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ADAPTATION AND VALIDATION OF THE SHORT EQI-C TEST FOR THE ECUADORIAN UNIVERSITY CONTEXT

Adaptación y validación del Test EQI-C versión corta para el contexto universitario ecuatoriano

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Abstract

In today's higher education landscape, emotional intelligence has become a central concern. In this context, appropriate measurement instruments are needed to accurately and effectively assess the different aspects that make up this construct. The objective of this research was to validate the short version of the EQI test (EQI-C) adapted to the Latin American–Ecuadorian context. The instrument was administered to students at the Universidad Nacional de Educación, aged 17 to 47 years. Of the 564 participants, the majority were female (406 women). Factorial analysis, reliability, and correlations among variables were performed. The results showed acceptable levels of internal consistency and validity, with an overall Cronbach's alpha of .882. Four factors were identified, accounting for 51% of the cumulative variance. It is concluded that the instrument can be implemented with Ecuadorian university students.

Keywords: factor analysis, higher education, emotional intelligence, psychometrics.

Resumen

En el panorama actual de la educación superior, la inteligencia emocional ocupa un lugar fundamental. En este contexto se requieren instrumentos de medición adecuados que permitan valorar con precisión los componentes de este constructo. El objetivo de esta investigación fue validar el test EQI-versión corta (EQI-C), adaptado al contexto latinoamericano-ecuatoriano. El instrumento se aplicó a estudiantes de la Universidad Nacional de Educación, con edades entre 17 y 47 años. De los 564 participantes, 406 eran mujeres. Se realizaron análisis factoriales, pruebas de confiabilidad y correlaciones entre variables. Los resultados mostraron niveles adecuados de consistencia interna y validez, con un coeficiente total de .882. Se identificaron cuatro factores que explican el 51 % de la varianza acumulada. Se concluye que el instrumento puede utilizarse con estudiantes universitarios ecuatorianos.

Palabras clave: análisis factorial, educación superior, inteligencia emocional, psicometría.

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1 | Introduction

In the current context, society demands that individuals develop transversal competencies that enable them to function effectively across different life domains. From this perspective, to achieve success people need professional, personal, and social skills that facilitate the application of knowledge and abilities; therefore, these skills should be cultivated in both formal and non-formal educational settings (Guerrero & Cebrián, 2023).

Along these lines, in recent years emotional intelligence (EI) has assumed a prominent role in academic and social spheres, significantly influencing how people think, decide, and interact with the world (Machado et al., 2025). Specifically, over the last decade a body of research worldwide, especially in Europe and Latin America, has substantiated a direct correlation between EI and happiness (Gallego Jiménez & Bosch Rabell, 2016).

Moreover, EI has been shown to positively influence various aspects of human development, including personal performance, problem solving, autonomy, and leadership, among others. The findings of Gallego Jiménez & Bosch Rabell suggest the need to create and develop intervention plans that incorporate EI as a transversal axis at all levels of education (Gutiérrez Rojas et al., 2021). Zhou et al. (2024) confirmed that EI is an independent predictive factor of educational performance for all students. Indeed, EI acts as a very strong predictor of student achievement, as it positively influences self-efficacy and social acceptance.

Similarly, some studies indicate that EI plays a crucial role in achieving success in leadership, contributing up to 80% to that outcome. Likewise, the development of EI is linked to improvements in students' academic performance. Contrary to earlier beliefs, it is now understood that EI can be assessed, taught, learned, and refined within educational settings. Strengthening interprofessional leadership based on EI is achieved through structured educational programs that integrate self-assessment, reflection, theoretical instruction, team practice, and constructive feedback, within a context that fosters collaboration and understanding of diverse roles and styles (Shrivastava et al., 2022).

As a result, various programs have been implemented in educational and workplace contexts (Gavín-Chocano & López-Barajas, 2020). These programs aim to teach and strengthen EI with the goal of equipping individuals with the skills necessary to understand and manage their own emotions and those of others, to distinguish them, and to use them to guide thoughts and behaviors regardless of age, culture, gender, or ideology (Fernández-Berrocal & Extremera Pacheco, 2002; Goleman, 2007; Mayer et al., 1997).

Although EI has experienced a surge of interest across multiple domains, its definition is not yet universally agreed upon, which generates some ambiguity in the field. However, there is convergence around the importance of self-awareness, self-regulation, empathy, and social skills as key components. Accordingly, various authors have proposed different conceptualizations and models; among the most recognized are those of Bar-On (1997), Bisquerra Alzina (2003), Goleman (1996), and Salovey and Mayer (1989).

2 | Literature review

The Salovey and Mayer (1989) model is pioneering and defines EI as a set of four abilities: (a) emotional perception: the ability to identify and understand one's own and others' emotions; (b) emotional assimilation: the capacity to feel and adequately express emotions; (c) emotional understanding: the ability to analyze and comprehend the causes and consequences of emotions; and (d) emotional regulation: the capacity to regulate and modify emotions reflectively.

Goleman's (1996) model proposes five components: (a) self-awareness: awareness of one's own emotions, strengths, and weaknesses; (b) self-regulation: the ability to control emotions and remain calm under pressure; (c) self-motivation: the capacity to focus on goals and maintain a positive attitude; (d) empathy: the ability to understand and share others' emotions; and (e) social skills: the ability to establish and maintain positive relationships with others.

From another perspective, Bar-On (1997) presents a mixed emotional-social intelligence model divided into five scales: (a) intrapersonal: self-awareness, self-regard, self-actualization, independence; (b) interpersonal: empathy, interpersonal relationships, social responsibility; (c) adaptability: problem solving, adaptability to change, coping with stress; (d) stress management: stress tolerance and impulse control; and (e) general mood: optimism and overall well-being.

Similarly, Bisquerra Alzina (2003) proposes a model based on five emotional competencies: (a) emotional awareness: knowledge of one's own and others' emotions; (b) emotional regulation: the ability to manage emotions appropriately; (c) emotional autonomy: independence, responsibility, critical thinking, and resilience; (d) social competence: the capacity to form and maintain positive relationships; and (e) life skills for well-being: the ability to make responsible decisions and promote personal and social welfare.

While the most influential authors in the study and investigation of EI (Bar-On, 1997; Bisquerra Alzina, 2003; Goleman, 1996; Salovey & Mayer, 1989) have shown favorable results in various studies, Muquis (2022) notes that few educational institutions attempt to implement these models. This leaves the development of the construct to individual initiative, the innovation of certain teachers, thesis projects, or other efforts that tend to lapse over time due to the administrative or curricular workload of those with that affinity.

Given this situation, several studies suggest implementing programs in a systematic and orderly way beginning with measurement to determine participants' emotional status and verify effectiveness; thus, it is possible to confirm the acquisition of emotional competencies to prevent disorders or strengthen motivational aspects in work, social, family, personal, and academic settings (Fragoso-Luzuriaga, 2019; Gavín-Chocano & López-Barajas, 2020).

In this regard, it is notable that today there are tests available to measure individuals' EI across different ages and contexts (Sánchez-Teruel & Robles-Bello, 2018). Moreover, a simple internet search reveals a large number of free self-report measures that allow anyone to check their emotional status. Typing "free emotional intelligence tests" into a web browser yields a wide variety of questionnaires.

Although the accessibility of online self-reports is a significant advantage — since anyone, regardless of age or context, can perform a self-assessment without consulting a specialist — there are also limitations: cultural and linguistic diversity, as well as individual expectations, can influence the honesty of responses. Social pressure to appear well adjusted may lead respondents to answer in socially desirable ways rather than reflect their true state.

From these considerations arise several questions: What do people do with self-report results? Are free online self-report EI tests valid for all users? Are specific knowledge or competencies about emotional intelligence required to interpret the results? The answers to these questions are complex and clearly require further research. However, it is important to take the limitations of self-reports into account when using them to assess EI.

Based on these questions, it is argued that considering the contextual, chronological, cultural, and linguistic characteristics of the group to which the measure is applied is fundamental to ensure assessment quality. Thus, future research should focus on finding evaluation instruments using different methodologies that are reliable, valid, and adapted to the target population (Sánchez-Teruel & Robles-Bello, 2018).

Regarding this point, a study by Jamba-Pedro et al. (2021) reports that, specifically for the university setting, multiple tests exist, but most research uses the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), a measure distributed by Multi-Health Systems. The MSCEIT is a 141-item tool that assesses emotional intelligence in adults to obtain an in-depth view of the capacity for perceiving, understanding, using, and regulating emotions.

The second most implemented test is Bar-On's instrument, designed to evaluate EI across ages and contexts. It consists of 117 items distributed across five dimensions and 15 subscales, notable for capturing a wide range of social emotional skills.

Third is the Trait-Meta Mood Scale (TMMS) (Mayer et al., 1997; Salovey & Mayer, 1989). This self-report scale measures EI through 48 items that assess self-perception regarding the ability to manage emotions and their characteristics. It covers the three dimensions proposed by these researchers: Emotional Attention, Emotional Clarity, and Emotional Repair (Calero, 2013).

This research aims to validate the short EQI test (EQI-C), which was adapted into Spanish by López-Zafra et al. (2014) and conditioned for the Latin American–Ecuadorian context by Zambrano-Vacacela (2023). It was considered pertinent to have a test suited to the specific characteristics of the Latin American university population to provide clear information for planning interventions consistent with results and aligned with EI management and knowledge.

3 | Method

Using a non-probability convenience sampling strategy (Gallego, 2004), 564 volunteer students from the Universidad Nacional de Educación of Ecuador participated in this study. They were enrolled across the nine cycles of the eight degree programs offered in both in-person and online modalities (basic education, education in experimental sciences, special education, inclusive education, arts pedagogy, pedagogy of national and foreign languages, early childhood education, and intercultural bilingual education). The largest representation came from the basic education program (42.9%) and education in experimental sciences (27.7%), while intercultural bilingual education had the smallest representation (3.7%). Additionally, approximately 91% of participants were enrolled in the in-person modality.

Table 1 details a majority presence of female students (72%); additionally, ages between 17 and 27 represent 91% of the sample, and although 82% do not have children, a substantial number do (100 students).

Table 1 | Characteristics of the participants

Variables		Men	Women	Prefer not to say
Modality of study	In-person	153	358	2
	Online	3	48	
Children	Yes	10	90	
	No	146	316	2

Note. Results obtained based on the inclusion criterion "All UNAE students who wished to participate freely and voluntarily in this study."

Procedure

To ensure equivalence between the Spanish (Spain) version and the contextualization to Latin American (Ecuadorian) Spanish, wording and phrases were first modified to preserve the same meaning and measure the same constructs; for example, "Afronto dificultades paso a paso" (original) was changed to "Enfrento las dificultades paso a paso," and "Cuesta controlar enfado" (original) was replaced with "Soy capaz de controlar mi enfado," among others. It is important to note that although wording changes were made to the questionnaire items, these were not significant; only certain words and phrases that experts judged potentially confusing were altered.

Subsequently, a review workshop was conducted with three experts: one in language and communication, a second in educational psychology, and a third in research methods. Finally, a pilot administration was carried out with 209 university students from another institution (Zambrano-Vacacela, 2023).

After the described process, authorization was requested from the university's Research Coordination office. An invitation was then sent to students via program directors by email and WhatsApp; the message briefly described the study's purpose, guaranteed confidentiality of responses, and included the Google Forms questionnaire link, noting that completion time was estimated at 5–8 minutes and that participants could choose not to complete it if they did not consent.

Instrument

EQI – short version (EQI-C)

This instrument for measuring emotional intelligence in university students was adapted into Spanish by López-Zafra et al. (2014). It originally contained several items measuring the interpersonal factor, stress management, adaptability, and general mood. However, to create a briefer instrument, those researchers simplified it to 28 items that measure the first four EI factors, based on Bar-On's argument that "general mood" is something calculated for potential intervention and to assess response veracity (Bar-On & Parker, 2018).

This 28-item instrument uses a four-point Likert scale: 1 never, 2 sometimes, 3 almost always, 4 always. It is worth noting that for this study only 26 items were included, which proved appropriate after analyzing Cronbach's alpha, as shown in Table 2.

Table 2 | EQI – short version (EQI-C) questionnaire adapted to the Latin American–Ecuadorian context

Variables	N.º	Item
Interpersonal	19	I am sensitive to other people's feelings
	15	I worry about what happens to others
	4	I help people
	10	I understand how others feel
	20	I have good relationships with others
	16	Relationships with others mean a lot to me
	12	I listen attentively when friends confide in me
Adaptability	13	I solve problems by focusing on possibilities
	18	I think of alternative solutions when I encounter difficulties
	3	I gather information when faced with a difficult situation
	1	I face difficulties step by step
	6	I can visualize a problem in a general way
Stress management	26	I explode easily*
	17	I am able to control my impulses
	9	My impulsivity has caused me problems*
	23	I have a bad temper*

(Continuation)

Variables	N.º	Item
Stress management	2	I am able to control my anger
	21	I am impulsive*
	24	I am impatient*
	14	I am able to control anxiety
Intrapersonal	7	I am able to understand how I feel
	5	I am able to express my ideas
	22	I find it easy to describe my feelings
	25	I find it easy to stand up for my rights
	8	I have achieved what I set out to achieve
	11	I am able to express feelings

Note. Questionnaire taken from the Spanish-adapted version published by López-Zafra et al. (2014). The asterisk (*) indicates reverse-scored items.

4 | Results

Data analysis was performed using the SPSS statistical package (trial version). Initially, Cronbach's alpha was calculated for each of the variables detailed in the questionnaire. As shown in Table 3, Cronbach's alpha exceeds .70 and the overall result indicates a value of .882, which supports the assertion that the questionnaire has good internal consistency.

Table 3 | Item statistics

Variables	Item	Mean	Standard deviation	Cronbach's alpha
Interpersonal	P4	3.21	.717	.758
	P10	2.82	.760	
	P19	2.80	.865	
	P15	2.79	.842	
	P20	2.91	.721	
	P16	2.65	.883	
	P12	3.29	.815	

(Continuation)

Variables	Item	Mean	Standard deviation	Cronbach's alpha
Adaptability	P13	2.82	.736	.751
	P18	2.77	.755	
	P3	2.64	.823	
	P1	2.53	.768	
	P6	2.58	.717	
Stress management	P26	2.96	.870	.842
	P17	2.57	.779	
	P9	2.86	.830	
	P23	2.73	.747	
	P2	2.65	.822	
	P21	2.95	.788	
	P24	2.64	.799	
	P14	2.42	.861	
Intrapersonal	P7	2.70	.788	.776
	P5	2.63	.764	
	P22	2.39	.769	
	P25	3.17	.784	
	P8	2.61	.677	
	P11	2.47	.831	
General				.882

Note. Values resulting from item analysis using Cronbach's alpha.

The results shown in Table 4 correspond to the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test (required for principal component analysis) and indicate that if the KMO measure approaches 1, factor analysis is appropriate, in this case KMO = .904. Additionally, Bartlett's test of sphericity is significant (p = .000). That is, this questionnaire meets the requirements for conducting principal component analysis.

Table 4 | KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**.904**
Bartlett's Test of Sphericity	Approx. Chi-square	5105.318
	df	325
	Sig.	.000

Note. Results of the KMO and Bartlett's Test of Sphericity.

Table 5 presents the item–total correlations and extraction values. The item with the lowest correlation with the total scale was P12 (interpersonal), with .302, while the highest was P22 (intrapersonal), with .677. The table also shows the correlations of all items with the dimensions of adaptability, stress management, interpersonal, and intrapersonal intelligence. Each item has an initial value of 1.000, representing its perfect correlation with itself; extraction values indicate the strength of the relationship between each item and the underlying variables.

For adaptability (P1 = .363; P3 = .536; P6 = .480; P13 = .428; P18 = .526), moderate correlations were found, with P3 (.536) and P18 (.526) being the strongest, suggesting a relatively solid relationship with this dimension.

In the stress management dimension (P2 = .537; P9 = .554; P14 = .512; P17 = .556; P21 = .644; P23 = .566; P24 = .490; P26 = .646), the highest correlations were observed, particularly for P21 (.644) and P26 (.646), indicating a strong association between these items and stress-related experiences in the university context. This insight may guide future research on stress management.

The interpersonal dimension (P4 = .463; P10 = .478; P12 = .302; P15 = .591; P16 = .421; P19 = .617; P20 = .391) exhibited a wider range of correlations, with P19 (.617) showing the strongest relationship within this factor.

Finally, in the intrapersonal dimension (P5 = .553; P7 = .489; P8 = .359; P22 = .677; P25 = .377), the highest value corresponded to P22 (.677), indicating a strong association with the intrapersonal construct.

Overall, the stress management and intrapersonal dimensions showed higher correlations compared to adaptability and interpersonal intelligence. These stronger associations suggest that certain items may be capturing closely related aspects within their respective dimensions. Therefore, further statistical analyses, such as confirmatory factor

analysis, are recommended to explore the latent structure of the data and validate these relationships. A deeper understanding of these correlations will contribute to the development of effective mental health and well-being interventions within the Ecuadorian university context, where such findings are essential for designing culturally relevant and evidence-based programs that address students' emotional and social needs.

Table 5 | Correlation Analysis between Items (Initial / Extraction)

Variables	Initial	Extraction
P1 Adaptability	1,000	.363
P2 Stress	1,000	.537
P3 Adaptability	1,000	.536
P4 Interpersonal	1,000	.463
P5 Intrapersonal	1,000	.553
P6 Adaptability	1,000	.480
P7 Intrapersonal	1,000	.489
P8 Intrapersonal	1,000	.359
P9 Stress	1,000	.554
P10 Interpersonal	1,000	.478
P11 Intrapersonal	1,000	.616
P12 Interpersonal	1,000	.302
P13 Adaptability	1,000	.428
P14 Stress	1,000	.512
P15 Interpersonal	1,000	.591
P16 Interpersonal	1,000	.421
P17 Stress	1,000	.556
P18 Adaptability	1,000	.526
P19 Interpersonal	1,000	.617
P20 Interpersonal	1,000	.391
P21 Stress	1,000	.644
P22 Intrapersonal	1,000	.677
P23 Stress	1,000	.566
P24 Stress	1,000	.490

(Continuation)

Variables	Initial	Extraction
P25 Intrapersonal	1,000	.377
P26 Stress	1,000	.646

Note. Extraction method: Principal Component Analysis.

Continuing with the component analysis, Table 6 shows that four components with eigenvalues greater than 1 were identified. The first component presented an eigenvalue of 6.977 (26.84% of total variance); the second, 3.177 (12.22%); the third, 1.786 (6.87%); and the fourth, 1.231 (4.74%). Together, these four components explained 51% of the total variance, a satisfactory result for a short version of the instrument.

Table 6 | Component Analysis (Initial Eigenvalues)

Component	Initial Eigenvalues		
	Total	% of Variance	% Cumulative
1	6,977	26,835	26,835
2	3,177	12,220	39,055
3	1,786	6,869	45,923
4	1,231	4,735	50,658

On the other hand, when examining the rotated component matrix using the Varimax method (Table 7), which includes all the items corresponding to the four study variables, it was observed that most factor loadings were above .50. Based on these results, the following components were identified: Component 1 corresponds to adaptability, Component 2 to stress management, Component 3 to interpersonal intelligence, and Component 4 to intrapersonal intelligence.

Table 7 | Rotated component matrix[a]

Item	Component			
	1	2	3	4
Adaptability: I tackle difficulties step by step	.597	-	-	-
Stress: I am able to control my anger	-	.524	-	-

(Continuation)

Item	Component			
	1	2	3	4
Adaptability: I gather information when faced with a difficult situation	.710			
Interpersonal: I help people	-	-	.506	-
Intrapersonal: I am able to express my ideas	-	-	-	.549
Adaptability: I can visualize a problem generally	.624	-	-	-
Intrapersonal: I am able to understand how I feel	-	-	-	.593
Stress: My impulsivity has caused me problems*	-	.728	-	-
Interpersonal: I understand how others feel	-	-	.584	-
Intrapersonal: I am able to express my feelings	-	-	-	.730
Interpersonal: I listen attentively when friends confide in me	-	-	.501	-
Adaptability: I solve problems by focusing on possibilities	.576	-	-	-
Stress: I am able to control my anxiety	-	-	-	.531
Interpersonal: I worry about what happens to others	-	-	.756	-
Interpersonal: Relationships with others mean a lot to me	-	-	.618	-
Adaptability: I think of alternative solutions when I encounter difficulties	.599	-	-	-
Interpersonal: I am sensitive to other people's feelings	-	-	.784	-
Stress: I am impulsive*	-	.794	-	-
Intrapersonal: I find it easy to describe my feelings	-	-	-	.751
Stress: I have a bad temper*	-	.737	-	-
Stress: I am impatient*	-	.692	-	-
Intrapersonal: I find it easy to stand up for my rights	.523	-	-	-
Stress: I explode easily*	-	.786	-	-

Note. Extraction method: Principal Component Analysis. Rotation method: Varimax with Kaiser normalization. (a) The rotation converged in six iterations. (*) Reverse-scored item.

5 | Discussion and conclusions

Regarding Cronbach's alpha, as observed in the analysis, each component demonstrated satisfactory reliability, with values ranging between .7 and .8. Overall, the test showed a total coefficient of .882, consistent with the findings reported by Bojórquez Molina et al. (2013), Chaves-Barboza and Rodríguez-Miranda (2018), Cronbach et al. (1965), and González and Pazmiño (2015). Therefore, it can be confirmed that the adapted version of the test is reliable for implementation in the Ecuadorian context.

In relation to the factor component analysis, a KMO value of .904 was obtained and Bartlett's test of sphericity was significant ($p = .000$), which indicates that the instrument meets the required statistical thresholds. These results are consistent with the studies conducted by Napitupulu et al. (2017) and Shrestha (2021), who point out that such measures are crucial when making decisions, as they allow researchers to focus only on the most relevant factors rather than on an excessive number of parameters, as was the case in this validation.

As for the correlation analysis (degree of linear association among variables), the results indicate a moderate to weak relationship, with most values exceeding .5. This finding aligns with previous studies conducted by Camacho-Sandoval (2009), Lahura (2013), and Martínez Ortega et al. (2009), although these authors note that such relationships often depend on the interpretation of each study. Nonetheless, in this case, the parameters required for applying the test in the context for which it was adapted are satisfactorily met.

Although it was not the primary focus of this study, an important predominance of female participants was observed, explained by two main factors identified in previous research. The first is that in the field of education, most professionals are women, an outcome that may be related to Ecuador's cultural, epistemological, and idiosyncratic conception of the teaching profession. This observation is consistent with the findings of Pérez-Morales et al. (2021), who reported that the majority of educators in Ecuador are female. Similarly, Romo Álvarez and Zurita Herrera (2009) found that 61.24% of teachers in the Ecuadorian public education system are women.

In line with this trend, Calderón-Guevara and Carrera-Pillalazo (2022) argue that teaching in Ecuador has undergone a process of feminization, as women represent more than 70% of the teaching workforce. This phenomenon is linked to historical, social, economic, and cultural factors, including gender roles and the perception of teaching as an

extension of domestic care. Their study further suggests that although Ecuador's Liberal Revolution promoted women's access to public education and teacher training, this predominance has contributed to the undervaluation of the profession, particularly in early education, where women make up nearly all teaching staff. However, in secondary and higher education, as well as in positions of greater academic authority, men continue to predominate, revealing persistent inequalities in access to positions of prestige. This situation partially extends to higher education, where there is parity in the number of male and female professors, yet discrimination and patriarchal practices persist in senior-level positions (Reyes Reinoso et al., 2023).

The second factor relates to women's greater tendency to participate in studies involving emotional intelligence (EI) or holistic development, attributed to emotional and personality characteristics, namely, a higher degree of emotional expressiveness. This trend was confirmed by Zambrano-Vacacela (2023), whose study on EI similarly reported higher female participation. Likewise, Extremera et al. (2006) found that women tend to score higher on overall EI measures, a finding also supported by the foundational research of Salovey and Mayer (1989).

In contrast, authors such as Ruiz-Ruiz (2015) challenge the notion that emotions represent a feminine weakness, arguing that while gender differences may influence EI, they are not determinative. Although a slight biological predisposition may exist in women for identifying and expressing emotions, such differences are minimal and largely shaped by factors such as age, culture, and education. From this perspective, the social construction of gender plays a significant role: girls are encouraged from childhood to express emotions and communicate, whereas boys are often taught to suppress them, which can lead to aggressive behaviors in conflict situations. For this reason, an equitable emotional education is recommended, one that promotes autonomy, empathy, and peaceful conflict resolution while eliminating gender stereotypes and biases.

Based on the results, it can be confirmed that the modifications made for the cross-cultural adaptation from Peninsular Spanish to Ecuadorian Spanish were both effective and efficient. The psychometric analysis conducted in this study identified the same domains and parameters as the original instrument; however, two items with low Cronbach's alpha values were removed, leaving 26 out of 28 items.

Similarly, the adapted questionnaire demonstrated adequate construct validity and internal consistency, confirming its suitability for use with Ecuadorian university students. The test proved to be a valid and reliable

instrument for assessing emotional intelligence. Moreover, significant correlations were found among the test variables, supporting its convergent and discriminant validity.

Likewise, this research opens the door to evaluating the implementation of emotional intelligence enhancement programs, thereby making it possible to verify the effectiveness of such interventions in producing measurable outcomes and, consequently, to refine the proposed intervention strategies. This position aligns with Fteiha and Awwad (2020), who recommend that, although students are often capable of applying EI strategies effectively, university instructors should provide guidance on emotional intelligence and stress-management techniques.

The relationship between outcomes and the context in which programs are implemented is a critical issue, as several authors cited in this study emphasize. For that reason, evaluation efforts must consider the specific characteristics of each setting in order to obtain more accurate and relevant conclusions.

From this perspective, the present study lays the groundwork for future research that deepens the assessment of emotional intelligence programs' effectiveness, explicitly treating context as a determining factor in achieving more realistic and culturally relevant results.

Nevertheless, it is advisable to continue validating the instrument across different contexts and with larger samples to obtain evidence from diverse university settings. It would also be worthwhile to conduct longitudinal follow-up studies to evaluate the instrument's sensitivity and specificity over time. Furthermore, although this may appear straightforward, it is recommended to train evaluators so that they can interpret the results efficiently and with methodological rigor.

Finally, it is recommended that emotional intelligence enhancement programs be tailored to the specific context in which they are implemented. Although several programs and assessment tools are available, both should be adapted to the cultural, paradigmatic, and idiosyncratic realities of the social environment where they are applied.

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Author's Contribution

Conceptualization; methodology; software; validation; formal analysis; investigation; resources; data curation; writing (original draft); writing (review and editing); visualization; supervision; project administration, all conducted by Z. L.

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