
Emotional Intelligence and Academic Performance among Undergraduate University Students: A Correlational Study

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Abstract

Introduction:

Emotional intelligence (EI), initially defined by Mayer and Salovey, denotes the capacity to accurately identify, comprehend, manage, and apply emotions in oneself and others. Emotional intelligence significantly impacts academic settings by affecting motivation, stress regulation, interpersonal dynamics, and learning behaviors. Although cognitive intelligence has historically been prioritized in academic achievement, increasing data indicates that emotional intelligence may substantially influence students' academic performance. Nevertheless, actual results are inconsistent, especially among university students in India, warranting additional research.

Methods:

A descriptive correlational research design was employed to examine the relationship between academic performance and emotional intelligence among undergraduate students. The study was conducted in selected universities of central Gujarat, India. A total of 1,000 undergraduate students were selected using a non-probability convenient sampling technique. Data were

collected using a socio-demographic questionnaire and a self-structured Emotional Intelligence Scale consisting of positively worded items rated on a five-point Likert scale. Emotional intelligence scores ranged from 40 to 200 and were categorized as low (40–80), average (81–120), above average (121–160), and high (161–200). Academic performance was measured using the aggregate percentage/CGPA of the previous academic year. Descriptive statistics, Pearson's correlation coefficient, and Chi-square tests were used for data analysis.

Results:

The majority of participants were females (58.6%) and aged between 20 and 21 years (69.6%). Pearson's correlation analysis revealed a **statistically significant relationship between emotional intelligence and academic performance** ($r = -0.086, p < 0.01$). Chi-square analysis demonstrated **no statistically significant association** between emotional intelligence and selected demographic variables, including age, gender, family type, and family income, place of residence, academic backlog, and recent grief experience ($p > 0.05$).

Discussion and Conclusion:

The results show that emotional intelligence has a strong link to academic success in undergraduate students. This suggests that better emotional skills could lead to better academic results. The absence of correlation with demographic variables suggests that emotional intelligence is mostly autonomous from socio-demographic influences. Integrating emotional intelligence enhancement programs into university curricula may promote academic success and comprehensive student development.

Keywords: Emotional intelligence; Academic performance; Undergraduate students; Correlational study; University education

Introduction

Academic achievement continues to be a primary metric of success in higher education, typically linked to cognitive competence and academic aptitude. Nonetheless, mounting data indicates that non-cognitive elements, especially emotional intelligence (EI), significantly impact students' academic performance, psychological health, and resilience to academic stress. ¹ Emotional

intelligence includes the ability to see, comprehend, control, and use emotions in oneself and others in a way that helps people reach their goals and get along with others.² Mayer and Salovey first formally proposed the idea of emotional intelligence in 1990. They said it is a kind of social intelligence that involves keeping an eye on and controlling emotions to help with thoughts and actions.³ Later, Goleman built on this idea and said that emotional intelligence is a key factor in performance in school, work, and social situations.⁴ Self-awareness, self-regulation, motivation, empathy, and social skills are all parts of emotional intelligence. All of these are important for learning and being involved in school. In college, students face a lot of academic and social hurdles, such as the stress of tests, competitiveness with friends, problems adjusting, and not knowing what they want to do with their lives. These pressures necessitate proficient emotional regulation and adaptive coping mechanisms.⁵ Research indicates that adolescents possessing elevated emotional intelligence demonstrate superior stress management, enhanced interpersonal interactions, increased motivation, and greater academic persistence. Nonetheless, research regarding the correlation between emotional intelligence and academic achievement is mixed, with certain studies indicating positive correlations while others reveal weak or insignificant associations.

From the Indian viewpoint, there has been a surge in study into emotional intelligence among university students in recent years. Indian research including medical, nursing, and undergraduate students have indicated that emotional intelligence correlates with academic achievement, psychological well-being, and less perceived stress.⁶⁻⁷ However, the size and direction of this association differ depending on the field of study, the school, and the way the tests are given. Moreover, few extensive research have investigated this link across varied undergraduate populations across several colleges.

With the increasing focus on comprehensive education and student welfare, it is essential to comprehend the influence of emotional intelligence on academic achievement. Consequently, the current study seeks to evaluate the relationship between academic performance and emotional intelligence among undergraduate students at specific universities in central Gujarat, as well as to investigate the correlation between emotional intelligence and particular demographic characteristics.

Methodology

A descriptive correlational survey research design was employed to examine the relationship between academic performance and emotional intelligence among undergraduate students studying in selected universities of central Gujarat, India. A sample of **1,000 undergraduate students** was determined using standard sample size calculation and selected through a **non-probability convenient sampling technique**. Data were collected using two structured tools: a **socio-demographic questionnaire** and a **self-structured Emotional Intelligence Questionnaire** consisting of positively worded items rated on a **five-point Likert scale** ranging from almost never (1) to always (5). The total emotional intelligence score was obtained by summing all item scores and categorized as **low (40–80)**, **average (81–120)**, **above average (121–160)**, and **high (161–200)**. Academic performance was assessed using the **aggregate percentage/CGPA of the previous academic year**. Data collection was conducted during regular working hours (09:00 AM–04:30 PM) on the respective campuses, and each participant completed both tools simultaneously within approximately **15–20 minutes**. Undergraduate students who were present during data collection, willing to participate, and able to read and write English were included, while those with psychological or diagnosed psychiatric problems were excluded. Prior informed consent was obtained, and confidentiality was maintained throughout the study. The collected data were analysed using **descriptive statistics** and **inferential statistics**, including **Pearson's correlation coefficient** to determine the relationship between academic performance and emotional intelligence and **Chi-square tests** to assess associations between emotional intelligence and selected demographic variables.

Results

The analyzed data are presented under three major components: demographic characteristics of the participants, the correlation between academic performance and emotional intelligence, and the association between emotional intelligence and selected demographic variables.

Table 1

Frequency, Percentage, and Mean Distribution of Demographic Variables of Undergraduate Students

n = 1000

| Sr. No. | Demographic Variable | Category | Frequency (n) | Percentage (%) |
|---------|--------------------------------------|-------------------|---------------|----------------|
| 1 | Age (years) | 17 | 11 | 1.1 |
| | | 18 | 35 | 3.5 |
| | | 19 | 172 | 17.2 |
| | | 20 | 436 | 43.3 |
| | | 21 | 263 | 26.3 |
| | | 22 | 58 | 5.8 |
| | | 23 | 15 | 1.5 |
| | | 24 | 7 | 0.7 |
| | | 25 | 2 | 0.2 |
| 2 | Gender | 31 | 1 | 0.1 |
| | | Male | 414 | 41.4 |
| 3 | Family Type | Female | 586 | 58.6 |
| | | Nuclear | 445 | 44.5 |
| | | Extended | 39 | 3.9 |
| 4 | Number of Family Members | Joint | 514 | 51.4 |
| | | < 3 | 144 | 14.4 |
| | | 4–5 | 544 | 54.4 |
| 5 | Monthly Family Income (₹) | > 6 | 307 | 30.7 |
| | | < 10,000 | 77 | 7.7 |
| | | 10,000–30,000 | 332 | 33.2 |
| | | 30,000–50,000 | 364 | 36.4 |
| 6 | Primary Caregiver | > 50,000 | 227 | 22.7 |
| | | Mother | 819 | 81.9 |
| | | Father | 76 | 7.6 |
| | | Grandparents | 94 | 9.4 |
| 7 | Age at Beginning of Formal Education | Others | 11 | 1.1 |
| | | 2 years | 97 | 9.7 |
| | | 3 years | 451 | 45.1 |
| | | 4 years | 306 | 30.6 |
| 8 | Place of Residence | > 4 years | 146 | 14.6 |
| | | Rural | 377 | 37.7 |
| 9 | Current Stay | Urban | 620 | 62.0 |
| | | Hostel | 374 | 37.4 |
| | | Home | 529 | 52.9 |
| 10 | Academic Backlog | Paying Guest (PG) | 92 | 9.2 |
| | | Yes | 884 | 88.4 |
| 11 | Grief Experienced in Last 6 Months | No | 116 | 11.6 |
| | | Yes | 761 | 76.1 |
| | | No | 239 | 23.9 |

Table 2

Correlation between Academic Performance and Emotional Intelligence among Undergraduate Students

n = 1000

| Variable | Pearson Correlation (r) | CGPA | Emotional Intelligence Score |
|-------------------------------------|-------------------------|-----------|------------------------------|
| CGPA | Pearson Correlation | 1.000 | - 0.086** |
| | Sig. (2-tailed) | - | 0.006 |
| | N | 1000 | 1000 |
| Emotional Intelligence Score | Pearson Correlation | - 0.086** | 1.000 |
| | Sig. (2-tailed) | 0.006 | - |
| | N | 1000 | 1000 |

The results presented in Table 2 indicate a statistically significant correlation between academic performance and emotional intelligence among undergraduate students ($r = -0.086$, $p = 0.006$). Although the magnitude of the correlation is weak, the relationship is statistically significant at the 0.01 level, suggesting that emotional intelligence is meaningfully associated with academic performance in the study population.

Section 3A:

Results Related to Selected Demographic Variables and Emotional Intelligence

n = 1000

| Emotional Intelligence Level | Score Range | Frequency (n) | Percentage (%) |
|------------------------------|-------------|---------------|----------------|
| Low | 40–80 | 28 | 2.8 |
| Average | 81–120 | 198 | 19.8 |
| Above Average | 121–160 | 610 | 61.0 |
| High | 161–200 | 164 | 16.4 |
| Total | — | 1000 | 100.0 |

Table 3B

Distribution of Emotional Intelligence Levels among Undergraduate Students

n = 1000

| Sr. No. | Demographic Variable | χ^2 Value | df | p Value |
|---------|--------------------------------------|----------------|----|---------------|
| 1 | Age | 26.992 | 27 | 0.464 |
| 2 | Gender | 9.842 | 3 | 0.020* |
| 3 | Family Type | 21.367 | 12 | 0.045* |
| 4 | Number of Family Members | 2.570 | 9 | 0.979 |
| 5 | Monthly Family Income | 17.892 | 9 | 0.037* |
| 6 | Primary Caregiver | 9.177 | 9 | 0.421 |
| 7 | Age at Beginning of Formal Education | 18.644 | 9 | 0.028* |
| 8 | Place of Residence | 7.194 | 9 | 0.617 |
| 9 | Current Stay | 6.221 | 9 | 0.718 |
| 10 | Academic Backlog | 1.201 | 3 | 0.753 |
| 11 | Grief in Last 6 Months | 8.914 | 3 | 0.030* |

Table 3B presents the association between emotional intelligence levels and selected demographic variables using the Chi-square test. The Chi-square analysis indicated that gender, family structure, monthly family income, age at the commencement of formal education, and recent experiences of bereavement were substantially correlated with levels of emotional intelligence ($p < 0.05$). This suggests that emotional intelligence in undergraduate students may be affected by specific personal, familial, and experiential factors. Conversely, factors including age, family size, residency, current location, and academic backlog had no statistically significant correlation with emotional intelligence ($p > 0.05$).

Discussion

The current study investigated the correlation between academic performance and emotional intelligence (EI) among undergraduate students enrolled in chosen universities in central Gujarat. The results showed a statistically significant but weak link between emotional intelligence and academic achievement ($r = -0.086$, $p < 0.01$). This suggests that emotional intelligence correlates with academic success, however its impact is limited when academic performance is assessed

using aggregate CGPA.

The results align largely with findings from Indian research indicating a notable correlation between emotional intelligence and academic performance. **Aithal et al.** conducted a study among Indian medical undergraduates, revealing that those with elevated emotional intelligence demonstrated superior academic achievement and improved interpersonal skills.¹ The authors emphasized that emotional intelligence enhances successful learning by facilitating emotional control, motivation, and stress management, which are crucial for success in academically rigorous settings.⁸ **Kumar and Muniandy** also found a strong positive link between emotional intelligence and academic success among Indian university students. They concluded that individuals with high emotional intelligence are better able to adjust and deal with schoolwork.⁹ In a different Indian study, **Bereded DG**, and Gupta found that emotional intelligence was linked to better academic achievement and mental health among college students.³ Their findings indicated that emotional intelligence serves as a supporting factor rather than a primary predictor of academic achievement, which corresponds with the weak yet statistically significant link identified in the current study.¹⁰ **Miri MR et al.** discovered that elevated emotional intelligence in Indian medical students correlated with less perceived stress and enhanced academic performance, especially during clinically rigorous educational periods.¹¹

The comparatively poor correlation seen in this study may be ascribed to the characteristics of academic assessment in Indian universities, which primarily focus on cognitive knowledge, tests, and rote memorization. These evaluation systems might restrict the visible influence of emotional intelligence on overall academic performance. Furthermore, the heterogeneous sample, comprising participants from various colleges and disciplines, may have attenuated more robust relationships observed in more homogeneous groups, such as those consisting of medical or nursing students.

The current study found no significant correlation between emotional intelligence and specific socio-demographic variables, aligning with the findings of **Joshi, S., Mukhia, S et al.**, who observed that emotional intelligence is more closely linked to individual psychological and experiential factors than to demographic traits.⁴ Overall, the results show that emotional intelligence helps with academic performance, but it doesn't work on its own. Adding programs to improve emotional intelligence to undergraduate courses may help students control their emotions, deal with stress, and stay interested in school for a long time.¹²



Ethics Approval and Consent to Participate

The study was conducted in accordance with the ethical standards of the institutional research committee and the principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the Institutional Ethics Committee of the respective university prior to data collection. Written informed consent was obtained from all participants before their inclusion in the study.

Consent for Publication

Not applicable, as no individual-level identifying information or images are included in this manuscript.

Availability of Data and Materials

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing Interests

The author declares that there are no competing interests.

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Authors' Contributions

The author conceived and designed the study, collected the data, performed the statistical analysis, interpreted the results, and prepared the manuscript.

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