Factors Influencing Academic Achievement Among College Students: The Influence of Emotional Intelligence, Student Engagement and Demographics

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Abstract: The issues of poor academic outcomes, dismissal, high attrition, and dropout rates among college students have long concerned for many educators and college communities. Several scholars have posited that these problems can be addressed through the development of emotional intelligence and increased student engagement. Considering these problems, the present study aimed to assess the efficacy of emotional intelligence and student engagement in improving academic performance. The sample of the study consisted of 119 undergraduate students selected using the convenience sampling technique. Self-report Emotional Intelligence Test and Student Engagement Scale were adopted to measure emotional intelligence and student engagement respectively. Cumulative Grade Point Average (CGPA) served as a measurement of academic achievement in the present study. Results from regression analyses revealed that certain components of emotional intelligence and academic engagement demonstrated a significant prediction effect on academic performance. From demographics, students' programs of study showed a significant relationship with academic achievement. The present findings may provide directions for the college communities in fostering student engagement and emotional intelligence, thereby improving academic achievement of their students. The study also discusses limitations and future research directions.

Keywords: *Emotional intelligence, student engagement, academic achievement, college students.*

Introduction

Problems of students' poor academic outcomes, withdrawal, dismissal, alienation and boredom, high attrition, and dropout rates in higher education students have long been a significant concern for many educators and college communities. Among the several potential strategies, numerous researchers have found emotional intelligence and academic engagement effective strategies for addressing such academic issues of college students (Fredricks et al., 2004). Many scholars have argued that emotional intelligence holds great importance in a variety of educational, clinical, and occupational settings (Bhadouria, 2013; Sánchez-Álvarez et al., 2020). According to Goleman (1995), a prominent scholar of emotional intelligence, cognitive intelligence is no longer the only determinant factor for achievement. While intelligence (IQ) explains only 20% of the variance of total success, emotional and social intelligence explains the rest of the variance. Given the significant role of emotional intelligence in students' achievement, numerous researchers have

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suggested educational institutions integrate emotional intelligence into their curricula, thereby enhancing academic achievement of students (e.g., Almegewly et al., 2022; Cristóvão et al., 2023; Wolfe, 2019). Students with higher levels of emotional intelligence tend to demonstrate better academic endurance in their academic endeavors. Therefore, promoting students' socioemotional skills can positively influence learning motivation and thereby enhance academic performance (Tang & He, 2023). Student engagement is another important factor that is believed to influence academic success of college students. Many researchers argue that academically engaged students are productive, passionate, willing, emotionally positive, and psychologically involved in schooling activities (Anokye Effah & Nkwantabisa, 2022; Skinner & Pitzer, 2012). According to Fredricks et al. (2004), engagement is a multifaceted concept that entails three important elements and these are behavioral, emotional, and cognitive. These three dimensions of academic engagement are claimed to be critical determinants of students' learning outcomes though there is no substantial empirical evidence. College students commonly face academic failures and adjustment difficulties, often struggling to cope effectively with those challenges (Dagdag et al., 2019). These adjustment problems usually lead to emotional difficulties among the students. This signifies that most college students encounter problems in managing their emotions while striving for success in their academic studies. Further, it can be said that a lower level of emotional intelligence might be associated with poor academic achievement. Similarly, students with poor emotional skills might not successfully meet the educational expectations in their studies and subsequently, they might not realize their academic goals (Maraichelvi & Rajan, 2013).

Poor student engagement is also another problem that leads to undesirable learning outcomes such as withdrawal, dismissal, poor academic performance, and high attrition and dropout rates (Astin, 1993; Fredricks et al., 2004). It is believed that highly academically engaged students learn and achieve better learning outcomes. Conversely, those who are less engaged in learning acquire less knowledge and consequently perform poorly in their studies (Anokye Effah & Nkwantabisa, 2022; Fredricks et al., 2004). Similarly, many Eritrea higher education students seem to struggle with poor engagement and emotional problems, often resulting in academic dismissal, withdrawal, and poor academic performance. However, no single study has been conducted on the impact of student engagement and emotional intelligence on the academic performance of students in the Eritrean higher education context. Given this research gap, the current study was conducted to comprehend the nature of the connection between emotional intelligence, student engagement, and academic performance of college students. Additionally, the study analyzed whether students' demographic variables were associated with their academic performance. The current study is poised to yield both theoretical and practical significance. Theoretically, the study enriches the growing body of literature on the influence of emotional intelligence and academic engagement on academic performance among college students. Besides, as our study is one of the first initiatives to examine the relationships between emotional intelligence, engagement, demographics and academic performance, it might lay a foundation for future research endeavors in the realm of higher education in Eritrean. Practically, by validating the interplay between emotional intelligence, student engagement, and academic achievement, the present study furnishes evidence-based insights for a wide range of stakeholders such as academicians, policymakers, counselors, college communities, parents, and college students for practice.

Literature Review

Emotional Intelligence and Academic Achievement

Salovey and Mayer (1990) conceptualized emotional intelligence as an individual's capability to cognize, evaluate, and comprehend one's emotions and those of others. It is also the skill to apply this information to facilitate psychological processes. Besides, emotional intelligence has been described as the "capacity for recognizing our feelings and those of others, for motivating ourselves, for managing emotions well in ourselves and our relationships" (Goleman, 1998, p. 316). Scholars of emotional intelligence (e.g., Mayer & Salovey, 1997) argue that the set of emotional skills enable people to have a sense of understanding of their context and accordingly make the necessary amendments in their thoughts and behaviors to better deal with situational demands.

Several studies recognize the positive association between emotional intelligence and academic achievement among college students (Rehman et al., 2021). Fayombo (2012) carried out a survey study among 151 university students to explore whether emotional intelligence is significantly associated with academic performance. The results of this study confirmed that emotional intelligence is associated with academic performance. This study indicated that the constitutes of emotional intelligence explained a total of 48% of the variance in students' academic success (Fayombo, 2012). Similarly, several components of emotional intelligence such as interpersonal, stress management, and adaptability (Jaeger & Eagan, 2007); self-recognition, self-regulation, self-motivation, and empathy (Raj & Chandramohan, 2015) positively and significantly predicted academic success of higher education students. Further, Nasir and Masrur (2010) affirmed emotional intelligence capabilities (e.g., efficacy, emotional regulation, and interpersonal communication skills) determine the quality and success of learning process by empowering students to learn how to learn. Turi et al. (2018) investigated the extent socio-emotional intelligence affects academic performance of undergraduate and graduate students in Malaysia. The findings of this study reported that socioemotional intelligence is positively correlated with academic performance of students. Recent studies have further affirmed earlier studies that emotional intelligence is positively associated with academic performance (Alvi et al., 2023; Karkada et al., 2020; Rehman et al., 2021). However,

it noteworthy that some of these studies were centered on specific cohorts of medical students, potentially limiting the applicability of their findings to non-medical student population. Moreover, in contrast the present study, which employed the ability model of emotional intelligence, many prior studies were grounded in a mixed model approach.

Despite several studies documented that emotional intelligence is positively associated with academic performance, there are still controversies that emotional intelligence accounts for a big variance in academic performance. For instance, Kashani et al. (2012) examined the linkage between emotional intelligence and academic achievement in college students, and the results of their study disclosed that emotional intelligence was not a significant predictor of academic achievement. Moreover, a study conducted by Jenaabadi (2014) failed to detect a statistically significant interplay between emotional intelligence and academic achievement. Therefore, the existing literature about the association between emotional intelligence and academic performance is mixed, controversial, and not well-established, which deserves further research.

Student Engagement and Academic Achievement

There are different ways of theorizing and conceptualizing student engagement. For instance, according to Kuh (2003), student engagement can be defined as students' dedication to successfully handling academic tasks both inside and outside the educational classroom setting. It is also related to students' adherence to the rules and regulations of the school which are important for promoting their involvement in learning Kuh (2003). Similarly, according to Christenson et al. (2008), student engagement represents the commitment that students demonstrate in their academic study and the feeling of attachment that they develop with their school or college. Besides, student engagement is related to students' active participation and initiative in different academic activities in their pursuit of attaining better academic results (Christenson et al., 2008). In addition, student engagement is also conceptualized as a state-like construct that is open for development and change (Fredricks et al., 2004). Despite the different definitions of engagement by different scholars, there seems to be a consensus among the definitions that student engagement primarily emphasizes students' active involvement in learning and development of a feeling of belongingness to the educational organization.

As per the nature of the relationship between engagement and learning outcomes, numerous empirical studies recognize student engagement as an essential feature of students' learning and learning outcomes such as academic success, dropout rate, learning motivation, lack of academic interest, and disaffection (e.g., Finn & Zimmer, 2012; Skinner & Pitzer, 2012). Specifically, research studies delineated that the different components of engagement are determinant factors in students' academic performance (Delfino, 2019; H. Lei et al., 2018; Wang & Holcombe, 2010). Likewise, numerous researchers underscore the importance of a warm socioemotional classroom atmosphere in facilitating students' active participation in their learning (e.g., Patrick et al., 2007; Wang et al., 2020). Furthermore, when students are actively engaged in their learning, they will improve their school achievements and have good behaviors because those students are more concentrated on their learning rather than other bad things that can steal their attention and control their minds (Hart et al., 2011). While these research works (Hart et al., 2011; Wang et al., 2020) made a valuable contribution, they focused on elementary, junior, and high school students carried out in specific geographic locations. Therefore, their findings may not be directly applicable to college students and those who are in other geographic locations.

The majority of the available literature is in favor of the positive contribution of student engagement to the academic success of students. However, some studies reported contradictory findings that student engagement is not statistically significantly related to academic achievement. For instance, Bircan and Sungur (2016) carried out a cross-sectional study on the influence of motivation and cognitive engagement in the academic performance of science education students, and their results revealed that there was no statistically significant association between cognitive engagement and academic performance. When considering the nature of the relationship between academic engagement and academic performance, it becomes evident that the findings are inconsistent and mixed. This underscores the need for further research. One reason contributing to these inconsistent results might be attributed to differences in theoretical frameworks and potential methodological shortcomings within the body of research.

Demographic Variables and Academic Achievement

Many studies have investigated the influence of demographic variables such as gender, age, and study programs or study fields on students' academic achievement. For instance, studies on gender documented that the mean score of academic achievement for female students is greater than their male counterparts (e.g., Abubakar & Oguguo, 2011; Farooq et al., 2011; Jabbar et al., 2011). Nevertheless, some other findings also reported contradictory findings that the overall academic performance of male students surpasses the performance of their female counterparts (e.g., Udida et al., 2012). Besides, a study conducted among 74 high school students in the United Arab Emirates reported a non-significant association between gender and academic achievement (Dukmak & Ishtaiwa, 2015). Consistent with the result of Dukmak and Ishtaiwa (2015), the study of Naderi et al. (2009) failed to provide evidence that there is a statistically significant difference in academic performance between gender groups. Therefore, based on these studies, it can be inferred that the issue of gender and academic performance seems to be equivocal and is yet to be settled. However, some of these studies (e.g., Dukmak & Ishtaiwa, 2015) were conducted among secondary school education with a small sample of students and might not represent college students.

Similarly, studies conducted on the relationship between age and academic achievement reported contradictory results. For instance, although Ebenuwa-Okoh (2010) has reported that the level of academic performance does not differ across different age groups, some other scholars found a significant relationship between age and students' academic achievement, suggesting that younger students achieve better performance than older ones (Dukmak & Ishtaiwa, 2015; Naderi et al., 2009). Little is known about the nature of the association between students' program of study and academic performance as there are no sufficient studies conducted on this issue. However, in a related area of study, Shaukat and Bashir (2016) examined academic confidence of postgraduate students concerning their programs of study. Their results revealed that Art students achieved a higher level of academic confidence in studying and understanding factors than the Science department. Similarly, the postgraduate education students were found to be more academically confident than those in Chemistry, Computer Science, and English programs. Academic confidence is directly related to the academic success of students, indicating that academically confident students demonstrate better achievement in their studies (Shaukat & Bashir, 2016). Therefore, based on this evidence, students of arts and education seem to have better academic performance than science students.

Research Hypotheses

Taking the findings of previous studies as a context, the present study established the following hypotheses:

Hypothesis 1. College **s**tudents with high levels of emotional intelligence would achieve better academic achievement.

Hypothesis 2. College students with a high level of student engagement would achieve better academic achievement.

Hypothesis 3. Students' demographic variables of gender, age, and department have no significant effect on their academic achievement.
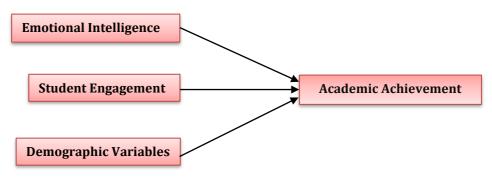

Figure 1. The Proposed Model of the Study

Methodology

Sample Size and Sampling Strategy

The current study recruited 119 undergraduate students who were doing their college studies in the academic year 2019/2020. A convenience sampling strategy was applied to draw the sample from the target population. Table 1 presents the frequency distribution of the respondents of the study. There were 58 males (49%) and 61 females (51%). The average age of the participants was 23.22 (*SD* = 3.89). The majority of the student participants were single (*n* = 109; 91.6%). Students from six programs of study (departments) of the college took part in the study: Psychology (*n* = 34; 28.6), Educational Administration (*n* = 24; 20.20), Chemistry Education (n = 26; 21.8%), Biology Education (*n* = 15; 12.6%), Physics Education (*n* = 8; 6.7%) and Math Education (*n* = 12; 10.1%).

Instrumentations

Academic Achievement and Sociodemographic Information

To gather data relating to sociodemographic variables, the participant students answered some self-developed questions about their age, gender, and program of study (department). Cumulative Grade Point Average (CGPA) was taken as a measurement of students' academic achievement. As part of the personal information question items, participants were asked to report their CGPA.

Emotional Intelligence

Self-Report Emotional Intelligence Test developed (SEIT) by Schutte et al. (1998) was adopted to assess students' emotional intelligence. SEIT is a 33-item scale rated on five Likert-type scale ranging between 1 (*Strongly Disagree*) and 5 (*Strongly Agree*). The sum score of emotional intelligence ranges between 33 and 165, where higher scores indicate higher levels of emotional intelligence. The scale was found to be highly reliable alpha value of 0.90 (Schutte et al., 1998).

Moreover, the author established that the scale showed remarkable construct validity, convergent validity, and predictive validity (Schutte et al., 1998). Notwithstanding Schutte et al. (1998) initially developed SEIT as one solution factor, following factor analytic studies, however, suggested a four-factor solution for the 33 items (Ciarrochi et al., 2001; Petrides & Furnham, 2000; Saklofske et al., 2003). The four subscales of emotional intelligence are Perception of emotions (10 items), managing one's emotions (9 items), managing others' emotions (8 items), and utilization of emotions (6 items). The overall reliability was .84 (Ciarrochi et al., 2001). The present study has thus applied the four-factor solution in analyzing the data. The multidimensional measure was also found to be highly reliable in the current study with an overall reliability coefficient of .83. Samples items include: "*I know when to speak about my problems to others*", "*When I face obstacles, I remember times I faced similar obstacles and overcome them*", "*I expect that I will do well on most things I try*".

Student Engagement

Student Engagement Scale (SES) devised by Doğan (2014) was used to assess student engagement. The measure is a multidimensional scale developed to measure three components of student engagement (i.e., emotional, cognitive, and behavioral). SES is a 31-item self-report measure rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The sub-scales and their items are emotional engagement scale (*10 items*) cognitive engagement scale (*12 items*) and behavioral engagement scale (*9 items*). The range of the total score for the measure is between 31 and 155, with higher scores reflecting greater student engagement. The reliability coefficients for emotional, cognitive, and behavioral were found to be .88, .88, and .81 respectively and the internal consistency for the overall SES was .91. The author of the scale has concluded that the scale is a valid and reliable instrument to measure the level of student engagement (Doğan, 2014). Some sample items of SES are: "*Teachers in my college are honest with their students*", "*I feel I am a member of my college*".

Procedure and Ethical Considerations

First, the research was approved by the research committee of the college and the department. Then, we disseminated a printed questionnaire to the student participants in their respective classrooms. The means of data collection was thus paper-based. As the participants were senior students with good English language proficiency, the English version of the questionnaire was employed. Out of the 160 distributed questionnaires, 119 properly filled questionnaires were included in the final analyses. As per the ethical considerations, the respondents were informed about the purpose of the research, and participation in the study was voluntary.

Data Analytical Procedure

First, data were inputted into SPSS version 25. Then, frequency distribution, Pearson-moment correlation, independent sample t-test, and multiple linear regression analyses were performed to analyze the data. To test the normality of the data, Skewness and kurtosis values were calculated and the results are presented in Table 1.

Results

Descriptive Statistics and Distribution of Scores of Study Variables

The values for mean, standard deviation, reliability coefficients, and measures of shape for variables of the study are illustrated in Table 1. Concerning the reliability coefficients, all the scales had good internal consistencies which were above the adequate benchmark value of .50. Skewness and kurtosis were computed to ensure the normal distribution of the sample data. According to Gravetter and Wallnau (2014), values ranging from -2 and to 2 are thought to indicate the normal univariate distribution of the data. Hence, as can be seen in Table 1, the skewness and kurtosis values of the present sample data appeared to be within the given limit and this assures that the sample data did not breach the basic assumption of normality. Results from the descriptive analyses also revealed that the emotional intelligence scores of the student participants ranged between 86 and 164. The range of the overall student engagement scores of the students also appeared to be between 67 and 144. Mean values comparison between the three dimensions of student engagement demonstrated that the respondents attained a higher level of engagement in the cognitive domain with a mean value of 42.46 followed by behavioral (*M* = 37.08, *SD* = 5.27) and emotional domains (*M* = 32, *SD* = 6.06).

Table 1. Summary of M, SD, and Cronbach's Alpha of the Study Variables

Variables	N	Min	Max	M	SD	α	Items	Sk	Ku
Perception of Emotions	119	23.00	50.00	36.53	5.138	.69	10	-.30	.28
Managing Own Emotions	119	21.00	45.00	35.34	4.58	.64	9	-.58	.76
Managing Others Emotions	119	17.00	39.00	30.14	4.12	.56	8	-.32	.10
Utilization of Emotions	119	12.00	30.00	24.15	3.07	.57	6	-.71	1.30
Emotional Intelligence	119	86.00	164.00	126.23	12.70	.83	33	-.11	.69
Emotional Engagement	119	16.00	46.00	32.81	6.06	.82	10	-.34	-.05
Cognitive Engagement	119	19.00	58.00	42.46	7.73	.87	12	-.70	.79
Behavioral Engagement	119	18.00	45.00	37.08	5.27	.70	9	-.99	1.08
Student Engagement	119	67.00	144.00	112.34	14.35	.87	31	-.46	.40

Note. Min = Minimum; *Max* = Maximum; *Sk* = skewness; *Ku* = kurtosis.

Bivariate Relationship Between the Study Variables

To examine the interplay between emotional intelligence, student engagement, and academic achievement, a Pearson Product-moment correlation analysis was conducted. Table 2 summarizes the results for correlation coefficient values of the association between the study variables. The present study hypothesized that emotional intelligence would be positively associated with academic achievement. The correlational results indicated that emotional intelligence was not significantly related to CGPA and the sample data failed to corroborate the hypothesis (r = .13, p > .05). Managing own emotions constituent of emotional intelligence, however, was significantly related to CGPA (r = .29, p < .05).

The study also expected that student engagement would be positively associated with CGPA. The sample data supported this hypothesis that student engagement was significantly related to their CGPA (r = .20, p < .05). Concerning the components of student engagement, only behavioral engagement was significantly and positively correlated with CGPA (r = .30, p < .05). From demographic variables, only department was significantly associated with CGPA (r = .34, p < .05).

Table 2. Inter-Correlations Between the Study Variables

Variables	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	-.35**	.01	.05	.27**	.15	.14	.18*	.02	.13	.18*	.15	.14
2. Age		.16	-.05	-.04	-.09	.09	-.04	.19*	.13	.15	.20*	.10
3. Program of study			.22*	.13	.06	.16	.21*	-.07	-.18*	.07	-.10	.34**
4. Perception of Emotions				.40**	.41**	.42**	.79**	-.02	.09	.06	.06	.12
5. Managing Own Emotions					.34**	.50**	.72**	.22*	.32**	.28**	.37**	.29**
6. Managing Others Emotions						.35**	.71**	.06	.10	-.02	.07	.05
7. Utilization of Emotions							.71**	-.01	.11	.10	.10	.010
8. Emotional Intelligence								.07	.17	.10	.16	.13
9. Emotional Engagement									.49**	.12	.73**	.00
10. Cognitive Engagement										.35**	.87**	.16
11. Behavioral Engagement											.61**	.30**
12. Student Engagement												.20*
13. CGPA												

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Multiple Linear Regression Analyses

Demographics, Emotional Intelligence, and CGPA

To examine the predicting effects of the demographic variables (i.e., gender, age, and department) and emotional intelligence on CGPA, a multiple linear regression analysis was carried out. The regression results (see Table 3) indicated that the demographic variables and emotional intelligence jointly explained 15 percent of the change in the outcome variable of CGPA and the regression model was statistically significant (R^2 = .15; $F_{(4,114)}$ = 4.99, p < .001). Standardized regression coefficients (see Table 3) outlined that students' program of study from the demographic variables performed a significant individual contribution to the regression model, indicating that students from the Psychology and Educational Administration achieved better academic performance (β = 0.32, p = .001) than Science Education students. However, emotional intelligence failed to have a statistically significant predicting effect on the outcome variable (β = .03, p > .05). Besides, age and gender did not exhibit any significant correlation with students' academic performance.

.05).

Table 3. Multiple Linear Regression Coefficients for Emotional Intelligence and CGPA

Predictors	B	SE	β	t	p	R	R²
Gender	.11	.06	.18	1.86	.065	.39	.15
Age	.01	.01	.12	1.24	.220		
Program of study	.20	.06	.32	3.51	.001		
Emotional intelligence	.00	.00	.03	.36	.718		

Note. Male and Science Education groups were used as reference groups

Demographics, Constituents of Emotional Intelligence and CGPA

To further explore the specific predicting effects of the constituents of emotional intelligence, multiple linear regression analyses were performed. To this end, all the variables were entered into the regression model. As illustrated in Table 3, the multiple linear regression analyses result revealed that the four constituents of emotional intelligence combined with the demographic variables of gender, age, and department explicated a total of 24% of the change in CGPA, and the model was significantly significant (R^2 = .24; $F_{(7,111)}$ = 4.90, $p < .05$). The unique contribution of each independent variable can be viewed in Table 3. From demographics, the demographic students' program of study has maintained its statistically significant relationship with CGPA. From constituents of emotional intelligence, managing emotions ($β$ = 0. 33, $p < .001$) and utilization of emotion ($β$ = 0. 25, $p < .05$) were significantly related to CGPA. Nevertheless, it is also worth noting that the other two components of emotional intelligence (i.e., perception of emotions and managing other's emotions) were not found to have a statistically significant correlation with academic achievement, despite the observed positive association.

Table 4. Regression Coefficients for Constituents of Emotional Intelligence and CGPA

Predictors	B	SE	β	t	p	R	R²
Gender	.09	.06	.13	1.42	.157	.49	.24
Age	.01	.01	.14	1.48	.143		
Program of study	.20	.06	.31	3.57	.001		
Perception of emotions	.00	.01	.03	.32	.752		
Managing own emotions	.02	.01	.33	3.26	.001		
Managing others emotions	.00	.01	.02	.16	.877		
Utilization of emotions	.03	.01	.25	2.40	.018		

Note. Male and Science Education groups were used as reference groups

Demographics, Student Engagement and CGPA

Similarly, to determine how well demographic variables and student engagement predict CGPA, a multiple linear regression analysis was run. In doing so, all the demographic variables and student engagement were inputted into the regression model. Results from the regression analyses, as reported in Table 4, pointed out that the demographic variables and student engagement accounted for 19 percent of the variance in the outcome variable of CGPA and the regression equation was also statistically significant (R^2 = .19; $F_{(4,114)}$ = 6.48, $p < .05$). The standardized regression coefficients pronounced that students with high academic engagement demonstrated better academic performance ($β$ = 0. 21, $p < .05$).

Table 4. Summary of Multiple Regression Coefficients for Student Engagement and CGPA

Predictors	B	SE	β	t	p	R	R²
Gender	.08	.06	.13	1.37	.174	.43	.19
Age	.00	.01	.05	.52	.604		
Department	.23	.06	.35	4.07	.000		
Academic engagement	.01	.00	.21	2.28	.025		

Note. Male and Science Education groups were used as reference groups

Demographics, Dimensions of Student Engagement and CGPA

Multiple linear regression analysis has also been conducted for the three components of student engagement and CGPA. The purpose of this regression analysis was to recognize and understand the component of engagement that contributes most to the academic performance of college students. The model summary of the regression equation presented that demographics and the three components of student engagement explained a total of 23% of the change in the dependent variable of CGPA and the regression model appeared to show statistical significance (R^2 = .23; $F_{(6,112)}$ = 5.54, $p < .001$). As depicted in Table 5, behavioral engagement was the best predictor of students' achievement ($β$ = 0. 20, $p < .05$). The rest of the components of engagement (i.e., emotional and cognitive), however, failed to significantly predict students' academic achievement.

Table 5. Multiple Regression Coefficients for Dimensions of Student Engagement and CGPA

Predictors	B	SE	β	t	p	R	R^2
Gender	.06	.06	.10	1.07	.288	.48	.23
Age	.00	.01	.05	.51	.608		
Program of study	.22	.06	.35	3.99	.000		
Emotional engagement	.01	.01	.10	1.06	.291		
Cognitive engagement	.01	.00	.18	1.77	.079		
Behavioral engagement	.01	.01	.20	2.20	.030		

Note. Male and Science Education groups were used as reference groups

Discussion

In the current study, we intended to examine the influence of emotional intelligence, student engagement, and demographics on Eritrean college students. The findings of the study demonstrated that two components of emotional intelligence showed a positive significant relationship with academic performance. However, students' overall emotional intelligence score was not significantly related to their academic achievement. Students' level of academic achievement was also found to be positively and significantly related to the overall student engagement and its one dimension (i.e., behavioral engagement). Further, the study has intended to examine whether academic achievement significantly differs across different groups such as gender, age, and program of study. Academic achievement of the participants was found to be related to their program of study (or department) but not to age and gender.

First, the study hypothesized that students with high scores in emotional intelligence and its constituents would achieve better academic performance. The sample data partially supported the study hypothesis. Out of the four components of emotional intelligence, two components (managing own emotions and utilization of emotions) showed significant predicting effects on academic achievement. Students who can regulate their own emotions and practically utilize their emotional knowledge to back up their cognitive processes are more tend to achieve better learning outcomes. The most striking finding is that managing own emotions, a component of emotional intelligence, is the robust predictor of students' academic performance. One potential explanation for these findings could be linked to the inherently demanding and stressful nature of college study. This environment necessitates emotional management and utilizing one's emotional knowledge. Consequently, college students with high self-emotional management and the capacity to harness their emotions are more likely to adeptly handle academic stressors, ultimately leading to greater achievement and flourishing in their academic pursuits. These findings of our study reiterated the results of previous studies that certain components of emotional intelligence are significant predictors of college students' academic performances (Jaeger & Eagan, 2007; Raj & Chandramohan, 2015). In addition, emotional management improves students' academic engagement and learning experience and also guides them toward a positive and productive path in their academic trajectory (Ding, 2022; X. Lei, 2022).

However, unlike the results of many previous studies (e.g., Adeyemo, 2007; Fayombo, 2012; Turi et al., 2018), the hypothesis that students' overall emotional intelligence would improve their level of academic achievement was not validated in the present study. Nonetheless, our finding is not astonishing as well for there are several studies that have failed to provide evidence for the association between emotional intelligence and academic achievement (e.g., Bastian et al., 2005; Jenaabadi, 2014). As different researchers employ different measures and theoretical frameworks for their studies, it seems possible that such variations in the measurement and conceptualization of emotional intelligence might produce inconsistent and controversial results. Further, the lack of a significant relationship between the overall emotional intelligence score and academic achievement in the present study could potentially be associated with the relatively small sample size.

Second, our study expected that the levels of student engagement and its three dimensions would be positively related to academic achievement, and this hypothesis was partially corroborated. Students with high academic engagement achieved better performance in their studies. More importantly, behavioral engagement plays the most influential role in students' academic achievement. These findings suggest that when students are actively involved in schooling activities by spending much of their time and energy, there is no way that they cannot academically succeed and earn better grades. A comparison of our findings with those of other studies confirms that there is generally a positive association between student engagement and academic performance (e.g., Delfino, 2019; Fredricks et al., 2004; H. Lei et al., 2018; Skinner & Belmont, 1993). However, it is equally important to mention that emotional and cognitive dimensions of engagement failed to demonstrate a significant predicting effect on academic achievement and these findings are also in keeping with other previous observational studies. Bircan and Sungur (2016) reported a non-significant relationship between cognitive engagement and academic achievement. As we have mentioned above in emotional intelligence, student engagement researchers might also encounter the same problem that the inconsistent results might be due to the different measurements and theoretical conceptualization of student engagement.

The study, in its third hypothesis, stated that participants' demographic variables of gender, age, and program of study would not significantly predict their academic achievement. The study supported the gender and age hypotheses that

academic achievement of college students did not significantly vary between age and gender groups. Consistent with our research findings, the existing literature supports the hypothesis that male and female students achieve more or less the same academic performance (e.g., Dukmak & Ishtaiwa, 2015; Naderi et al., 2009). However, some studies also found female students have better academic performance (Farooq et al., 2011; Jabbar et al., 2011). Likewise, research evidence was provided for the age that academic achievement is the same for both younger and older students (Ebenuwa-Okoh, 2010). On the other hand, some literature suggests that younger students have better academic performance than their older counterparts (Dukmak & Ishtaiwa, 2015). Therefore, it can be said that the association between demographics and academic achievement is not yet well established. Such contradictions might be attributed to methodological problems such as small sample size, measurement errors, and contextual differences.

Concerning the program of study, unlike our expectation, students from the departments of Psychology and Educational Administration reported greater academic performance than Science education students, and the null hypothesis was rejected. The difference can be explained partly by the level of difficulty of the programs. It seems very hard to earn high grades in natural science education programs such as Physics Education, Chemistry Education, Biology Education, and Math Education as such programs tend to be more difficult and demanding than the Social Science fields such as psychology and educational administration. Despite the scarcity of literature documented on the issue of program of study and academic achievement, some related findings support the notion that Social Science and Art students typically show greater academic confidence and subsequently score better performance in their college studies (Shaukat & Bashir, 2016).

Conclusion

In the 21st century in which education is becoming highly integrative and sophisticated, problems of poor academic outcomes, withdrawal, dismissal, academic alienation and boredom, high attrition and dropout rates in college students have long been a great concern for many educators and college communities. To better deal with such problems, several scholars have suggested that fostering emotional intelligence and academic engagement can provide remedies. Following this suggestion, the present study sought to investigate the extent to which emotional intelligence, student engagement, and demographics are correlated with academic achievement in college students. The findings of the present study underline that student engagement (especially behavioral engagement), managing own emotions, and utilization of emotions are associated with greater academic success among college students. The results of the current research might theoretically and practically guide parents, policymakers, educators, and college communities to nurture emotional intelligence and student engagement, thereby improving the desirable learning outcomes of the students.

Recommendations

Given the findings of the study, we suggest several recommendations for college communities, parents, teachers, and policymakers. College communities are recommended to consider the findings of the study to ensure that the academic activities and assignments given to their students are behaviorally, cognitively, and emotionally engaging. As behavioral engagement is validated as a robust predictor of academic achievement, college communities are advised to create a conducive learning environment where college students can maximize their participation and involvement in curricular and non-curricular activities. The present study also recommends college communities work hard on cultivating emotional abilities such as managing their own emotions and utilization of emotions and thereby promote academic achievement through different schooling activities, seminars, and workshops. Several scholars have also suggested that emotional intelligence can be promoted with the help of training and classroom-based activities, thereby enhancing positive learning outcomes among students (e.g., Getahun, 2023; Khurshid et al., 2018; Wolfe, 2019).

Further, the current study also recommends college instructors consider the different components of engagement and accordingly make a decision on which pedagogical approach is appropriate and effective for promoting every dimension. The current study recommends that teachers should present their instructional lessons in a way that students get actively involved by integrating meaningful and enjoyable learning activities that foster a sense of teamwork and academic interaction between students and teachers. Previous studies have also suggested that teachers could promote student engagement of their students by articulating instructional goals and the rationale behind the lesson clearly (Jang, 2008), using the inquiry method and giving feedback (Campbell & Mayer, 2009), and allowing students to be shareholders in the teaching-learning processes (Zeeman & Lotriet, 2013) and creating student management teams (Troisi, 2014). Furthermore, our study recommends policymakers and curriculum designers in higher education institutions design curricula in such a way that emotional intelligence and student engagement can be boosted. Similarly, parents of college students are recommended to apply the findings of the current research to nurture emotional intelligence abilities and a sense of school engagement in their children from early childhood.

Limitations

Despite the theoretical and practical implications, the study, like many other studies, has several limitations which have to be considered in future studies. One possible weakness of the study is associated with the small number of participants. As we have studied senior students of one college as a case, the sample size was relatively small and this small size might affect the generalizability of the results. Future research endeavors might duplicate the study with a large sample to have

a better generalization. Another potential limitation is the research design. The study adopted a cross-sectional study where participants were observed at one specific time. In addition to that, our study used only quantitative data. Hence, future studies might address such limitations by using longitudinal as well as both quantitative and qualitative research approaches. Further, self-report questionnaires were used to gather data and this may affect the accuracy and trustworthiness of the findings of the study. Future studies consider using diversified methods of data collection to gain a more diverse perspective. The study was also limited to examining emotional intelligence, student engagement, and demographics with academic achievement. Future studies might also study these variables with other related learning outcomes.

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Authorship Contribution Statement

Gebregergis: Introduction, literature review, methodology, results, discussion, manuscript editing and proofreading. Beraki: Introduction, literature review, methodology, results, and discussion. Michael: Introduction, literature review, methodology, results, and discussion. Ahmedin: Introduction, literature review, methodology, results, and discussion. Debesay: Introduction, literature review, methodology, results, and discussion. Atoshm: Introduction, literature review, methodology, results, and discussion. Tekleberhan: Introduction, literature review, methodology, results, and discussion. Karolina: Manuscript editing and proofreading. Csilla: Manuscript editing and proofreading.

References

Abubakar, R. B., & Oguguo, O. D. (2011). Age and gender as predictors of academic achievement of college mathematics and science students. *Journal of Educational and Social Research, 1*(2), 89-94. https://bit.ly/45LDzU0

Adeyemo, D. A. (2007). Moderating influence of emotional intelligence on the link between academic self-efficacy and achievement of university students. *Psychology Developing Societies, 19*(2), 199-213. https://doi.org/10.1177/097133360701900204

Almegewly, W. H., Rawdhan, A., Saleh, M., Alrimal, M., Alasmari, R., Alhamad, S., Almuqri, R., Aljebreen, M., Alsubaie, H., & Farghaly Abdelaliem, S. M. (2022). Correlation between emotional intelligence and academic achievement among undergraduate nursing students. *International Journal of Africa Nursing Sciences*, *17*, Article 100491. https://doi.org/10.1016/j.ijans.2022.100491

Alvi, T., Nadakuditi, R. L., Alotaibi, T. H., Aisha, A., Ahmad, M. S., & Ahmad, S. (2023). Emotional intelligence and academic performance among medical students - a correlational study. *European Review for Medical and Pharmacological Sciences*, *27*(4), 1230-1237. https://doi.org/10.26355/eurrev_202302_31355

Anokye Effah, N. A., & Nkwantabisa, A. O. (2022). The influence of academic engagement on academic performance of university accounting students in Ghana. *South African Journal of Accounting Research*, *36*(2), 105-122. https://doi.org/10.1080/10291954.2021.1988204

Astin, A. W. (1993). What matters in college? *Liberal Education*, *79*(4), 4-15.

Bastian, V. A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences*, *39*(6), 1135-1145. https://doi.org/10.1016/j.paid.2005.04.006

Bhadouria, P. (2013). Role of emotional intelligence for academic achievement for students. *Research Journal of Educational Sciences 1*(2), 8-12. https://bit.ly/471nCe0

Bircan, H., & Sungur, S. (2016). The role of motivation and cognitive engagement in science achievement. *Science Education International*, *27*(4), 509-529. https://bit.ly/49rQbCK

Campbell, J., & Mayer, R. E. (2009). Questioning as an instructional method: Does it affect learning from lectures *Applied Cognitive Psychology*, *23*(6), 747-759. https://doi.org/10.1002/acp.1513

Christenson, S. L., Reschly, A. L., Appleton, J. J., Berman-Young, S., Spangers, D., & Varro, P. (2008). Best practices in fostering student engagement. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (pp. 1099-1120). National Association of School Psychologists.

Ciarrochi, J., Chan, A. Y. C., & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences*, *31*(7), 1105-1119. https://doi.org/10.1016/S0191-8869(00)00207-5

Cristóvão, A. M., Valente, S., Rebelo, H., & Ruivo, A. F. (2023). Emotional education for sustainable development: A curriculum analysis of teacher training in Portugal and Spain. *Frontiers in Education, 8,* Article 1165319. https://doi.org/10.3389/feduc.2023.1165319

Dagdag, J. D., Cuizon, H. G., & Bete, A. O. (2019). College students' problems and their link to academic performance: Basis for needs-driven student programs. *Journal of Research, Policy and Practice of Teachers and Teacher Education*, *9*(2), 54-65. https://doi.org/10.37134/jrpptte.vol9.no2.5.2019

Delfino, A. P. (2019). Student engagement and academic performance of students of Partido State University. *Asian Journal of University Education*, *15*(1), 42-55.

Ding, X. (2022). Management work mode of college students based on emotional management and incentives. *Frontiers in Psychology, 13*, Article 963122. https://doi.org/10.3389/fpsyg.2022.963122

Doğan, U. (2014). Öğrenci Bağlılık Ölçeğinin geçerlik ve güvenirliği [Validity and reliability of Student Engagement Scale]. *Bartın University Journal of Faculty of Education/Bartın Üniversitesi Eğitim Fakültesi Dergisi*, *3*(2), 390 - 403. https://bit.ly/3SvrJKR

Dukmak, S., & Ishtaiwa, F. F. (2015). Factors influencing the academic achievement of students in the preparatory and secondary schools of the United Arab Emirates. *European Journal of Social Sciences*, *46*(2), 132-147.

Ebenuwa-Okoh, E. E. (2010). Influence of age, financial status, and gender on academic performance among undergraduates. *Journal of Psychology*, *1*(2), 99-103. https://doi.org/10.1080/09764224.2010.11885451

Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: A case of secondary school level. *Journal of Quality and Technology Management*, *7*(2), 1-14. https://bit.ly/3Sdtaxf

Fayombo, A. G. (2012). Relating emotional intelligence to academic achievement among university students in Barbados. *International Journal of Emotional Education*, *4*(2), 43-54.

Finn, J. D., & Zimmer, K. S. (2012). Student engagement: What is it? Why does it matter? In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 97-131). Springer. https://doi.org/10.1007/978-1-4614-2018-7_5

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*(1), 59-109. https://doi.org/10.3102/00346543074001059

Getahun, A. W. (2023). Emotional intelligence and pro-social behavior as predictors of academic achievement among university students. *Community Health Equity Research and Policy*, *43*(4), 431-441. https://doi.org/10.1177/0272684x211033447

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.

Goleman, D. (1998). *Working with emotional intelligence*. Bantam Books.

Gravetter, F., & Wallnau, L. (2014). *Essentials of statistics for the behavioral sciences* (8th ed.). Wadsworth.

Hart, S. R., Stewart, K., & Jimerson, S. R. (2011). The Student Engagement in Schools Questionnaire (SESQ) and the Teacher Engagement Report Form-New (TERF-N): Examining the preliminary evidence. *Contemporary School Psychology: Formerly "The California School Psychologist"*, *15*, 67-79. https://doi.org/10.1007/BF03340964

Jabbar, M., Aziz, M. A., & Zeb, S. (2011). A study on effect of demographic factors on the achievement of secondary school students in the Punjab, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, *1*(1), 63-76.

Jaeger, A. J., & Eagan, M. K. (2007). Exploring the value of emotional intelligence: A means to improve academic performance. *NASPA Journal*, *44*(3), 512-537. https://doi.org/10.2202/1949-6605.1834

Jang, H. (2008). Supporting students' motivation, engagement, and learning during an uninteresting activity. *Journal of Educational Psychology*, *100*(4), 798-811. https://doi.org/10.1037/a0012841

Jenaabadi, H. (2014). Studying the relation between emotional intelligence and self-esteem with academic achievement. *Procedia - Social and Behavioral Sciences*, *114,* 203-206. https://doi.org/10.1016/j.sbspro.2013.12.685

Karkada, I. R., D'Souza, U. J. A., & Mustapha, Z. A. B. (2020). Relationship of emotional intelligence and academic performance among medical students: Systematic review. *Universal Journal of Educational Research*, *8*(3A), 72-79. https://doi.org/10.13189/ujer.2020.081410

Kashani, F. L., Azimi, A. L., & Vaziri, S. (2012). Relationship between emotional intelligence and educational achievement. *Procedia - Social and Behavioral Sciences*, *69*, 1270-1275. https://doi.org/10.1016/j.sbspro.2012.12.061

Khurshid, M. A., Majoka, M. I., & Khan, M. S. (2018). Development of emotional intelligence of university students: An investigation of the effect of curricular. *Pakistan Journal of Distance & Online Learning, 4*(1), 215-234. https://bit.ly/49t1qLx

Kuh, G. D. (2003). What we're learning about student engagement from NSSE: Benchmarks for Effective Educational Practices. *Change: The Magazine of Higher Learning*, *35*(2), 24-32. https://doi.org/10.1080/00091380309604090

Lei, H., Cui, Y., & Zhou, W. (2018). Relationships between student engagement and academic achievement: A meta-analysis. *Social Behavior and Personality: An International Journal*, *46*(3), 517-528. https://doi.org/10.2224/sbp.7054

Lei, X. (2022). The impact of emotion management ability on learning engagement of college students during COVID-19. *Frontiers in Psychology*, *13*, Article 967666. https://doi.org/10.3389/fpsyg.2022.967666

Maraichelvi, A., & Rajan, S. (2013). The Relationship between emotional intelligence and the academic performance among final year undergraduates. *Universal Journal of Psychology*, *1*(2), 41-45. https://doi.org/10.13189/ujp.2013.010203

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-31). Basic Books.

Naderi, H., Abdullah, R., Hamid, T. Z., & Sharir, J. (2009). Creativity, age and gender as predictors of academic achievement among undergraduate students. *Journal of American Science*, *5*(5), 101-112. https://bit.ly/3u8B5Ck

Nasir, M., & Masrur, R. (2010). An Exploration of emotional intelligence of the students in relation to gender, age and academic achievement. *Bulletin of Education and Research*, *32*(1), 37-51.

Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, *99*(1), 83–98. https://doi.org/10.1037/0022-0663.99.1.83

Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, *29*(2), 313-320. https://doi.org/10.1016/S0191-8869(99)00195-6

Raj, P., & Chandramohan, V. (2015). Emotional intelligence predicting academic achievement among college students. *International Journal of Science and Research*, *4*(3), 1275-1278. https://bit.ly/3QOeML2

Rehman, R., Tariq, S., & Tariq, S. (2021). Emotional intelligence and academic performance of students. *Journal of the Pakistan Medical Association*, *71*(12), 2777-2781. https://doi.org/10.47391/jpma.1779

Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences*, *34*(4), 707-721. https://doi.org/10.1016/S0191-8869(02)00056-9

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*(3), 185-211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Sánchez-Álvarez, N., Berrios Martos, M. P., & Extremera, N. (2020). A Meta-analysis of the relationship between emotional intelligence and academic performance in secondary education: A Multi-stream comparison. *Frontiers in Psychology*, *11*, Article 1517. https://doi.org/10.3389/fpsyg.2020.01517

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, *25*(2), 167-177. https://doi.org/10.1016/S0191-8869(98)00001-4

Shaukat, S., & Bashir, M. (2016). University students' academic confidence: Comparison between social sciences and natural science disciplines. *Journal of Elementary Education*, *25*(2), 113-123. https://bit.ly/3QyC6MM

Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, *85*(4), 571-581. https://doi.org/10.1037/0022-0663.85.4.571

Skinner, E. A., & Pitzer, J. R. (2012). Developmental dynamics of student engagement, coping, and everyday resilience. In S. Christenson, A. Reschly & C. Wylie (Eds), *The handbook of research on student engagement* (pp. 21-44). Springer. https://doi.org/10.1007/978-1-4614-2018-7_2

Tang, Y., & He, W. (2023). Relationship between emotional intelligence and learning motivation among college students during the COVID-19 pandemic: A serial mediation model. *Frontiers in Psychology*, *14*, Article 1109569. https://doi.org/10.3389/fpsyg.2023.1109569

Troisi, J. D. (2014). Making the grade and staying engaged: The influence of student management teams on student classroom outcomes. *Teaching of Psychology*, *41*(2), 99-103. https://doi.org/10.1177/0098628314530337

Turi, J. A., Ghani, M. F. A., Javid, Y., & Sorooshian, S. (2018). The impact of socio-emotional intelligence on academic performance. *Journal Of Educational Administration Research and Review*, *2*(2), 86-95. https://doi.org/10.17509/earr.v2i2.22478

Udida, L. A., Ukwayi, J. K., & Ogodo, F. A. (2012). Parental socioeconomic background as a determinant of student's academic performance in selected public secondary schools in Calabar Municipal Local Government Area, Cross River State, Nigeria. *Journal of Education and Practice*, *3*(16), 129-136. https://bit.ly/3QvP3Wp

Wang, M.-T., Degol, J. L., Amemiya, J., Parr, A., & Guo, J. (2020). Classroom climate and children's academic and psychological wellbeing: A systematic review and meta-analysis. *Developmental Review*, *57*, Article 100912. https://doi.org/10.1016/j.dr.2020.100912

Wang, M.-T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal*, *47*(3), 633-662. . https://doi.org/10.3102/0002831209361209

Wolfe, K. (2019). Enhancing the emotional intelligence of students: Helping the critical few. *Journal of the Scholarship of Teaching and Learning*, *19*(3), 16-33. https://doi.org/10.14434/josotl.v19i2.23750

Zeeman, E., & Lotriet, M. (2013). Beyond the expected: An enriched learning experience through learner engagement and participation. *Teaching in Higher Education*, *18*(2), 179-191. https://doi.org/10.1080/13562517.2012.696540