Exploring the interplay between emotional intelligence and academic performance of undergraduate university students

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Abstract

This study aimed to investigate the relationship between perceived emotional intelligence and students' academic achievement. To this end, a quantitative research approach with a correlational design was employed. Participants were randomly selected using a stratified sampling technique, resulting in a sample of 135 second- and third-year undergraduate psychology students. An emotional intelligence scale was administered to these participants, and the collected data were subsequently analyzed using both descriptive statistics (including mean, frequency, and percentage) and inferential statistics (including independent sample t-tests, one-way ANOVA, Pearson product-moment correlation, multiple regression analysis, and mediation analysis). The findings indicated that students' perceived emotional intelligence levels were above average. Group comparison analyses revealed that, among various socio-demographic variables, only sex showed a significant difference in emotional intelligence. Similarly, the analysis showed that only the parents' level of education significantly impacted students' academic performance. Furthermore, a statistically significant positive relationship was found between emotional intelligence and academic achievement. Additionally, linear multiple regression analysis revealed that emotional intelligence significantly contributed to academic performance. Mediation analysis further revealed that the relationship between emotional intelligence and academic achievement is partially mediated by sex. Finally, the study concludes with recommendations aimed at enhancing the academic achievement of students.

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Introduction

The pursuit of academic success has long been a focal point in education, with traditional metrics such as standardized test scores and GPAs serving as primary indicators of achievement. However, in recent years, scholars and educators have increasingly recognized the importance of factors beyond cognitive abilities in shaping students' academic outcomes. Among these factors, emotional intelligence (EI) has garnered significant attention for its potential to influence students' academic performance and overall well-being (Brackett et al.,

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2011). Defined as the ability to perceive, understand, regulate, and express emotions effectively (Salovey & Mayer, 1990), EI plays a significant role in shaping individuals' social interactions, decision-making processes, and overall well-being. In the context of education, scholars have increasingly recognized the importance of emotional intelligence for academic success (Goleman, 1995).

Theoretical frameworks such as the Mayer and Salovey (1997) model offer a comprehensive understanding of emotional intelligence by delineating its core components, namely, the ability to perceive emotions, use emotions to facilitate thinking, understand emotions, and manage emotions effectively. These components encompass intrapersonal skills related to self-awareness and self-regulation, as well as interpersonal skills involving empathy, communication, and social interaction. According to this model, emotional intelligence enhances individuals' capacity to adaptively respond to emotional stimuli, thereby influencing cognitive processes, decision-making, and behavior in academic contexts.

Numerous studies have demonstrated a positive association between emotional intelligence and academic performance (Mayer et al., 2008; Piqueras et al., 2019). Students with higher levels of emotional intelligence tend to exhibit better academic outcomes, including higher grades, standardized test scores, and graduation rates (Graziano et al., 2007; O'Connor et al., 2019). This relationship can be attributed to various factors, including the role of emotional intelligence in facilitating effective communication, problem-solving, and stress management skills, all of which are essential for academic success (Brackett et al., 2011; Zeidner et al., 2009).

However, the relationship between emotional intelligence and academic performance is not unidimensional; rather, it is influenced by a complex interplay of individual and contextual factors. One such set of factors is socio-demographic variables, including gender, socioeconomic status (SES), and cultural background. These socio-demographic factors have been shown to shape individuals' experiences, opportunities, and resources, thereby influencing their emotional intelligence development and academic outcomes (Schutte et al., 1998; Sirin, 2005).

Gender differences in emotional intelligence have been a topic of interest in research, with some studies revealing women’s higher score on emotional intelligence compared to men (Mayer et al., 2008; Schutte et al., 1998). Additionally, socio-economic status, as indicated by factors such as parental education and income level, has been consistently linked to academic achievement, with students from higher SES backgrounds generally exhibiting better academic outcomes (Sirin, 2005; Pong et al., 2010). Cultural background and ethnicity also play a significant role in shaping individuals' emotional experiences and expression styles, which may influence the effectiveness of emotional intelligence skills in academic settings (Matsumoto & Juang, 2013).

While previous research has examined the direct relationship between emotional intelligence and academic performance, fewer studies have explored the mediating role of socio-demographic variables in this relationship. Understanding how socio-demographic factors may moderate or mediate the association between emotional intelligence and academic achievement is crucial for developing targeted interventions to support students from diverse backgrounds. By identifying the mechanisms through which socio-demographic variables influence the relationship between emotional intelligence and academic

performance, educators and policymakers can design more effective strategies to promote student success and reduce disparities in educational outcomes. Therefore, this study seeks to address this gap in the literature by investigating the meditational role of socio-demographic variables on the relationship between emotional intelligence and academic performance among students.

Statement of the Problem

In the context of Ethiopia, where socio-economic disparities, cultural diversity, and educational challenges are prevalent, understanding the role of emotional intelligence in shaping academic outcomes is particularly pertinent. While numerous studies have examined the relationship between emotional intelligence and academic performance in various cultural contexts, there is a notable dearth of research specifically focused on Ethiopian students. In addition to the inadequacy of locally conducted studies, the results of these investigations demonstrate a lack of consistency. For example, Astatke (2019) identified a significant relationship between emotional intelligence and the academic achievement of college students. In contrast, studies by Yikitbelegn (2018) and Gemechu (2014) found no statistically significant relationship between emotional intelligence and academic performance.

Given these socio-cultural and educational dynamics, there is a pressing need for empirical research to examine the relationship between emotional intelligence and academic performance among Ethiopian students. By addressing this gap in the literature and contextualizing findings within Ethiopia's unique cultural and educational landscape, this study aims to provide valuable insights for educators, policymakers, and researchers seeking to promote holistic student development and enhance educational outcomes in Ethiopia. Thus, this study has investigated the extent to which emotional intelligence is associated with academic performance of university students.

To comprehensively address the issue under investigation, this study aimed to answer the following three basic research questions: (1) what is the nature of the relationship between emotional intelligence and academic performance among university students? (2) Does the emotional intelligence of undergraduate university students vary as a function of some socio-demographic variables, such as sex, years of study, and parental education levels? (3) What are the specific pathways through which socio-demographic variables influence the relationship between emotional intelligence and academic performance among university students?

Methods

Research Design

The primary objective of this study is to examine the correlation between emotional intelligence and academic performance among students. To ensure a systematic data collection and analysis process, a quantitative approach with a correlational research design was utilized. The correlational research design is well-suited for examining the relationships among two or more variables within the study participants, as these relationships are assessed

concurrently (Stangor, 2011). Besides, the quantitative research method was employed to gather numerical data, which helps to capture trends in the phenomena and generalize to a larger population while delving deeper into the issue (Bryman, 2006).

Sampling Techniques

The participants in this study were 2nd and 3rd year undergraduate school of psychology students at Addis Ababa University in both regular and extension programs. There were a total of 203 undergraduate students in this study, with varying numbers of male and female students in each group. The School of Psychology was chosen as the participant pool due to its large size and diverse socio-demographic factors.

To determine the sample size for this study, Yamane's (1967) formula was employed, taking into consideration the small population size. Based on this formula, a total of 135 students were randomly selected using the stratified sampling technique, according to the formula 203 /(1 + 203 * 0.052). However, out of the 135 students, only 126 students (with a response rate of 93.3%) successfully completed and returned the questionnaires.

Instrument

To gather the requisite data from study participants, a scale was employed as the primary instrument. This scale was meticulously adapted to capture specific socio-demographic variables believed to have a correlation with the primary study variables. The instrument was bifurcated into two distinct sections: one addressing socio-demographic variables and the other assessing emotional intelligence.

The section dedicated to general information collected data on gender, locality, Cumulative Grade Point Average (CGPA), years of study, age, religion, and parental educational attainment. To obtain data on CGPA, participants were asked to provide self-reported results.

The emotional intelligence component of the instrument was developed by Schutte, Malouff, Hall, Haggerty, Cooper, Golden, and Dorheim (1998) and comprises 33 items. As delineated by Ciarrochi et al. (2001), the scale evaluates various facets of emotional intelligence: ten items (5, 9, 15, 18, 19, 22, 25, 29, 32, 33) assess emotional perception; nine items (2, 3, 10, 12, 14, 21, 23, 28, 31) measure the management of one's own emotions; eight items (1, 4, 11, 13, 16, 24, 26, 30) gauge the management of others' emotions; and six items (6, 7, 8, 17, 20, 27) evaluate the utilization of emotions. The instrument employs a Likert scale format, where participants rate their agreement with each statement on a five-point scale, ranging from strongly agree (5) to strongly disagree (1).

Validity and Reliability of the Instrument

The questionnaire was adopted from a previously developed, validated, and used instrument. The cross-cultural validity of the scale was ensured through the translation of the scales into English language by language experts. To further validate the scales, the scale was translated into Amharic, local language, by language experts. After ensuring validity and reliability, the questionnaires were administered by the researcher in collaboration with instructors and students to gather the data.

The emotional intelligence measure instrument was developed by Schutte et al. (1998). They claim that the internal consistency of the instrument is very high, at 0.90. This instrument was also locally conducted, and its reliability was found to be 0.923 (Yikirbelegn, 2018) and 0.76 (Gemehu, 2014). Additionally, Pérez et al. (2005) indicated that this tool is used in many academic research studies and has a reliability estimate ranging from moderate to high (0.75-0.85). The current study has shown that the scale has an internal consistency of 0.83. Total scale scores are calculated by reverse coding items 5, 28, and 33, and then summing all items. Scores range from 33 to 165, with higher scores indicating a higher level of emotional intelligence.

Data Analysis Techniques

To analyze data, both descriptive and inferential statistical methods were used. Descriptive statistical methods were employed to investigate the levels of emotional intelligence and academic performance among the students. An independent t-test was used to determine if there was a statistically significant mean score difference in students' academic performance based on dichotomous demographic variables. To assess whether there was a significant mean difference in students' academic performance based on demographic variables with more than two categories (such as parents' level of education), one-way ANOVA was utilized. Pearson product-moment correlation was used to examine the relationship between demographic variables, emotional intelligence, and academic performance. Additionally, multiple regression analysis was employed to determine the extent to which emotional intelligence contributed to changes in students' academic performance.

Results

In this section, we analyzed the quantitative data obtained from the participants. The analysis was performed based on the objectives of the study, and the major findings are presented in tables along with their descriptions.

Socio-demographic Characteristics of Respondents

The study targeted second and third year psychology students from Addis Ababa University. A total of 126 students directly participated in the study. The profiles of the respondents are summarized in the Table 1.

Table 1

Socio-demographic Characteristics of Respondents

Variables	Categories	Frequency	Percent
Sex	Male	28	22.2
	Female	98	77.8
Program enrolled	Regular	44	34.9
	Extension	82	65.1
Batch	2nd Year	62	49.2
	3rd Year	64	50.8

Fathers' Educational level	Secondary School and Below	32	25.4
	Certificate and Diploma	34	27.0
	Degree and Above	60	47.6
Mothers' Educational level	Secondary School and Below	54	42.9
	Certificate or Diploma	35	27.7
	Degree and above	37	29.4
	Total	126	100.0

Table 1 presents the demographic characteristics of the research participants, including their gender, locality, program, and batch. Out of the 126 study participants, 22.2% were males and 77.8% were females. In terms of residence, the majority (93.7%) of participants grew up in urban areas, while only a small percentage (6.3%) lived in rural areas. The same table also shows that 34.9% of participants were enrolled in regular programs; while 65.1% were in extension programs. In terms of the participants' year of study, the table indicates that 49.2% were in year three and 50.8% were in year two.

Regarding the level of education achieved by the parents, the data reveals that the majority of fathers (47.6%) have completed a first degree or higher. A smaller percentage of fathers (25.4%) have completed secondary school or below, while 27% had a certificate or diploma. As for the mothers' level of education, the majority (42.9%) have completed secondary school or below. On the other hand, 29.4% of mothers had a degree or higher and 27.7% had a certificate or diploma.

Descriptive Analysis of Dimensions of Emotional Intelligence

To provide some insight into the amount and variety of academic performance and emotional intelligence in its entirety and throughout its aspects, descriptive statistical methods were used.

Table 2

Descriptive Analysis of Dimensions of EI and Academic Performance

Variables	Mean	Std. Deviation	Min.	Max.
Academic Performance (CGPA)	3.05	.54	2.00	3.93
Emotional Intelligence Total	124.67	13.19	68.00	149.00
Perception of Emotion	37.56	4.93	21.00	49.00
Managing Own Emotion	34.54	4.55	22.00	45.00
Managing Others' Emotion	29.79	4.12	12.00	37.00
Utilization of Emotion	22.78	3.77	12.00	29.00

Table 2 shows that the mean and standard deviation scores of students on emotional intelligence were 124.67 and 13.19, respectively. Based on the mean values obtained, it was found that the emotional intelligence and academic performance of university students were above the hypothesized mean.

When it comes to the dimensions of emotional intelligence, it was found that students scored higher means on the "Perception of emotion" component (M=37.56, SD=4.93),

followed by the "Managing Own Emotion" component (M=34.54, SD=4.55). The component with the lowest mean was "Utilization of emotion" (M=22.78, SD=3.77), while "Managing Others' emotion" had a mean of (M=29.79, SD=4.12). Thus, the mean values for all components of emotional intelligence were found to be moderate.

Exploring Means Differences among Groups

One of the research questions addressed was whether undergraduate university students' emotional intelligence differs according to certain socio-demographic factors. To determine the presence of variation, independent t-tests and one-way ANOVA were performed, depending on the number of variable categories.

Independent *t-test*

Independent t-tests were performed to assess whether there were significant differences in the means of students' academic performance (CGPA) and Emotional Intelligence based on the participants' Gender, program of study, Year of study (Batch), and Locality. Before conducting the independent samples t-tests, the assumption of homogeneity of variance was assessed using Levene's test. It was confirmed that the variance in scores was the same for both groups.

Table 3

EI and Academic Performance across Socio-demographic Variables

Variables		Categories	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Sex	Emotional Intelligence	Male	28	113.46	13.98	-5.698	.000*
		Female	98	127.87	11.11		
	Academic Performance	Male	28	2.99	.57	-.728	.485
		Female	98	3.07	.54		
Program	Emotional Intelligence	Regular	44	125.55	15.48	.546	.586
		Extension	82	124.20	11.87		
	Academic Performance	Regular	44	3.17	.45	1.774	.078
		Extension	82	2.99	.58		
Batch	Emotional Intelligence	2nd Year	62	123.05	14.20	-1.359	.177
		3rd Year	64	126.23	12.06		
	Academic Performance	2nd Year	62	3.07	.52	.374	.709
		3rd Year	64	3.04	.57		

Note. *P < 0.05

Table 3 shows that there were differences between male and female students in their mean scores on Emotional Intelligence and Academic Performance. The analysis results indicate that there was a statistically significant mean difference in Emotional Intelligence between males and females (t (124) = 5.698, P < 0.000). The effect size was found to be -1.02, indicating a large effect. However, there was no statistically significant mean difference in Academic Performance between males and females (t (124) = -0.705, P < 0.485). Furthermore, the results show that there were no statistically significant mean score

differences in students' Emotional Intelligence and Academic Performance based on their program of study and study year.

Table 4

Dimensions of Emotional Intelligence across Gender

EI Dimensions	Gender	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Perception of Emotion	Male	28	34.9643	4.94774	-3.269	.001*
	Female	98	38.2959	4.70185		
Managing Others Emotion	Male	28	27.4643	4.54999	-3.549	.001*
	Female	98	30.4592	3.75038		
Managing Own Emotion	Male	28	31.2857	4.91300	-4.633	.000*
	Female	98	35.4694	3.99795		
Utilization of Emotion	Male	28	19.7500	4.21307	-5.317	.000*
	Female	98	23.6429	3.15983		

Note. *P < 0.05

As shown in Table 4, there were statistically significant differences in all dimensions of emotional intelligence between male and female students. It was found that there was a significant mean difference between male and female students in Perception of Emotion (t (124) = -3.269, p <.001). The effect size was -0.59, indicating a moderate effect. The results also indicated a significant mean difference between male and female students in Managing Others' Emotion (t (124) = -3.549, p <.001). The effect size was -0.64, also indicating a moderate effect. Similarly, it was shown that there was a significant mean difference between male and female students in Managing Own Emotion (t (124) = 4.633, p <.000). The effect size was -0.83, indicating a large effect. Moreover, it was found that there was a significant mean difference between male and female students in Utilization of Emotion (t (124) = -5.317, p < .000). The effect size was -0.95, also indicating a large effect. On all four dimensions, females scored higher than males.

ANOVA (Analysis of Variance)

The one-way ANOVA was computed to determine if there is a variation in the mean scores of students' academic performance based on their parents' levels of education. Before conducting the analysis of variance (ANOVA), Levene's test was used to assess the assumption of homogeneity of variance. This test confirmed that the variance in scores is equal among the three groups.

Table 5

One Way ANOVA for Fathers' Level of Education

Sources of Variation	Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Between Groups	3.252	2	1.626	5.946	.003	.088
Within Groups	33.638	123	.273			
Total	36.890	125				

Note. *=The mean difference is significant at the 0.05 level.

Table 5 demonstrates that students' academic performance varies based on their fathers' educational backgrounds. Therefore, there is a significant mean score difference on academic performance among students based on their fathers' level of education ($F(2,123) = 1.626$, $p < 0.003$). The effect of fathers' education resulted in a medium effect size of .088, indicating that 8.8% of the variation in students' academic performance can be attributed to their fathers' level of education. However, since the ANOVA results do not indicate which specific groups showed differences, post hoc tests were conducted and the findings are summarized in Table 6.

Table 6

Post Hoc Tests for Fathers' Educational Level

Measure	(I) Fathers Education	(J) Fathers Education	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Secondary School & Below	College Certificate or Diploma	-.09836	.12880	.726
		Degree & Above	-.36435*	.11447	.005
	College Certificate or Diploma	Secondary School & Below	.09836	.12880	.726
		Degree & Above	-.26599	.11226	.050
	Degree & Above	Secondary School & Below	.36435*	.11447	.005
		College Certificate or Diploma	.26599	.11226	.050

Note. *= The mean difference is significant at the 0.05 level.

As shown in table 6, the significant difference in academic performance was observed only between two groups among the three categories of fathers' level of education. Students whose fathers' highest level of education is secondary school and below showed a significant difference in academic performance compared to those students whose fathers' highest level of education is a degree and above.

Table 7

One Way ANOVA for Mothers' Level of Education

Sources of Variation	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Between Groups	3.620	2	1.810	6.693	.002	.098
Within Groups	33.269	123	.270			
Total	36.890	125				

Note. *= The mean difference is significant at the 0.05 level.

The above ANOVA summary table (Table 7) indicates a difference in academic performance among students based on their mothers' educational backgrounds. Specifically, there is a significant difference in mean scores of academic performance across different

levels of mothers' education ($F(2,123) = 6.693$, $p < 0.002$)). Additionally, in order to determine the effect size of this result, the most commonly used effect size statistic, eta squared, was calculated. The effect of mothers' education yielded a medium effect size of .098, indicating that 9.8% of the variance in students' academic performance was explained by their mothers' level of education. Since the ANOVA result does not specify the groups between whom the differences were found, post hoc tests were conducted and the results are summarized in Table 8.

Table 8

Post Hoc Tests for Mothers' Educational Level

Measure	(I) Mothers' Education	(J) Mothers' Education	Mean Difference (I-J)	Std. Error	Sig.
Tukey HSD	Secondary School & Below	College Certificate or Diploma	-.18852	.11286	.221
		Degree & Above	-.40528*	.11099	.001
	College Certificate or Diploma	Secondary School & Below	.18852	.11286	.221
		Degree & Above	-.21676	.12263	.185
	Degree & Above	Secondary School & Below	.40528*	.11099	.001
		College Certificate or Diploma	.21676	.12263	.185

Note. *= The mean difference is significant at the 0.05 level.

As shown in Table 8, there was a significant difference in academic performance between two groups among the three categories of mothers' level of education. Specifically, students whose mothers' highest level of education is secondary school and below showed significantly lower academic performance compared to those whose mothers' highest level of education is a degree or higher.

Exploring Relationships among Variables

This study aimed to investigate the nature of the connection between university students' academic performance and emotional intelligence. Both correlation and regression analysis were carried out to sufficiently ascertain whether there is a statistically significant link between the variables.

Correlation Analysis

This section presents the results of the Pearson Product-Moment Correlation, which was conducted to determine if there were any significant correlations between the dimensions of emotional intelligence and academic performance.

Table 9

Inter-correlation Matrix of among study Variables

	1	2	3	4	5	6
1. Academic Performance, CGPA	-					
2. Emotional Intelligence Composite	.275**	-				
3. Perceiving Emotion	.172	.754**	-			
4. Managing Others Emotion	.281**	.751**	.462**	-		
5. Managing Own Emotion	.284**	.773**	.315**	.475**	-	
6. Utilizing Emotion	.090	.761**	.446**	.360**	.569**	-

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

The academic performance of students, as shown in Table 9, has a significant correlation with their emotional intelligence. Specifically, emotional intelligence has a moderate, positive, and significant correlation with academic performance (r=.275). The results indicated a fairly positive correlation coefficient between CGPA and the various dimensions of emotional intelligence; as seen in the correlation matrix. Among the dimensions of emotional intelligence, Managing Own Emotion (r=.284) and Managing Others Emotion (r=.281) show a statistically significant positive correlation. However, the other two dimensions, Perceiving Emotions (r=.172) and Utilization of Emotions (r=.090), demonstrate positive but non-statistically significant correlations with students' academic performance.

Multiple Regression Analysis

Before conducting regression analysis, an attempt was made to check the tenability of assumptions. These assumptions include multicollinearity, outliers, linearity, homoscedasticity, and independence of residuals. Multicollinearity diagnosis revealed values of tolerance greater than .10 and values of VIF less than 10 suggesting that the assumption was not violated. Furthermore, the assumptions of lack of outliers, linearity, homoscedasticity, and independence of residuals were checked using the Normal Probability Plot (P-P) of the Regression Standardized Residual and Scatterplots results again showing that these assumptions were not violated.

To determine the significant contribution of the independent variables to the variation in the dependent variable, a standard regression was conducted. The results of this analysis are summarized in Table 10.

Table 10

Regression Coefficients for Emotional Intelligence, Gender and Parent's Level of Education

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.330	.418		3.183	.002
	Emotional Intelligence	.013	.004	.326	3.624	.000

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Gender	-.347	.128	-.266	-2.707	.008
Fathers Education	.145	.059	.221	2.472	.015
Mothers Education	.184	.058	.285	3.156	.002

Note. R = .475, R^2 =.226, $F_{(4, 221)}$ =8.809, P < .000

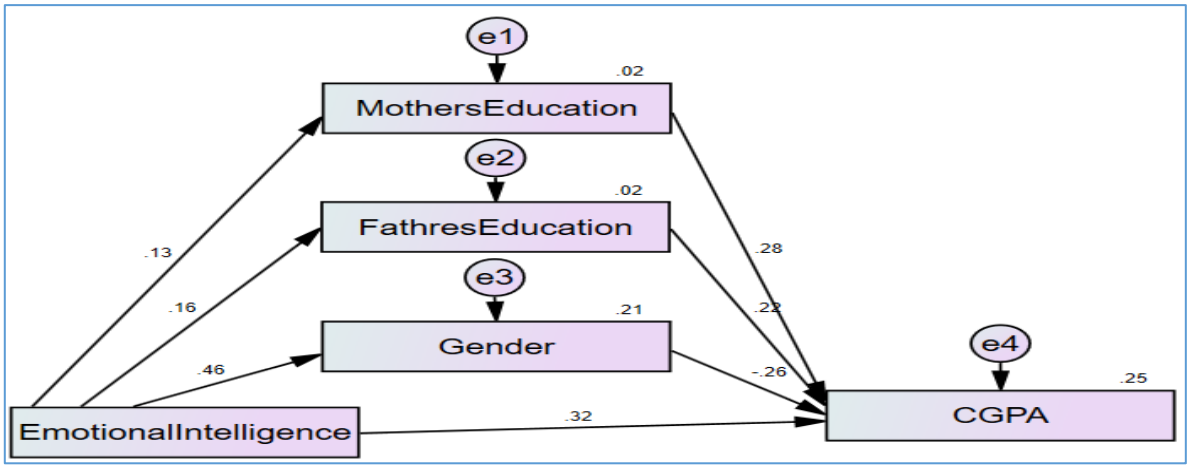
As shown in Table 10, there is a significant correlation (p < .01) between the criterion variable and predictor variables. The coefficient of determination (R^2 = .252) indicates that 25.2% of the variation in the criterion variable is accounted for by the combined effect of the predictor variables. The measure of relative importance of each predictor variable reveals that all of the coefficients for the predictor variables were found to be significant contributors to the regression equation. Specifically, the highest contribution was accounted for by mothers' level of education (B = .321, p < .001), followed by emotional intelligence (B = .307, p < .001).

Mediation Analysis

The third and final research question of this study aimed to determine whether socio-demographic variables serve as a mediator between emotional intelligence and academic performance. To investigate this, we conducted path analysis, which examined the direct influence of exogenous variables on the endogenous variable, as well as the mediating role of the variables. The analysis of the mediation role of three socio-demographic variables is presented in the following paragraphs.

Figure 1

Standardized Paths and Parameters of the Fit Academic Performance Prediction Model



The study assessed the mediating role of socio-demographic variables such as Sex, Fathers' education and Mothers' education) on the relationship between Emotional Intelligence and Academic Performance. The results revealed a significant indirect effect of Emotional Intelligence on Academic Performance through sex (b = -.005, t = -2.50, p < .010). The study also found an insignificant indirect effect of impact of Emotional

Intelligence through Mothers' Education on Academic Performance emotional intelligence (b = .001, t = 1.00, p < .199).

Similarly, the study found an insignificant indirect effect of Emotional Intelligence through Fathers' Education on Academic Performance (b = .001, t = 1.00, p < 0.063). Furthermore, the direct effect of emotional intelligence on academic performance in the presence of the mediators was also found significant (b = .013, p <.001). Hence, one of the socio-demographic variables, Sex, partially mediated the relationship between emotional intelligence and academic performance. The summary of the mediation is presented in Table 11.

Table 11

Mediation Analysis Summary

Relationship	Indirect Effect	Confidence Interval		t-statistics	P-value	Conclusion
		Lower Bound	Upper Bound			
EI -> Sex -> CGPA	-.005	-.010	.001	-2.50	.010	Partial Mediation
EI -> FE -> CGPA	.001	.000	.005	1.00	.063	No Mediation
EI -> ME -> CGPA	.001	-.001	.005	1.00	.199	No Mediation

Note. EI: Emotional Intelligence, FE: Fathers' Education, ME: Mothers' Education

Discussion

This study aimed to examine how perceived emotional intelligence relates to the academic performance of undergraduate students. Once the data was gathered from the participants, various statistical methods were used to analyze it. Different results were obtained in relation to the three research questions posed in this study. Therefore, in this section we discuss the findings by comparing and contrasting them with previous research findings.

Relationship between Emotional Intelligence and Academic Performance

The first research question addressed in this study was whether or not there is a relationship between emotional intelligence and academic performance. The results of the earson product moment correlation coefficient demonstrated a significant and positive correlation between emotional intelligence and students' academic achievement. This suggests that as students' emotional intelligence increases, so does their academic performance, and vice versa. Specifically, the dimensions of managing own emotion and managing others emotion showed statistically significant and positive relationships, while perceiving emotions and utilization of emotions also exhibited positive and statistically significant correlations with students' academic performance. These findings are in line with previous studies, which have consistently shown a significant and positive correlation between emotional intelligence and academic achievement (Yadesa, 2021; Yilmaz, 2015; Lanciano & Curci, 2014). However, it should be noted that two studies conducted in the same setting with a similar population did not find a statistically significant relationship between emotional intelligence and academic achievement (Yikirbelegn, 2018; Gemechu, 2014).

Emotional Intelligence across Socio-demographic Variables

The second research question of this study was to determine whether there are differences in emotional intelligence across socio-demographic factors. The results of the independent t-test showed a statistically significant difference between male and female participants in terms of their overall level of emotional intelligence. In this regards, the findings indicate that females are more emotionally intelligent than males. This difference was observed in all components of emotional intelligence, with females scoring higher than males.

These findings are consistent with previous studies (Yikirbelegn, 2018; Yilmaz, 2015) which have also found that females tend to score higher on measures of emotional intelligence compared to males. However, it is important to note that a study by Shahzad & Bagum (2012) on gender differences in Trait Emotional Intelligence reported opposite findings. Additionally, other local empirical studies conducted in similar settings have reported no significant difference in overall emotional intelligence between male and female university students (Gemechu, 2014; Meshkat & Nejati, 2017; Yadesa, 2021).

Mediation Role of Socio-demographic Variables

The third research question of this study was to determine whether socio-demographic factors mediate the relationship between emotional intelligence and academic performance. The results showed that one of the socio-demographic variables, Sex, partially mediated the relationship between emotional intelligence and academic performance.

The result is consistent with the findings of empirical study conducted by Gomez-Baya et al. (2017) among similar population, university students. They found that gender significantly mediated the relationship between emotional intelligence and academic performance, with females demonstrating stronger correlations between emotional intelligence and academic achievement compared to males. The current study also showed that parental level of education does not significantly mediated the relationship between emotional intelligence and academic performance.

Contrarily, a study conducted by Lee and Sulaiman (2019) among secondary school students revealed that parental education level partially mediated the relationship between emotional intelligence and academic performance, suggesting that students with parents having higher education levels tended to exhibit stronger correlations between emotional intelligence and academic achievement.

Conclusions and Recommendations

The study's findings indicate several key conclusions: Undergraduate psychology students at Addis Ababa University exhibit elevated levels of emotional intelligence, suggesting they possess the skills necessary to understand and manage both their own emotions and those of others, which in turn supports their ability to navigate academic challenges effectively and sustain strong academic performance. Notably, female students demonstrate significantly higher emotional intelligence than their male peers, indicating a greater capacity for emotional awareness and management. Additionally, academic

performance is significantly influenced by the educational attainment of students' parents; specifically, students whose fathers have only a certificate-level education or whose mothers have elementary education or less tend to perform worse academically compared to those with more highly educated parents. Correlation and regression analyses further reveal a robust positive relationship between emotional intelligence and academic performance, suggesting that higher emotional intelligence is associated with better academic outcomes. Moreover, emotional intelligence mediates the impact of socio-demographic factors, such as gender and parental education levels, on academic performance, highlighting its role as a critical intermediary in these relationships.

To enhance student outcomes based on the study's findings, it is recommended that Higher Education Institutions implement targeted emotional intelligence training programs to build upon the existing competencies of students. Institutions should also consider gender-sensitive approaches to support emotional development equitably among male and female students. Given the influence of parental education on academic performance, providing additional support and resources to students from less-advantaged backgrounds could help mitigate disparities. Furthermore, incorporating emotional intelligence as a key component of academic support services may leverage its positive correlation with academic success. Finally, further research should be conducted to explore the complex interactions between emotional intelligence, socio-demographic factors, and academic performance, aiming to refine strategies that can enhance student success across diverse populations.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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