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Emotional Intelligence and Gender Differences Among First-Year Undergraduates During the Transition to Higher Education

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Abstract

Abstract Emotional intelligence (EI) has gained increasingly scholarly attention as a key psychosocial attribute influencing students' academic adjustment during the transition to undergraduate education. The present study examined emotional intelligence among first-year undergraduate students, with particular reference to gender differences. Using a descriptive survey research design, the study was conducted on a sample of 150 first-year undergraduate students (61 males and 89 females) selected through simple random sampling from two colleges in the North 24 Parganas district of West Bengal. Data were collected using a self-constructed and standardized Emotional Intelligence Scale and analysed using descriptive statistics and an independent-samples t test. The findings revealed that a majority of students demonstrated moderate emotional intelligence, while a considerable proportion fell within the high to very high range, alongside a comparable proportion exhibiting low emotional intelligence. Female students obtained a slightly higher mean EI score (M = 78.81) than their male counterparts (M = 76.54); however, the difference was not statistically significant (p = .077). The results indicate that emotional intelligence among first-year undergraduates does not vary significantly by gender and underscore the need for institutional initiatives to strengthen emotional competencies during the early phase of undergraduate education.

Keywords: Emotional Intelligence, First-Year Undergraduates, Gender Differences, Academic Adjustment, Higher Education

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INTRODUCTION

Emotional intelligence (EI) has emerged as a central construct within educational psychology due to its demonstrated significance for students' academic performance, psychological well-being, and capacity to adapt to increasingly complex learning environments. The construct was first articulated by Salovey and Mayer (1990), who defined emotional intelligence as the ability to perceive, understand, utilise, and regulate emotions in oneself and others. Their ability-based model framed EI as a constellation of cognitive–emotional competencies that facilitate effective reasoning, interpersonal communication, and adaptive problem-solving. Extending this foundational perspective, Goleman (1995) foregrounded the applied relevance of emotional intelligence, emphasising its role in motivation, social competence, and success across educational and professional domains. Collectively, these theoretical contributions position emotional intelligence as a critical non-cognitive attribute underpinning effective academic functioning and psychosocial adjustment.

The transition to higher education represents a significant developmental and psychosocial shift for young adults, particularly during the first year of undergraduate study. First-year students encounter heightened academic demands, increased autonomy, exposure to diverse peer networks, and, in many cases, separation from established familial and social support systems. These changes often generate elevated levels of stress and adjustment difficulties. Within this context, emotional intelligence has been identified as a protective factor that enables students to manage academic pressures and interpersonal challenges more effectively. Empirical evidence suggests that students with higher emotional intelligence demonstrate superior emotional regulation, healthier peer relationships, and more adaptive coping strategies, all of which contribute to smoother academic and social adjustment (Parker et al., 2004). Moreover, emotional self-awareness and regulation have been associated with reduced stress levels and improved study behaviours among university students (Schutte et al., 1998).

Beyond transitional adjustment, emotional intelligence has been consistently linked to academic achievement and broader indicators of student success. A comprehensive meta-analysis by MacCann et al. (2020) established emotional intelligence as a significant predictor of academic performance, even after controlling for cognitive ability and personality traits. Similarly, Qualter et al. (2012) demonstrated that emotional intelligence supports students' ability to navigate academic transitions by fostering social integration and effective coping mechanisms. These findings resonate with Tinto's (1993) model of student integration, which emphasises the centrality of both academic and social integration in promoting student persistence and reducing attrition, particularly during the early years of higher education.

In recent years, higher education institutions have increasingly recognised the importance of non-cognitive attributes in shaping students' academic trajectories and overall well-being. Emotional intelligence has been identified as a key contributor to psychological resilience, emotional well-being, and sustained academic engagement. Research indicates that students with higher levels of emotional intelligence experience lower levels of anxiety, greater resilience, and enhanced subjective well-being (Fernández-Berrocal & Extremera, 2006). These benefits are especially salient during the first year of undergraduate education, a period characterised by academic pressure, identity exploration, and social adjustment. Consequently, examining emotional intelligence among first-year undergraduate students is essential for informing institutional policies and student support mechanisms aimed at fostering emotional competence, retention, and academic success.

Among the various factors influencing emotional intelligence, gender has received considerable scholarly attention; however, empirical findings remain inconsistent. Several studies report no statistically

significant gender differences in emotional intelligence. For example, Singh and Thapa (2023) found no meaningful gender variation in emotional intelligence among higher secondary students, while Kumar (2020) reported that emotional intelligence was largely independent of gender, despite females exhibiting marginally higher mean scores. These findings align with earlier investigations by Ayan et al. (2017) and Mathur et al. (2005), which similarly reported negligible gender-based differences across school and university populations.

Conversely, other studies suggest that female students tend to demonstrate higher levels of emotional intelligence than their male counterparts. Sharma (2021) identified a significant gender difference favouring females, attributing this advantage to higher emotional awareness and regulatory capacities. Alam (2018) likewise reported elevated emotional intelligence levels among female adolescents, while Kant (2019) observed significantly higher emotional intelligence scores among female university students. These findings indicate that gender-related variations in emotional intelligence may persist into higher education and may be shaped by sociocultural and developmental influences. The inconsistency of empirical evidence suggests that gender differences in emotional intelligence are context-dependent rather than universal. Cultural norms, educational environments, and developmental stages may interact to influence emotional competencies among students. Given that first-year undergraduate students occupy a particularly critical phase of emotional, social, and academic transition, further empirical investigation within this population is warranted. Examining emotional intelligence and gender differences among first-year undergraduates can contribute valuable insights to the existing literature and support the design of targeted institutional interventions aimed at enhancing emotional competence, academic adjustment, and student well-being.

OBJECTIVES

The present study was conducted with the following objectives:

- To examine the level of emotional intelligence among first-year undergraduate students.
- To determine whether emotional intelligence differs significantly between male and female first-year undergraduate students.

RESEARCH QUESTION

- What is the level of emotional intelligence among first-year undergraduate students?

NULL HYPOTHESIS (H_0)

- H_{01}**:** There is no statistically significant difference in emotional intelligence between male and female first-year undergraduate students.

METHODOLOGY

Research Design

The present study employed a descriptive survey research design to investigate the level of emotional intelligence among first-year undergraduate students and to examine gender-based differences.

Population and Sample

The population for the present study comprised all first-year undergraduate students enrolled in colleges located in the North 24 Parganas district of West Bengal. From this population, a sample of 150 students

Table 1: Descriptive Statistics of Emotional Intelligence Scores by Gender

Gender	n	M	SD
Male	61	76.54	7.82
Female	89	78.81	7.41

was selected through a simple random sampling method from two colleges within the district. The final sample included 61 male and 89 female students, providing adequate representation for examining both the overall level of emotional intelligence and gender-based differences among first-year undergraduate learners.

Instrument

A self-developed Emotional Intelligence Scale for Higher Education Students was used to assess emotional intelligence among first-year undergraduates. The scale was developed based on Goleman's five dimensions of emotional intelligence—self-awareness, self-regulation, motivation, empathy, and social skills. It comprised 20 items rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with higher scores indicating greater emotional intelligence. The instrument underwent expert validation to ensure content adequacy and was pilot tested to establish reliability and clarity before being administered to the sample.

Procedure for Data Collection

Prior permission was obtained from the authorities of the two selected colleges. Data were collected in classroom settings during regular academic hours. The purpose of the study was clearly explained to the participants, and they were assured of voluntary participation, anonymity, and confidentiality. The Emotional Intelligence Scale was administered in paper-and-pencil format, and completed questionnaires were collected on the same day to ensure a high response rate and data completeness.

Statistical Techniques

The collected data were coded and analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including mean, standard deviation, frequency, and percentage distribution, were used to assess the distribution of emotional intelligence among first-year undergraduate students. To examine gender-based differences in emotional intelligence, an independent-samples t test was employed. Given the unequal group sizes, Welch's correction was applied where appropriate. The level of statistical significance for all analyses was set at 0.05.

RESULTS

The purpose of the present analysis was to examine the distribution of emotional intelligence (EI) scores, develop normative classifications, and determine whether emotional intelligence differs significantly by gender. Descriptive statistics, percentile-based norms, frequency analysis, and inferential statistics were employed to address these objectives. Descriptive Statistics of Emotional Intelligence by Gender Descriptive statistics were computed to summarize emotional intelligence scores separately for male and female participants. The results are presented in Table 1.

The descriptive results suggest generally moderate emotional intelligence levels among participants, with marginally higher EI observed among females. Female participants demonstrated a slightly higher mean emotional intelligence score (M = 78.81, SD = 7.41) compared to male participants (M = 76.54, SD = 7.82). Figure 1 illustrates this slight mean difference between genders. The standard deviations indicate

Table 2: Percentile-Based Norms for Emotional Intelligence

Norm Level	Score Range
Very Low Emotional Intelligence	≤ 72
Low Emotional Intelligence	73–76
Average Emotional Intelligence	77–80
High Emotional Intelligence	81–84
Very High Emotional Intelligence	≥ 85

comparable variability across the two groups, suggesting similar dispersion of emotional intelligence scores among males and females.

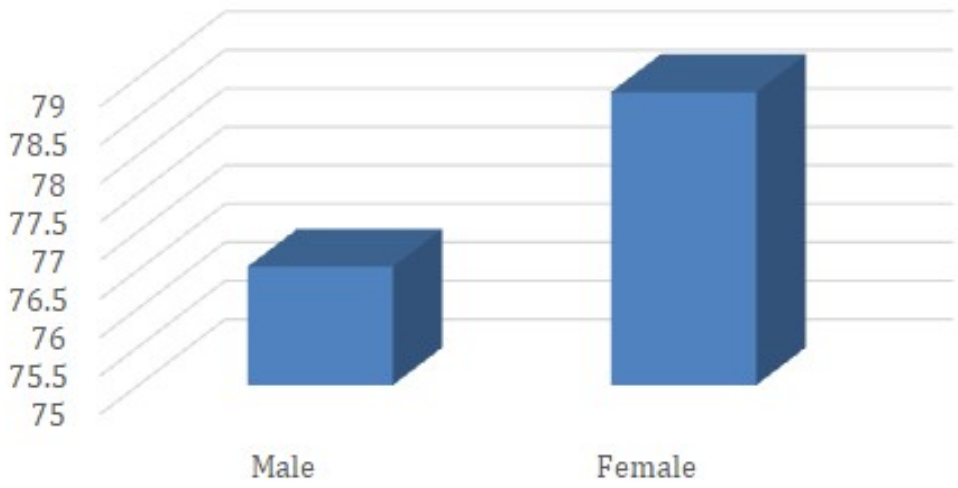


Figure 1: Mean Scores of Male and Female Students.

Development of Percentile-Based Norms for Emotional Intelligence

To facilitate meaningful interpretation of emotional intelligence scores, percentile-based norms were developed using the total sample (N = 150). Based on the 20th, 40th, 60th, and 80th percentile cut-off points, five normative levels of emotional intelligence were established. The norms are presented in Table 2.

These normative categories classify participants' emotional intelligence relative to the overall score distribution. Higher categories reflect greater emotional awareness, emotional regulation, and interpersonal competence.

Frequency Distribution of Emotional Intelligence Levels

Using the established norms, participants were categorized into five emotional intelligence levels. The frequency and percentage distribution of participants across these categories is presented in Table 3 and Figure 2.

As shown in Table 3 and Figure 2, the distribution of emotional intelligence scores was relatively balanced across the five normative levels. Approximately 40.7% of the participants were classified within the high to very high emotional intelligence categories, indicating strong emotional competencies among a substantial portion of the sample. Conversely, 40.7% of participants fell within the very low to

Table 3: Frequency Distribution of Emotional Intelligence Levels (N = 150)

Emotional Intelligence Level	Score Range	f	%
Very Low Emotional Intelligence	≤ 72	33	22.0
Low Emotional Intelligence	73–76	28	18.7
Average Emotional Intelligence	77–80	32	21.3
High Emotional Intelligence	81–84	28	18.7
Very High Emotional Intelligence	≥ 85	29	19.3
Total		150	100.0

low emotional intelligence categories, suggesting that a considerable proportion may require emotional intelligence enhancement and support interventions. The absence of extreme clustering indicates that the scale effectively captured variability in emotional intelligence.

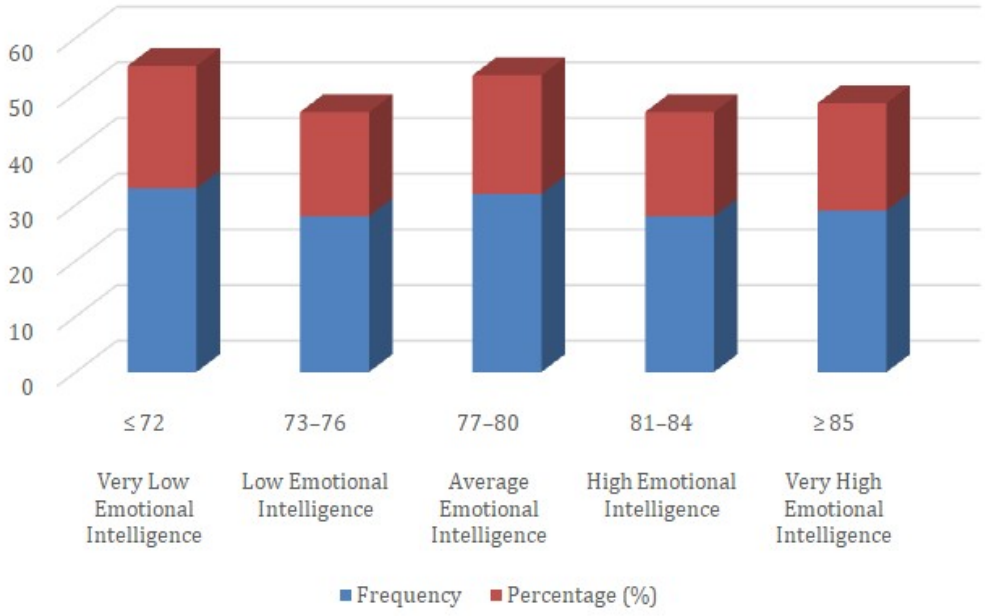


Figure 2: Frequency Distribution of Emotional Intelligence Levels.

Gender Differences in Emotional Intelligence

To examine whether emotional intelligence differed significantly between male and female first-year undergraduate students, an independent-samples t test with Welch's correction was conducted due to unequal group sizes. The results are presented in Table 4.

Table 4: Independent-Samples t Test Comparing Emotional Intelligence Scores by Gender

Gender	M	SD	t	df	p
Male	76.54	7.82	–1.78	124.47	.077
Female	78.81	7.41			

The results indicated that the difference in emotional intelligence scores between male and female first-year undergraduate students was not statistically significant, $t(124.47) = -1.78$, $p = .077$. Although

female participants obtained slightly higher emotional intelligence scores (M = 78.81, SD = 7.41) than males (M = 76.54, SD = 7.82), the magnitude of this difference was small and did not reach the conventional level of statistical significance. These findings suggest that emotional intelligence is not significantly influenced by gender within the present sample. The small mean difference indicates that emotional competencies are likely shaped by individual, educational, and contextual factors rather than biological sex alone.

DISCUSSION

The present study investigated emotional intelligence among first-year undergraduate students and examined whether emotional intelligence differed significantly by gender. The findings provide a nuanced understanding of emotional intelligence during the early phase of undergraduate education, a period marked by substantial academic, social, and emotional transition. Overall, the results indicate a moderately distributed pattern of emotional intelligence, with students spread across low, average, and high levels. This distribution suggests that emotional competencies are neither uniformly developed nor deficient at the point of entry into higher education, but rather remain in a dynamic state of development shaped by transitional demands and individual experiences.

A salient observation from the findings is the relatively balanced distribution of emotional intelligence across normative categories. While approximately two-fifths of the students demonstrated high to very high emotional intelligence, an equivalent proportion fell within the very low to low range. This bifurcation underscores the heterogeneous emotional preparedness of first-year undergraduates. The presence of a substantial group with lower emotional intelligence is particularly noteworthy, as it reflects the emotional challenges inherent in the transition to university life, including heightened academic expectations, increased autonomy, and the need to navigate new social environments. These findings are consistent with earlier research suggesting that the first year of higher education is a critical period for emotional adjustment, during which students vary considerably in their capacity to regulate emotions, cope with stress, and maintain effective interpersonal relationships (Parker et al., 2004; Qualter et al., 2012).

At the same time, the proportion of students exhibiting high emotional intelligence indicates that a significant segment of the sample possesses well-developed emotional competencies upon entry into university. Such students are likely better equipped to manage academic pressures, engage constructively with peers and faculty, and employ adaptive coping strategies. This variability reinforces the view that emotional intelligence is shaped by a complex interplay of prior educational experiences, family environments, and individual dispositions, rather than emerging uniformly at a particular developmental stage. Importantly, the absence of extreme clustering at any single level suggests that the emotional intelligence scale effectively captured meaningful variation within the sample, lending credibility to the normative classifications developed in the study.

With respect to gender differences, the findings revealed no statistically significant difference in emotional intelligence between male and female first-year undergraduate students. Although female students obtained marginally higher mean scores, the difference was small and did not reach conventional levels of statistical significance. This result aligns with a substantial body of empirical literature reporting negligible or non-significant gender differences in emotional intelligence (Ayan et al., 2017; Kumar, 2020; Mathur et al., 2005; Singh & Thapa, 2023). The findings suggest that emotional intelligence among first-year undergraduates is not strongly determined by gender, but is more likely influenced by individual emotional experiences, contextual factors, and educational exposures.

The absence of significant gender differences may also reflect changing sociocultural dynamics, wherein emotional awareness and regulation are increasingly encouraged across genders within educational and social contexts. Additionally, the early undergraduate phase may represent a stage at which emotional competencies are shaped more by situational demands than by gendered socialisation patterns. This interpretation is consistent with contemporary perspectives that view emotional intelligence as a malleable construct, responsive to environmental influences and educational interventions rather than fixed demographic characteristics.

Taken together, the findings highlight the importance of addressing emotional intelligence as a developmental and educational concern within higher education. The moderate and varied levels of emotional intelligence observed among first-year undergraduates point to the need for institutionally supported initiatives aimed at strengthening emotional competencies. Structured orientation programmes, emotional skills workshops, mentoring systems, and counselling services may play a crucial role in supporting students with lower emotional intelligence while further enhancing the strengths of those with higher emotional competence. Such interventions are likely to contribute not only to improved emotional well-being but also to academic adjustment, student engagement, and retention during the critical first year of undergraduate education.

CONCLUSION

This study examined emotional intelligence among first-year undergraduate students and explored gender-based differences during the early phase of higher education. The findings reveal that emotional intelligence is moderately distributed, with students spanning low to high levels, indicating considerable variability in emotional preparedness at university entry. This pattern reflects the developmental and transitional nature of the first undergraduate year, during which students negotiate new academic, social, and emotional demands. Importantly, no statistically significant gender difference in emotional intelligence was observed, suggesting that emotional competence during this stage is shaped more by individual experiences and educational contexts than by gender.

The presence of a substantial proportion of students with lower emotional intelligence highlights the need for institutional initiatives aimed at strengthening emotional competencies. Integrating emotional intelligence development into orientation programmes, mentoring systems, and student support services may enhance students' emotional regulation, resilience, and academic adjustment. While the study is limited by its cross-sectional design and context-specific sample, it contributes meaningful evidence to the understanding of emotional intelligence in early undergraduate education. Future research may adopt longitudinal and mixed-method approaches to further explore the development of emotional intelligence across the university years.

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