EMOTIONAL INTELLIGENCE AND ACADEMIC PERFORMANCE IN HIGHER EDUCATION

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Abstract: The objective of this study was to investigate whether there is a correlation between emotional management, perceived emotional intelligence, and academic performance among a sample of 406 students from a Higher Education Institution. The data were obtained through an execution test for the emotional management variable, a self-report questionnaire to measure perceived emotional intelligence, and to gather academic performance data, the technological department of the institution was asked for the overall average achieved by the participants over an academic semester. The data were processed in the statistical software SPSS, and the Pearson's correlation coefficient (r) was applied between the variables academic performance, emotional management, and perceived emotional intelligence. The results demonstrate a positive correlation between emotional management and academic performance. Furthermore, the clarity component of perceived emotional intelligence also correlates with academic performance. It is concluded that considering emotional variables in higher education processes, along with traditional cognitive factors, is important for achieving academic performance outcomes.

Keywords: Emotional intelligence, Academic performance, Students, Higher education

1   Introduction

The achievement of satisfactory outcomes in the educational sphere not only entails acquiring specific knowledge and skills but is also linked to the development of fundamental competencies to confront the challenges of adult life. In this regard, academic performance is associated with both cognitive and motivational, as well as socio-emotional variables [1, 2].

While traditionally, intelligence quotient and cognitive abilities have been considered predictors of academic success, it has been demonstrated that other equally relevant aspects exist. Factors such as motivation, self-esteem, and socio-emotional skills have been shown to play a crucial role in academic performance [3, 4]. Therefore, understanding the interplay between cognitive and non-cognitive factors becomes essential to comprehensively address academic performance and promote effective teaching and learning strategies.

In the educational realm, emotional intelligence has gained significant relevance due to its impact on the well-being and academic success of students [5]. Emotional intelligence refers to the ability to recognize, understand, and manage one's own emotions and those of others, as well as to use this emotional information effectively in various situations [6]. By developing emotional intelligence, students can more effectively handle academic challenges, establish positive relationships with their peers and teachers, resolve conflicts constructively, and cope with stress and pressure [7]. Furthermore, emotional intelligence has also been associated with increased academic engagement and a better classroom environment [8, 9].

Emotional intelligence, according to the "Four-Branch Model of Emotional Intelligence" refers to the ability to perceive, understand, and regulate one's own emotions and those of others, as well as to use this emotional information effectively in the thinking and decision-making process [6]. This cognitive-emotional ability has gained widespread recognition in various disciplines, including psychology, education, and the business sector, due to its impact on personal well-being, interpersonal relationships, and performance in various areas of life. This model identifies four fundamental components of emotional intelligence. The first component is emotional perception, which pertains to the ability to identify and understand one's own emotions and those of others, as well as recognizing emotional expressions in verbal and non-verbal language. The second component is emotional facilitation, involving the skill to generate, promote, and use emotions appropriately to facilitate thinking and decision-making. The third component is emotional comprehension, which relates to the capacity to understand the intricate relationships between emotions and thoughts and to use this understanding to guide behavior. The final component is emotional management, encompassing the ability to regulate one's own emotions and those of others, promoting emotional balance and effective adaptation to different contexts. These components form the cornerstone of emotional intelligence and provide a solid theoretical framework for comprehending and measuring this essential skill in the academic sphere and beyond.

2   Related Works

Emotional intelligence has been the subject of numerous studies that explore its relationship with multiple academic variables. In the international context, several studies have explored how emotional skills can influence students' ability to face educational challenges and achieve adequate performance [10]. Previous studies have revealed a positive correlation between emotional intelligence and academic performance [2, 11]. In addition, emotional intelligence has been associated with greater academic motivation, greater adaptability to academic challenges, and greater satisfaction with learning [12]. These findings highlight the importance of emotional intelligence as a key predictor of academic performance and highlight the relevance of its integration into the educational field to promote emotional well-being and student success.

In the Latin American region, research on the correlation between emotional intelligence and academic performance has also gained importance. Studies conducted in various Latin American countries have sought to contextualize international findings within the region's own cultural and educational particularities. The results obtained have highlighted how emotional competencies can play a crucial role in student performance [13]. These investigations have contributed to broaden the perspective on emotional intelligence in the academic field, considering the specific dynamics of the region.

In the research on the assessment of emotional intelligence, various types of instruments are used to assess this multidimensional skill. Among the most common instruments are questionnaires and self-report scales, which ask participants to answer a series of questions related to their perception, experience, and emotional competencies [14]. These types of measurements provide a subjective assessment of their own skills. These measurements capture individuals' perception and self-reflection about their emotions, their ability to recognize and regulate them, and their effectiveness in managing them. Most of the existing research on emotional intelligence in the educational field uses self-report measures, that is, they measure perceived emotional intelligence [15]. On the other hand, in addition to self-report questionnaires, performance measure instruments are also used, which involve the performance of specific tasks designed to assess emotional skills in practical situations. These measurements provide an objective assessment of individuals' actual skills to recognize, understand, and regulate emotions, and are based on direct observation of their performance in different emotional contexts. The combination of self-report and performance measure instruments provides a more comprehensive and accurate assessment of emotional intelligence, allowing for a more in-depth analysis of individuals' emotional skills and facilitating the comparison and analysis of data in the field of scientific research. This is essential for identifying areas for improvement and designing effective interventions aimed at developing emotional intelligence.

The general objective of this study was to determine the correlation between academic performance and emotional intelligence. The specific objectives were: to determine if there is a correlation between academic performance and emotional management (the fourth component of the "Four-Branch Model of Emotional Intelligence") and between perceived emotional intelligence and academic performance. Perceived emotional intelligence has three components: emotional clarity, emotional repair, and attention to emotions.

The relevance of this research lies in the social and academic impact that can be derived from correlating academic performance with emotional intelligence. From a social perspective, understanding how emotional skills influence academic success can provide valuable information for the integral development of young people and their preparation to face the challenges of adult life. A strong emotional intelligence is not only related to a greater ability to manage stress, resolve conflicts, and establish healthy interpersonal relationships [16], but it can also positively influence

self-esteem and motivation, which are crucial aspects for well-being and personal growth [17].

In the academic field, this type of study can provide information for further research that focuses on how emotional competencies are related to the ability to learn, adapt, and perform in an educational environment. Identifying if there are consistent patterns between emotional intelligence and academic performance can allow educational institutions to implement more effective pedagogical strategies and emotional support programs that promote optimal learning. In addition, the results of this research could lead to a change in the way that student success is evaluated and valued, moving from a purely cognitive approach to a more holistic one that takes into account socio-emotional aspects. Another contribution of this study is that two types of instruments were used to assess emotional intelligence for the subsequent correlation with the academic performance variable: a self-report measure (Trait Meta Mood Scale- 24) and a performance measure (Emotional and Cognitive Cordillera Test). The skill or performance measure was used to assess emotional management and the self-report measure allowed for the assessment of perceived emotional intelligence. Using two different types of measures allows for more reliable results since social desirability can interfere with the accuracy of the data obtained through a self-report instrument, while performance measures generate more reliable responses because they require solving cases where real skills are put to the test and not just the subject's perception of those skills.

3. Materials and Methods

The methodology used in this study is quantitative, cross-sectional, non-experimental, and correlational. A non-probability intentional sampling was used to select the sample. The sample consisted of 406 students from a private higher education institution, enrolled in ten different majors (54.9% female and 45.1% male) with an average age of 23 years. The classrooms of third-year students were visited to introduce the research. A signed informed consent was requested from those who wished to participate in the study. The consent indicated the acceptance to participate freely and voluntarily in the research, as well as the confidential nature of the data obtained. A second visit to the classrooms was made for those who signed the consent to complete the questionnaires.

Although there are multiple questionnaires that allow for the assessment of emotional intelligence, two complementary instruments were selected that fit the theoretical framework of the "Four-Branch Model of Emotional Intelligence". The details of the tools used are detailed below:

-        **Emotional and Cognitive Cordillera Test (ECCT):** This test is the only one with norms for the Ecuadorian population that measures emotional management. The complete test measures both cognitive and emotional aspects, and for this research, the emotional management subscale was specifically used. It evaluates emotional management skills in six hypothetical scenarios

through 20 items. Each scenario has five possible actions, in which the student has to decide which is more or less effective to solve the proposed problem. This subscale belongs to the skill or performance tests. The questionnaire was originally validated with 1,750 higher education students, and according to its authors, it has a Cronbach's alpha of 0.89 [2].

-        **Trait Meta Mood Scale (TMMS- 24)**: This self-report questionnaire consists of 24 items, which are answered on a Likert scale. The objective is to assess perceived intrapersonal emotional intelligence (attention to emotions, emotional clarity, and emotional repair). The Spanish adaptation which presents the following Cronbach's alpha values: attention 0.90, clarity 0.90, and repair 0.86 [18].

To obtain the academic performance, the final average obtained during the last academic period that the students took was requested from the technology department. The collected data was processed in the statistical program SPSS. Considering that the variables studied are numerical, the Pearson correlation coefficient r was applied to show if there are significant relationships between: emotional management and academic performance, perceived emotional intelligence and academic performance, and finally between emotional management and perceived emotional intelligence.

4. Results

The results show that there is a positive correlation between academic performance and emotional management. Although the correlation is weak, the p-value shows a statistically significant correlation. Regarding the relationship between academic performance and the three components of perceived emotional intelligence, only a positive correlation is evident with the emotional clarity component. Finally, when analyzing the relationship between emotional management and perceived emotional intelligence, it was found that only the emotional clarity component correlates positively with emotional management. The values corresponding to the relationships between the variables and the statistical significance determined by the p-value are shown in Table 1.

Table 1: Correlations between emotional management, academic performance, and perceived emotional intelligence (N=406)

	Emotional management	Academic performance	Perceived emotional intelligence		
			Attention	Clarity	Repair

Emotional management	Pearson correlation	1	,197**	,044	,138**	,089
	Sig. (bilateral)		,000	,381	,005	,073
Academic performance	Pearson correlation	,197**	1	,105*	,071	,054
	Sig. (bilateral)	,000		,034	,154	,276
Attention	Pearson correlation	,044	,105*	1	,151**	,164**
	Sig. (bilateral)	,381	,034		,002	,001
Clarity	Pearson correlation	,138**	,071	,151**	1	,499**
	Sig. (bilateral)	,005	,154	,002		,000
Repair	Pearson correlation	,089	,054	,164**	,499**	1
	Sig. (bilateral)	,073	,276	,001	,000	

**. The correlation is statistically significant at a 1% level (two-tailed).

*. The correlation is highly significant at the 1% level (two-tailed).

Among the limitations of this research is that the academic performance variable was studied only through the average grade of an academic period, which can be limiting, since the number of courses taken, failed subjects, and the duration of the major, among other aspects, have not been considered.

1.2 DISCUSSION

Based on the results presented, it is shown that there is a positive correlation between academic performance and emotional management. Although this correlation is weak, it is important to note that there is a statistically significant relationship, which supports the existence of this association.

These results are consistent with previous research in which a positive correlation between the variables is evident [13, 19, 20].

Among the possible reasons for these results is that emotional management involves the regulation of both positive and negative emotions, as a result, we can point out that there is better management of academic stress. Students who possess strong emotional management skills may be more able to cope with academic challenges, preventing negative emotions from interfering with their ability to focus, make decisions, and solve problems. In a sample of university students, there was a positive correlation between the emotional skills and some cognitive aspects associated with academic performance such as verbal ability and inductive reasoning [21].

In addition, when exploring the relationship between academic performance and the three components of perceived emotional intelligence, it is observed that there is only a positive correlation with the emotional clarity component. This suggests that the ability to understand and recognize one's own emotions is related to better academic performance. These findings highlight the importance of promoting and developing emotional clarity in educational settings to improve academic outcomes. An explanation for this correlation is that students who have high emotional clarity can better understand their emotional states and, therefore, be more able to regulate their emotions effectively. This allows them to maintain a proper emotional balance and avoid negative emotions from interfering with their academic performance. The effectiveness in emotional competencies can contribute to social and academic adaptation acting as a facilitator of thinking, since cognitive work implies the ability to use and regulate emotions in order to favor concentration, impulsivity and stress management and, therefore, produce an increase in the student's intrinsic motivation [22]. It is worth noting that the results differ from others research in which there was no relationship between emotional intelligence and academic performance [23]. Probably the variety of results is due in part to the type of measures used to assess the construct of emotional intelligence.

When correlating scores on emotional management and perceived emotional intelligence, it is found that only the emotional clarity component is positively correlated with emotional management. This finding has also been reported in other studies [15]. One possible reason for these results is that the skills related to adequate emotional management are not necessarily related to our perception of them. In other words, the results obtained through a performance measure such as the ECCT, which objectively measures emotional management, can differ significantly from the results of a self-report questionnaire such as the TMMS-24, which does not objectively evaluate emotional competencies, but the perception that subjects have about them.

Conclusions

Academic performance correlated positively with emotional management and with the clarity factor of perceived emotional intelligence. Although the correlations obtained with academic performance are weak, they are statistically significant, which highlights the need to consider psychological aspects of students to contribute to their academic performance. Although it is not possible to speak of a causal relationship between emotional intelligence and academic

performance, emotional skills such as clarity and emotional management have a positive relationship with this variable.

In the correlation of emotional management and perceived emotional intelligence, it was found that only the emotional clarity component is positively related to emotional management. Emotional repair and attention skills do not correlate significantly with emotional management, one possible reason for this is that the necessary skills to manage emotions adequately do not always coincide with our perception of having those skills. This research shows the importance of integrating emotional education programs into the curriculum to strengthen students' emotional management and improve their academic performance.

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