is still not fully integrated into many school systems. This gap is especially evident in countries like India, where social-emotional learning is not yet a consistent part of the formal curriculum (Samanta & Dwivedi, 2025). This gap also contrasts with the goals of Sustainable Development Goal 4, which highlights the need for quality

education that strengthens interpersonal competence and global citizenship (United Nations, 2015).

In light of these considerations, the present study seeks to provide a clearer understanding of how emotional intelligence relates to academic achievement during the higher secondary years. To guide this investigation, the study sets out the following objectives:

- to examine the association between emotional intelligence and academic performance;
- to analyse the relative contributions of intrapersonal and interpersonal EI dimensions; and
- to determine whether emotional intelligence varies across key demographic groups among higher secondary students.

By addressing these objectives, the study aims to generate evidence that can inform curriculum design, pedagogical practice, and policy efforts directed towards strengthening social-emotional competencies within the broader framework of quality education.

## 2. LITERATURE REVIEW

### Foundations of Emotional Intelligence

Early work on Emotional Intelligence (EI) introduced two influential perspectives that continue to shape contemporary knowledge. Salovey and Mayer (1990) describe EI as a set of cognitive skills that involve perceiving emotions, using them to support thinking, understanding emotional meanings, and regulating emotional responses. Goleman (1995) later expanded this view by incorporating personality traits and behavioural competencies. Although these models differ in focus, they converge on core competencies across intrapersonal and interpersonal dimensions. These competencies include emotional awareness, the ability to manage one's own emotions, sensitivity to others' emotions, and adaptive social responding (Mayer et al., 2016; Petrides et al., 2004). Together, these constructs offer a coherent base for examining EI within educational research.

### Emotional Intelligence and Student Outcomes

A substantial body of research has examined the association between EI and academic achievement. MacCann et al. (2020) conducted a meta-analysis of 158 studies involving more than 40,000 participants and found that EI predicts academic performance at levels comparable to cognitive ability, even after controlling for personality and intelligence. The strength of these associations varies. Some studies report weak correlations near  $r = .10$ , while others report moderate values closer to  $r =$

.30 (Brackett et al., 2011; Petrides et al., 2004). This variation suggests that contextual or individual factors may shape how EI influences academic outcomes.

Several studies point to the particular significance of interpersonal EI. Lam and Kirby (2002) found that the ability to manage others' emotions predicted academic performance among university students, whereas self-focused emotional skills did not. Parker et al. (2004) similarly reported that social skills and interpersonal problem-solving showed stronger associations with academic outcomes than intrapersonal competencies. These findings may indicate that the collaborative and socially embedded nature of contemporary classrooms increases the relevance of other-focused emotional competencies.

### Developmental Importance of the Higher Secondary Stage

The higher secondary years represent a distinctive developmental period characterised by rapid emotional growth and escalating academic expectations. Adolescents experience significant neurobiological changes and face increasing social demands during this stage (Steinberg, 2005). Higher EI may support resilience and reduce vulnerability to anxiety, depressive symptoms, and maladaptive stress responses. These protective factors are especially relevant for students navigating the intense workload and competitive pressures associated with higher secondary schooling (Manacy, 2024; Khatri, 2018).

Interpersonal competencies also shape adolescents' daily experiences. These competencies help young people form supportive peer relationships, manage early romantic attachments, and interact effectively with adults. Such relational contexts create the social environment that can facilitate or undermine academic engagement (Parker et al., 2004). These developmental demands underscore the need for structured supports such as social-emotional learning.

### Social-Emotional Learning (SEL) in Educational Systems

Growing recognition of EI's importance has supported the expansion of social-emotional learning (SEL) in schools. This priority is echoed in the National Education Policy (NEP 2020), which explicitly foregrounds social-emotional development across stages of schooling and calls for curricular and pedagogical reforms that integrate social-emotional and ethical learning into mainstream education.

SEL refers to structured programmes that aim to build students' emotional and social competencies. Meta-analytic research shows that well-designed SEL initiatives can improve academic performance by about 11 percentile points and reduce behavioural difficulties and emotional distress (Durlak et al., 2011; Schonert-Reichl, 2017). Despite these benefits, SEL implementation is uneven across education systems. This inconsistency is especially pronounced in developing countries, where SEL has not yet become an embedded component of formal schooling (Samanta & Dwivedi, 2025).

This divide between evidence and practice underscores the need to understand which EI competencies are most influential for learners at different developmental stages and in varied contexts.

## 3. METHODS

### Research Design and Participants

This study used a quantitative, cross-sectional correlational design to examine the associations between emotional intelligence (EI) and academic performance among higher secondary students. Two higher secondary schools in the Tiruchirappalli district were selected through convenience sampling, and all students enrolled in Grades 11 and 12 within these schools were included, resulting in a census sample of 322 participants. Basic demographic information was collected, focusing on gender and family type. These variables were included to consider whether they might influence the strength or direction of the observed associations. Institutional permission and informed consent were obtained prior to data collection.

### Measures

*Emotional Intelligence.* EI was assessed using the Emotional Intelligence Inventory (EII-MM, 3rd ed.; Mangal & Mangal, 2025), published by the National Psychological Corporation. The inventory consists of 100 items rated on a three-point Likert scale and is designed for use with Indian adolescents. It measures four dimensions: Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management, and Interpersonal Management.

*Academic Performance.* Academic performance was operationalised as students' percentage marks from their most recent board examination results.

### Data Analysis

Analyses included descriptive statistics, independent samples t-tests, and one-way ANOVA to explore demographic differences. Pearson product-moment correlations were then computed to examine associations between EI dimensions and academic achievement. Statistical significance was set at  $p < 0.05$ . All analyses were conducted using SPSS.

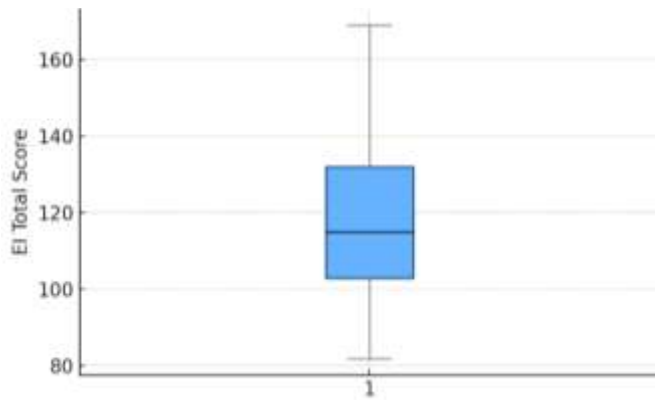
## 4. RESULTS

**Table - 1:** Descriptive Statistics for Total EI Scores

Statistic	Value
Mean	118.56
SD	18.19
Minimum	82
Q1	103
Median	115
Q3	132
Maximum	169

The mean total EI score for 322 participants was 118.56 (SD = 18.19), with a slightly right-skewed distribution (skewness = 0.509).

**Figure – 1:** Distribution of Emotional Intelligence scores across participants represented by a box plot



**Table – 2:** Emotional Intelligence Scores by Gender

Gender	n	Mean EI Score	Standard Deviation	p-value
Male	95	117.68	15.87	0.577
Female	227	118.93	19.1	

Independent samples t-test revealed no significant gender differences in EI scores ( $p = 0.577$ ).

**Table – 3:** Emotional Intelligence Scores Across Family Types

Family Type	n	Mean EI Score	Standard Deviation	p-value
Nuclear Family	235	118.55	17.91	0.162
Joint Family	65	120.74	19.6	
Single Parent Family	22	112.18	15.98	

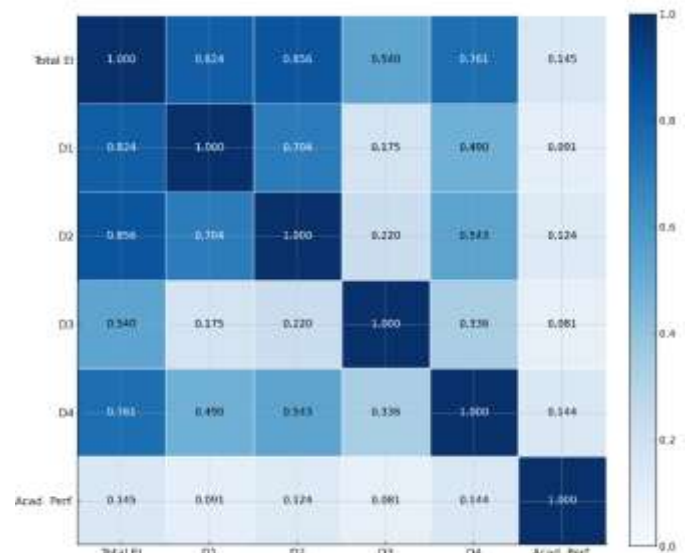
ANOVA showed no significant family type differences in EI scores ( $p = .162$ ).

**Table – 4:** Correlations Between EI and Academic Performance

Variable	Academic Performance (Marks)
Total EI	$r = 0.145, p = 0.009$
Interpersonal Awareness	$r = 0.124, p = 0.026$
Interpersonal Management	$r = 0.144, p = 0.010$

Pearson correlation analysis revealed a weak but statistically significant positive correlation between total EI and academic performance ( $r = 0.145, p = 0.009$ ). Specifically, Interpersonal Awareness ( $r = 0.124, p = 0.026$ ) and Interpersonal Management ( $r = 0.144, p = 0.010$ ) showed significant correlations with academic marks.

**Figure – 2:** Correlation matrix illustrating relationships between emotional intelligence components (Total EI, D1–D4) and academic performance (Acad. Perf.).



## 5. DISCUSSION

This study provides insight into how emotional intelligence relates to academic achievement among higher secondary students. The findings indicate that interpersonal competencies, rather than intrapersonal skills, contribute most consistently to academic performance. This distinction adds nuance to existing EI research and highlights specific areas for educational focus.

### Interpreting the Dimension-Specific Pattern

The significant associations for Interpersonal Awareness and Interpersonal Management reflect the social nature of learning in Grades 11 and 12, where collaboration, peer interaction, and teacher-student communication shape daily academic tasks. Students skilled at interpreting social cues and managing relationships may participate more effectively in group activities and classroom discussions, strengthening their engagement (Lam & Kirby, 2002; Parker et al., 2004).

The non-significant intrapersonal correlations require careful interpretation. These findings do not diminish the importance of self-awareness or emotional regulation; instead, they may indicate that exam-oriented assessment systems give fewer opportunities for such competencies to influence marks. Intrapersonal EI may be more visible in performance-based or classroom-assessed tasks than in written examinations. These patterns may also reflect cultural and pedagogical practices unique to the participating schools, which can shape how emotional competencies translate into academic performance. The effect sizes observed ( $r \approx .12-.15$ ) fall within the “small” range, suggesting that EI is one of several factors influencing achievement, consistent with broader literature (MacCann et al., 2020). Even so, small effects can hold practical significance across large cohorts.

### Alignment With Previous Indian Research

The findings broadly align with Indian studies reporting modest positive links between EI and academic performance (e.g., Khatri, 2018; Manacy, 2024). Research conducted in Indian higher secondary settings often points to interpersonal EI—empathy, social sensitivity, relationship management—as particularly relevant for academic engagement. Some studies, however, have found stronger intrapersonal effects, likely reflecting variation in school culture, instructional practices, and assessment formats. The present results contribute to this



literature by clarifying that, in these two schools, interpersonal EI appears more directly connected to achievement than self-focused skills.

### Insights and Implications for Quality Education

The emphasis on interpersonal EI supports a broader understanding of quality education as extending beyond content mastery. Students who collaborate effectively, manage relationships, and engage constructively with peers are better positioned to thrive in discussion-based and problem-solving tasks. Such competencies also contribute to a positive classroom climate, reduce conflict, and support inclusive participation—outcomes aligned with SDG 4's vision of equitable, holistic education.

The absence of gender or family-type differences further suggests that interpersonal EI is distributed fairly evenly across groups, allowing SEL interventions to be implemented universally rather than targeted narrowly.

### Policy and Practice Implications

These findings underscore the value of systematically embedding SEL into higher secondary education in India. Prioritising interpersonal competencies—communication, empathy, collaboration—may yield meaningful academic and social benefits. Teacher training systems should integrate EI-focused modules, equipping teachers to model interpersonal skills and incorporate them into everyday pedagogy. This aligns with NEP 2020's emphasis on holistic development, competency-based learning, and social-emotional growth.

Assessment practices also merit reflection. Traditional examinations may overlook the academic contributions of interpersonal skills. Complementing them with formative assessments—peer feedback, group project evaluations, and observations of collaborative behaviour—can provide a fuller picture of students' strengths and align assessment with NEP 2020's experiential learning goals.

Together, these implications highlight that strengthening interpersonal EI is not an add-on but a strategic component of improving learning, inclusion, and the overall quality of secondary education.

## 6. LIMITATIONS AND FUTURE DIRECTIONS

Several limitations should be acknowledged when interpreting the findings of this study. Although a census sampling approach was used within the participating schools, the institutions themselves were selected through convenience sampling. This limits the generalisability of the results, as school-level characteristics—such as instructional practices, assessment culture, or student demographics—may have influenced both EI scores and academic performance. Consequently, the findings may not generalise to schools with different academic cultures, socio-economic profiles, or instructional environments. Future studies would benefit from including a broader and more diverse sample of schools across districts or states to capture wider variation in educational contexts.

The cross-sectional design also restricts the ability to make causal inferences. While the observed associations offer valuable insight into how EI relates to academic achievement at a single point in time, longitudinal research is needed to clarify developmental trajectories and to examine whether changes in EI translate into improvements in academic outcomes over time.

A further limitation concerns the reliance on self-report measures of emotional intelligence. Although the EII-MM provides a structured and contextually appropriate assessment for Indian adolescents, self-report instruments may be subject to social desirability bias and may not fully capture students' actual emotional competencies. Incorporating ability-based measures or multi-informant approaches—including teacher ratings or behavioural observations—would strengthen the validity of future investigations.

Finally, the study did not explore the mechanisms through which EI influences academic performance. Interpersonal competencies may shape classroom engagement, peer collaboration, or teacher-student relationships, each of which could contribute indirectly to academic outcomes. Future research could examine these mediating processes through mixed-methods designs or classroom-based observational studies. Experimental or quasi-experimental studies evaluating the impact of structured SEL interventions would also offer valuable evidence, particularly in the context of policy priorities outlined in the National Education Policy (NEP 2020).

Taken together, these directions underscore the need for continued research that not only deepens theoretical understanding of emotional intelligence in Indian secondary education but also informs practical strategies for strengthening social-emotional competencies within schools.

## 7. CONCLUSION

This study demonstrates that interpersonal emotional intelligence—particularly the ability to understand others and manage social relationships—plays a meaningful role in shaping academic achievement among higher secondary students. The dimension-specific pattern suggests that social aspects of learning carry particular weight at this stage of schooling. Collaboration, discussion, and peer engagement are especially central to academic life during these years. Although the correlations were modest, their consistency underscores meaningful opportunities for strengthening interpersonal EI among students.

The findings offer practical insight for strengthening the quality of secondary education. Embedding structured opportunities for students to develop empathy, perspective-taking, communication, and conflict-resolution skills can enhance classroom participation and contribute to more supportive, inclusive learning environments. Approaches such as cooperative learning, guided group tasks, and role-play provide natural contexts for practising these competencies. Teachers also require sustained professional development that equips them to model interpersonal skills, scaffold student interactions, and integrate SEL principles into routine classroom practice. Such efforts align with the priorities of the National Education Policy (NEP 2020), which emphasises holistic development, social-emotional growth, and competency-based learning.

By placing interpersonal EI alongside traditional academic content, schools can prepare learners not only for examinations but also for the collaborative demands of contemporary social and professional life. This orientation reflects UNESCO's vision of quality education and reinforces the importance of equipping young people with the social-emotional capacities needed to contribute meaningfully within an interconnected world.

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