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Development and psychometric properties of the Emotional Competence Profile Questionnaire for Iranian students: ECPQ – Persian Version

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ABSTRACT

Objective: This study focuses on developing and validating the Persian version of the Emotional Competence Profile Questionnaire (ECPQ) for Iranian students aged 18 to 22.

Methods and Materials: The present study is a validation study using correlation, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The 50-item ECPQ was translated into Persian and reviewed by individuals fluent in both English and Persian to ensure transliteral equivalency. A sample of 91 students from the Faculty of Psychology, Islamic Azad University, North Tehran Branch, were selected based on convenience sampling to participate in this study. Item-total correlations, internal consistency reliability, and construct validity were examined using SPSS and AMOS software.

Findings: Results showed internal consistency was adequate (Cronbach's $\alpha = 0.72$), and test-retest reliability was strong ($r = 0.76$, $p < 0.01$). Exploratory Factor Analysis (EFA) revealed a five-factor structure, differing from the original ten-factor model, likely due to cultural and linguistic differences. In this study, both the five-factor and ten-factor models were tested using CFA, and the results indicated that both models were supported by the data. The findings suggest that the Persian ECPQ version is a reliable and valid tool for assessing emotional competence.

Conclusion: While EFA did not support the original 10-factor model, a revised 5-factor structure emerged with superior fit and reliability. CFA validated both models, but the revised model demonstrated stronger internal consistency. These findings highlight cultural influences on the questionnaire's structure, emphasizing the need for further validation in diverse Persian-speaking populations.

Keywords: Emotional Competence, Experience of Emotion, Empathy, Self-control, Social skills.

Introduction

Emotion, in general has long been a focal point of theory and research across various fields in the history of mankind. However, one aspect of it which had been overlooked for a long time and now is becoming very important in many theories and approaches is the concept of emotional competence. Emotional competence refers to the skills and abilities associated with human emotions (Sarhammami et al., 2024; Suardi Wekke et al., 2022). It represents how individuals navigate emotional information in both interpersonal and intrapersonal contexts. Essentially, emotional competence involves the identification, expression, understanding, regulation, and utilization of one's own or others' emotions (Brasseur, et al., 2013). Recent

findings indicate that emotional competence, in contrast to emotional intelligence, which is sometimes portrayed as innate, can be developed through teaching and learning. Therefore, in this respect the term emotional competence holds an advantage over emotional intelligence (Choi, 2025; Elias et al., 2025; Ulu et al., 2025). Competence is described as the learning outcomes that indicate what an individual can know or demonstrate as a result of engaging in a learning process (Choi, 2025; Elias et al., 2025). It is a broad term that describes an individual's performance quality on a particular task (Villegas, 2025). Sternberg and his colleagues (2000) have differentiated between competency and intelligence, emphasizing that competency encompasses the abilities needed to solve personal and professional issues, whereas intelligence encompasses the sub-components of these abilities in the form of thinking and comprehension. In this sense, it is reasonable to infer that emotional competency pertains to one's ability to perform tasks related to emotions, whereas emotional intelligence is the foundational skill that enables this proficiency. Goleman (1998) differentiates between emotional intelligence and emotional competence. He explains that emotional intelligence is a skill that can be developed and is demonstrated through emotional competence. In other words, emotional intelligence is displayed through specific indicators known as emotional competencies, which are essentially abilities related to emotional competence. Thus, emotional competence is an acquired skill rooted in emotional intelligence that can enhance performance in the real life (Goleman, 1998; Goleman et al., 2002). Moreover, it appears that emotional competence involves interaction with oneself and others, whereas emotional intelligence appears to involve less interaction (Halberstadt et al., 2001)

Emotional competence, defined based on both "emotional knowledge" and "emotional regulation," can improve overt self-regulated behaviors and decrease maladaptive behaviors (Izard et al., 2008). Numerous studies have highlighted the significance of emotional competence, showing its influence on various aspects of life including physical health, psychological well-being, social relationships, and professional success. Psychologically, studies indicate that individuals with high emotional competence experience better well-being, increased self-confidence, greater life satisfaction, and reduced mental disorders (Baudry et al., 2017; Scherer, 2018). There is a positive correlation between emotional competence and physical health at a physiological level (Scherer, 2018). Socially, individuals with higher emotional competence tend to have stronger social relationships (Denham et al., 2003). Additionally, high emotional competence is predictive of academic success and effective job performance (Leroy et al., 2012; Petrides et al., 2004).

Based on the information provided, it appears essential to have a reliable tool for assessing emotional competence. Various tools for measuring emotional competence have undergone thorough and comprehensive validation, as evidenced by prior studies (Austin et al., 2004; Mikolajczak et al., 2007; Salovey et al., 1995). These tools typically assess the elements of emotional competence but do not evaluate an individual's emotional responses to others. Brasseur et al. (2013) attempted to address the shortcomings of prior studies. They distinguished between two dimensions: "interpersonal emotional competence" and "intrapersonal emotional competence," and formulated a questionnaire encompassing these dimensions to evaluate its validity and reliability. It is worth mentioning that each of these two scales consists of five subscales. These are respectively: interpersonal identification, interpersonal expression, interpersonal comprehension, interpersonal regulation, and interpersonal utilization. Additionally, there are intrapersonal identification, intrapersonal expression, intrapersonal comprehension, intrapersonal regulation, and intrapersonal utilization. In Brasseur et al. study (2013) the Cronbach's alpha coefficients for different interpersonal and intrapersonal subscales ranged from 0.72 to 0.81. The Profile of Emotional Competence is the product of more than 10 years of emotional intelligence research. It was developed by Brasseur and Mikolajczak in order to measure intrapersonal and interpersonal emotional competences separately. It has been validated in several studies on a total of nearly 22,000 subjects (Brasseur et al., 2013). Translations of the English PEC are available in French, Dutch, Japanese, Polish, Romanian, Spanish, Basque, and Portuguese. However, as the scale is widely used and while there is no reliable scale in the Persian language to assess the emotional competence among Farsi-speaking university students, the present research was an attempt to validate the Persian version

of the scale. The validation procedure was conducted through correlational methods, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

Methods and Materials

Study Design and Participants

The statistical sampling for this research was conducted using a convenience sampling method; involving students aged 18 to 22 at the Faculty of Psychology, Islamic Azad University, North Tehran Branch. One hundred students were convenience selected for the study. During the test phase, 100 participants took part, but this number decreased to 91 in the retest phase.

To start, the English version of Brasseur et al.'s emotional competence questionnaire (2013) was translated into Persian fluently. To ensure the translation's accuracy and fluency, six individuals fluent in both English and Farsi reviewed it. Based on their feedback, adjustments were made to the translated text. A pilot test was conducted with 13 students, aged between 18 and 22 years (mean age = 20.5), selected from universities in Tehran. The goal was to ensure the questionnaire was comprehensible and relevant for students in this age range. Participants were asked to rate each of the 50 items on a 1 to 5 scale, based on their clarity and comprehensibility, where a score of 3 or lower indicated a need for revision. Based on their feedback, only one item received a score of 3, and it was subsequently revised with the help of language experts. The remaining items were deemed sufficiently clear and understandable. These revisions ensured the content was appropriate and comprehensible for the target population.

To ensure that the concepts in the Farsi questionnaire align with those intended in the original questionnaire, the Farsi questionnaire was back-translated by an individual proficient in both English and Farsi languages. This individual had no prior exposure to the original questionnaire. The back-translated version of the questionnaire was sent to the authors of the original questionnaire and approved by them. They raised some points, some of which were implemented, while others were addressed through additional explanations provided by the researchers involved in this study.

In the next step, to assess the questionnaire's reliability, a sample of 100 undergraduate students from the Faculty of Psychology at Islamic Azad University, North Tehran Branch was selected using available convenience sampling method. These students were presented with the questionnaire and asked to answer it twice, with a two-week interval between responses. The questionnaire included 50 questions written in fluent Farsi, with participants required to choose one response from the options: “never”, “sometimes”, “I have no opinion”, “most of the time”, or “always”. Participation in the research project was voluntary. Participants were reassured that all their information would be kept confidential and would be used for research purposes only. The study was approved by the Ethics Board of the Academic Center for Education, Culture and Research.

Instruments

The research instrument utilized in this study was a 50-question questionnaire designed to measure emotional competence. This questionnaire was developed by Brasseur, Grégoire, Bourdu, and Mikolajczak (2013). It is structured into 10 subscales, with each subscale comprising 5 questions. The subscales included are: identification of one's emotions; identification of the emotions of others; understanding one's emotions; understanding the emotions of others; expression of one's emotions; listen to the emotions of others; regulation of one's emotions; regulation of the emotions of others; use of one's emotions and use of other people's emotions.

Data Analysis

Descriptive statistics were used to summarize the demographic characteristics of the participants. Internal consistency was assessed using Cronbach’s alpha coefficient, with values above 0.70 considered acceptable. Test-retest reliability was evaluated by calculating Pearson’s correlation coefficient between scores obtained from the first and second administrations. To examine the underlying factor structure of the Persian version of the Emotional Competence Profile Questionnaire (ECPQ), Exploratory Factor Analysis (EFA) was performed using Principal Component Analysis (PCA) with Varimax rotation. The adequacy of the data for factor analysis was determined

using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. Based on the EFA results, a five-factor model was proposed, and Confirmatory Factor Analysis (CFA) was subsequently conducted to evaluate its goodness-of-fit. Additionally, CFA was performed for the original ten-factor model to compare both structures. Model fit was assessed using indices such as Chi-square (χ^2/df ratio), Comparative Fit Index (CFI), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), and Root Mean Square Error of Approximation (RMSEA). All statistical analyses were conducted using SPSS and AMOS.

Findings and Results

We had 100 participants in the test phase, with a mean age of 20.53 ± 1.45 years (age range: 18–22). Among them, 61 were female and 39 were male. In the retest phase, nine participants (six females and three males) were lost to follow-up, leaving 91 participants. The age range remained the same, with a new mean age of 20.54 ± 1.47 years. The demographic information related to the study participants is summarized in Table 1.

Table 1

Demographic variables

Variable	Value
Final Sample	
Gender	
Men	36 (39.56%)
Women	55 (60.44%)
Age	20.54 ± 1.47

The internal consistency of the Emotional Competence Profile questionnaire was assessed using Cronbach's alpha coefficient (Table 2). A Cronbach's alpha value of 0.70 or higher is generally considered acceptable, while values between 0.50 and 0.70 indicate moderate reliability. The obtained Cronbach's alpha was 0.72, suggesting adequate internal consistency. According to Cohen's guidelines, this value falls within the acceptable range, indicating a moderate to strong effect size in terms of item correlation within the questionnaire. This suggests that the items are sufficiently related to measure the intended construct.

Table 2

Cronbach's Alpha Coefficient for Internal Consistency

Cronbach's Alpha	N of Items
0/72	50

To evaluate the test-retest reliability of the ECPQ, Pearson's correlation coefficient was calculated between the scores obtained in the first and second administrations of the test (Table 3). A Pearson correlation of 0.76 ($p < 0.01$) was observed, indicating a strong and statistically significant relationship between the two sets of scores. According to Cohen's effect size interpretation for correlation coefficients, r = 0.76 represents a large effect size, confirming that the questionnaire exhibits high test-retest reliability and provides stable and consistent results over time.

Table 3

Pearson Correlation Coefficient for Test-Retest Reliability

Pearson Correlation	0/76**
Sig. (2-tailed)	0/001

N	91

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

Exploratory Factor Analysis (EFA) was conducted to investigate the factor structure of the Persian version of the Emotional Competency Profile questionnaire, as translation and cultural adaptation may have influenced its original factor structure (Table 4). Principal Component Analysis (PCA) with Varimax rotation and Kaiser Normalization was performed. The suitability of the data for factor analysis was confirmed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (results not shown). The rotated component matrix revealed a five-factor structure, which did not align with the original ten-factor model of the questionnaire. This finding suggests that the Persian version exhibits a different underlying structure compared to the original version, likely due to linguistic and cultural differences.

Based on the EFA results, we decided to develop a revised version of the questionnaire following the proposed five-factor structure. To further evaluate its suitability, we examined its internal consistency and conducted Confirmatory Factor Analysis (CFA). Since the internal consistency of the original ten-factor model had already been assessed, we additionally performed CFA for this model as well. This approach allowed us to explore the psychometric properties of both models and determine which structure provides a better fit for the Persian version of the questionnaire.

Table 4

Rotated Component Matrix of the Persian Version of the ECPQ

Component	1	2	3	4	5
V1		.660			
V2		.763			
V3	.811				
V4	.855				
V5					.357
V6	.441				
V7			.576		
V8					-.548
V9		-.573			
V10	.561				
V11	.748				
V12				.747	
V13			.509		
V14			.457		
V15				.638	
V16	.476				
V17				.622	
V18			-.552		
V19	.591				
V20		.666			
V21	.569				
V22	.435				
V23			.434		
V24	.314				
V25					.669
V26		.706			

V27						.630
V28				-.569		
V29				-.497		
V30				.713		
V31						.469
V32	.523					
V33	.632					
V34				-.325		
V35	.750					
V36	.615					
V37		.573				
V38						.712
V39					.812	
V40		.499				
V41	.416					
V42						.423
V43		.525				
V44				-.600		
V45				.513		
V46					-.361	
V47	.655					
V48		-.534				
V49		.515				
V50					.724	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 10 iterations.

Figure 1 presents the standardized factor loadings for the CFA of the Persian adaptation of the ten-factor Profile of Emotional Competence PEC questionnaire. The model comprises two higher-order factors: Intrapersonal and Interpersonal emotional competence. Each higher-order factor is linked to five latent constructs, with observed variables representing different aspects of emotional competence. The standardized factor loadings range from 0.43 to 0.88, indicating moderate to strong effect sizes based on Cohen's guidelines, where loadings above 0.30 suggest a meaningful relationship. The highest loadings (e.g., 0.88 for identification of the emotions of others) suggest a strong association, while lower loadings (e.g., 0.43 for regulation of the emotions of others) indicate relatively weaker but still significant relationships. The chi-square value of 78.720 with 34 degrees of freedom is statistically significant ($p < 0.001$), suggesting that the model does not achieve a perfect fit, though effect sizes of factor loadings still provide evidence of meaningful relationships among variables.

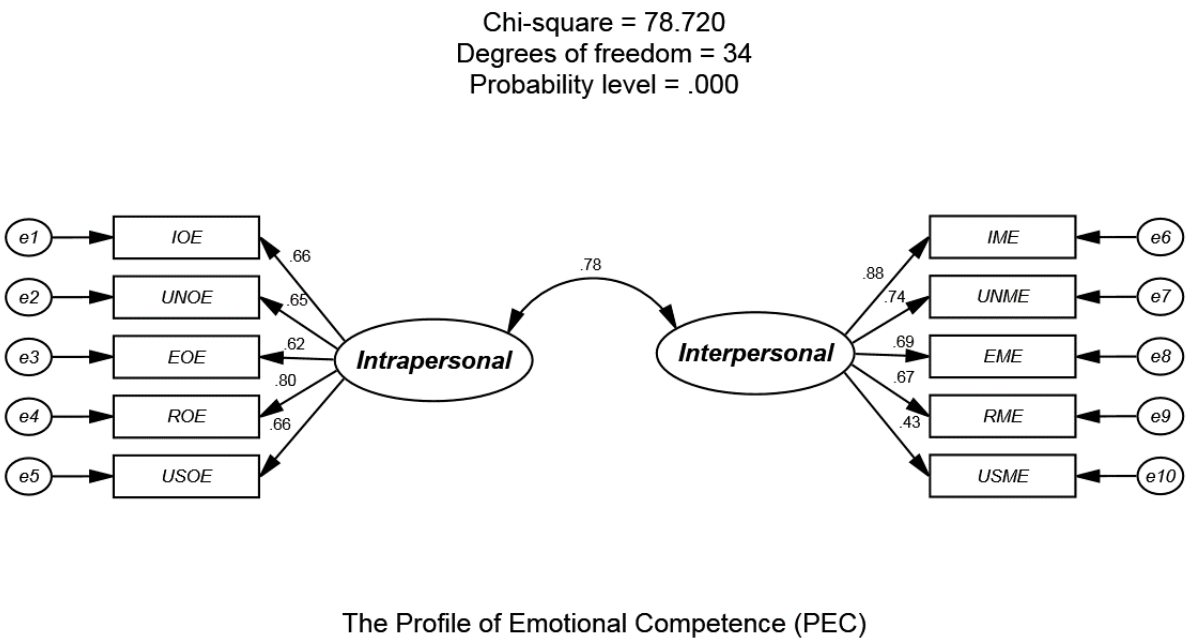

Figure 1

The standardized coefficients of the components loaded on the subscales of the ten-factor model of emotional competence questionnaire Persian version

IOE: identification of one's emotions, UNOE: understanding one's emotions, EOE: expression of one's emotions, ROE: regulation of one's emotions, USOE: use of one's emotions, IME: identification of the emotions of others, UNME: understanding the emotions of others, EME: listen to the emotions of others, RME: regulation of the emotions of others, USME: use of other people's emotions

Table 5 presents the goodness-of-fit indices for the CFA model, along with an interpretation of effect sizes. The Comparative Fit Index (CFI = 0.96) represents a large effect size in terms of model fit, as values above 0.95 suggest excellent fit. The Goodness-of-Fit Index (GFI = 0.92) and Adjusted Goodness-of-Fit Index (AGFI = 0.91) further support a strong model fit. The Root Mean Square Error of Approximation (RMSEA = 0.06) falls within an acceptable range (0.05–0.08), indicating a moderate effect size in terms of model misfit. Additionally, the chi-square to degrees of freedom ratio (χ^2/df = 2.320) suggests a reasonably good fit, as values below 3.0 indicate an adequate model. Taken together, these fit indices suggest that while the model is not a perfect representation of the data, the effect sizes of both the factor loadings and fit indices indicate a practically meaningful model.

Table 5

Fit indices of conformity factor analysis of the ten-factor model

Fit Indices	(χ^2)	df	P	/df²χ	RMSEA	GFI	AGFI	CFI
Conformity Factor Analysis	78.720	34	0/001	2.320	0.06	0.92	0.91	0.96

After factor extraction by EFA (Table 4), items with factor loadings below 0.50 were carefully examined for conceptual alignment with other items within the same factor. If an item conceptually matched the theme of its assigned factor, it was retained despite its lower loading. However, items that neither met the loading threshold nor fit conceptually with other items in the same factor were removed. Based on this criterion, items 6, 10, 16, and 37 were excluded from further analysis. This step ensured that the final factor structure of the Persian version remained both statistically and conceptually sound. This refinement process led to the identification

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of five distinct factors based on the conceptual grouping of retained items. These factors were labeled as Use (Utilization) of Emotions, Experience of Emotions, Empathy, Self-Control, and Social Skills, reflecting the underlying themes of the items within each factor.

To assess the fit of the proposed five-factor structure identified through Exploratory Factor Analysis, a Confirmatory Factor Analysis (CFA) was conducted. CFA enables us to test whether the hypothesized structure derived from EFA aligns with the observed data, providing statistical evidence for the validity of the factor model.

Figure 2 illustrates the standardized factor loadings for the five-factor CFA model. The model comprises the latent constructs, each linked to multiple observed variables (items). The factor loadings range from 0.27 to 0.79, with most values above 0.40, indicating moderate to strong relationships between the items and their respective latent constructs.

The chi-square statistic for the model is $\chi^2 = 2155.030$ with 979 degrees of freedom (df), suggesting a statistically significant model ($p < 0.001$). While the chi-square test is sensitive to sample size and often significant in large datasets, alternative fit indices provide a more reliable evaluation of model adequacy.

Key findings from the CFA model include: Use of Emotions shows strong factor loadings, particularly for items Q16 (0.79), Q18 (0.74), and Q29 (0.72), indicating robust associations. Experience of Emotions demonstrates high loadings for Q17 (0.96), Q36 (0.67), and Q39 (0.67), reflecting a strong latent structure. Empathy exhibits factor loadings from 0.37 to 0.74, supporting the construct's validity. Self-Control displays high factor loadings, with Q10 (0.76), Q13 (0.72), and Q35 (0.72) contributing most strongly. Social Skills has relatively lower but still meaningful loadings, ranging from 0.32 to 0.49. Overall, the CFA results provide empirical support for the proposed five-factor structure, demonstrating an acceptable model fit and meaningful factor relationship.

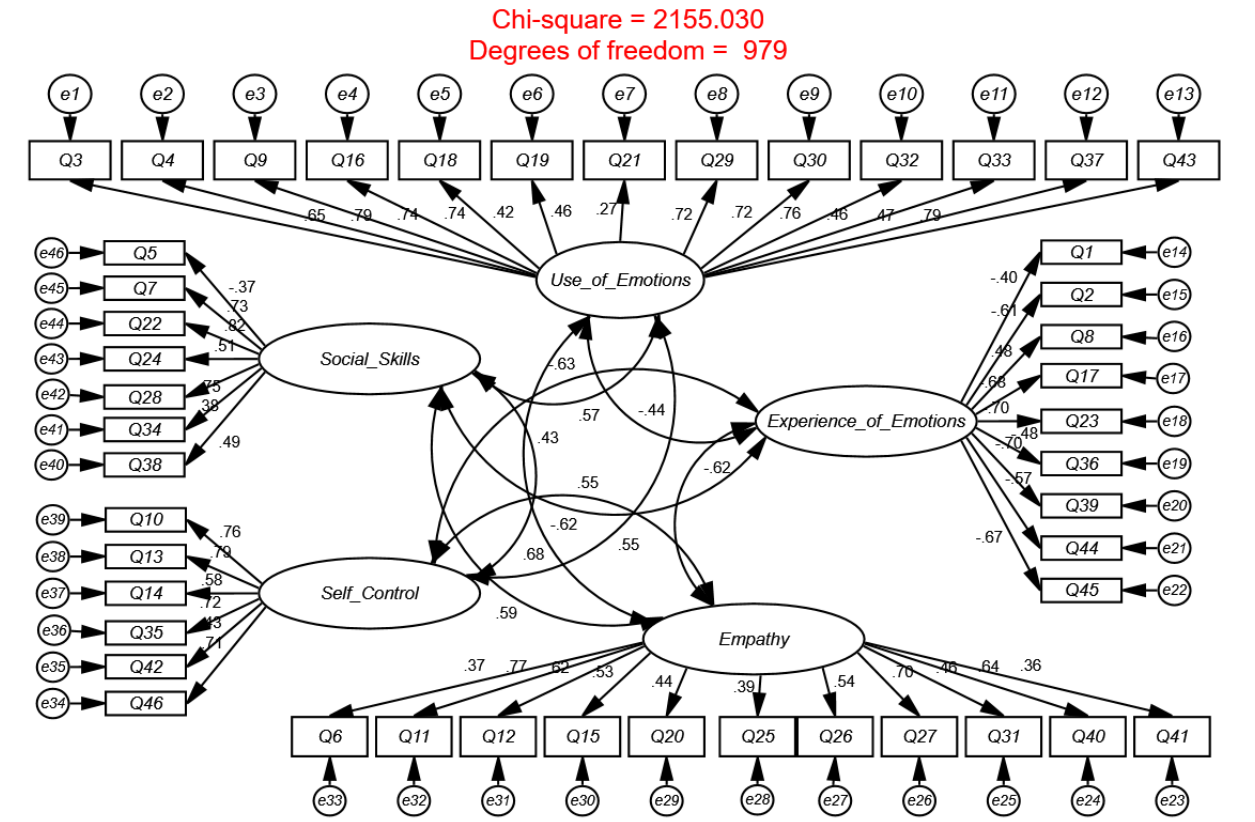

Figure 2

The standardized coefficients of the components loaded on the subscales of the revised profile of emotional competence questionnaire

Table 6 presents the standardized and unstandardized coefficients of questions loaded on the mentioned subscales. Significant at the 0.01 level, the coefficients reveal strong relationships, with p-values of 0.001 indicating high statistical significance across multiple questions. For the "Use of Emotions" subscale, questions such as Q4 (standardized estimate: .786), Q9 (.744), and Q43 (.785) demonstrate significant positive correlations, reflecting a robust influence on the subscale. Similarly, the "Experience of Emotions" subscale highlights strong negative correlations, particularly in Q17 (-.695), Q23 (-.609), and Q39 (-.697). The "Empathy" subscale showcases notable positive coefficients for questions such as Q12 (.766), Q40 (.640), and Q41 (.360). The consistent high T-values and low standard errors across these subscales affirm the reliability and precision of these estimates, underscoring their significant contributions to the respective subscales.

Table 6

Standardized and unstandardized coefficients of questions loaded on subscales.

Question		Subscale	Standardized estimate	Unstandardized estimate	Standard error	T-value	P-value
Q3	--->	Use_of_Emotions	.650	1.000			
Q4	--->	Use_of_Emotions	.786	1.118	.123	9.106	0.001**
Q9	--->	Use_of_Emotions	.736	1.027	.119	8.634	0.001**
Q16	--->	Use_of_Emotions	.744	.951	.109	8.716	0.001**
Q18	--->	Use_of_Emotions	.416	.589	.113	5.209	0.001**
Q19	--->	Use_of_Emotions	.463	.594	.103	5.751	0.001**
Q21	--->	Use_of_Emotions	.274	.353	.101	3.492	0.001**
Q29	--->	Use_of_Emotions	.718	.991	.117	8.464	0.001**
Q8	--->	Experience_of_Emotions	.485	1.000			
Q17	--->	Experience_of_Emotions	-.678	-1.723	.292	-5.894	0.001**
Q23	--->	Experience_of_Emotions	-.695	-1.936	.325	-5.963	0.001**
Q2	--->	Experience_of_Emotions	-.609	-1.340	.240	-5.583	0.001**
Q1	--->	Experience_of_Emotions	-.403	-.849	.197	-4.302	0.001**
Q30	--->	Use_of_Emotions	.719	.992	.117	8.474	0.001**
Q32	--->	Use_of_Emotions	.762	1.013	.114	8.882	0.001**
Q33	--->	Use_of_Emotions	.459	.883	.155	5.704	0.001**
Q37	--->	Use_of_Emotions	.469	.631	.109	5.814	0.001**
Q43	--->	Use_of_Emotions	.785	1.028	.113	9.100	0.001**
Q36	--->	Experience_of_Emotions	-.483	-.972	.200	-4.868	0.001**
Q39	--->	Experience_of_Emotions	-.697	-1.796	.301	-5.971	0.001**
Q44	--->	Experience_of_Emotions	-.575	-1.114	.206	-5.410	0.001**
Q45	--->	Experience_of_Emotions	-.668	-1.446	.247	-5.853	0.001**
Q26	--->	Empathy	.535	1.000			
Q25	--->	Empathy	.390	.837	.190	4.401	0.001**
Q20	--->	Empathy	.442	.642	.132	4.860	0.001**
Q27	--->	Empathy	.702	1.167	.177	6.608	0.001**
Q31	--->	Empathy	.465	.848	.168	5.042	0.001**
Q15	--->	Empathy	.531	1.066	.192	5.553	0.001**
Q12	--->	Empathy	.620	1.018	.166	6.144	0.001**
Q11	--->	Empathy	.766	1.482	.214	6.915	0.001**
Q6	--->	Empathy	.368	.668	.159	4.198	0.001**
Q40	--->	Empathy	.640	1.051	.168	6.264	0.001**
Q41	--->	Empathy	.360	.516	.125	4.124	0.001**

The CFA results demonstrated an acceptable model fit for the proposed five-factor structure (Table 7). The chi-square test was significant ($\chi2=2155.030$\chi^2 = 2155.030, df=979df = 979, $p<0.001p < 0.001$), though given its sensitivity to sample size, alternative fit indices were considered. The $\chi2/df$\chi^2/df ratio was 2.2,

suggesting a reasonable fit. Other fit indices also indicated an acceptable model fit, with CFI = 0.88, AGFI = 0.86, and GFI = 0.89. The RMSEA value of 0.077 further supported the model's adequacy. These results confirm that the five-factor model derived from EFA is a valid representation of the data.

Table 7

Fit indices of conformity factor analysis of the five-factor model

Fit Indices	(χ^2)	df	P	/df²χ	RMSEA	GFI	AGFI	CFI
Conformity Factor Analysis	2155/030	979	0/001	2/201	0/077	0/89	0/86	0/88

The reliability analysis of the revised five-factor model profile of the emotional competence questionnaire yielded a Cronbach's alpha coefficient of 0.922 for the entire questionnaire, which consists of 46 items. This high Cronbach's alpha value indicates a strong internal consistency among the items, suggesting that they are measuring the same underlying construct with a high degree of reliability. Consequently, the questionnaire can be considered a dependable tool for assessing emotional competence in the given population.

Table 8

Internal Consistency of the Five-Factor Structure

Cronbach's Alpha	N of Items
0/922	46

Discussion and Conclusion

Emotions are a crucial aspect of human life. A life devoid of emotion lacks vibrancy, movement, variety, meaning, and purpose. In our actions and communications, aside from endeavoring to convey our own intentions clearly, we also form attitudes towards what we listen to and say. The ability to do this depends on possessing a skill known as emotional competence. Defined by a combination of emotional, cognitive, and behavioral components, emotional competence equips individuals with essential skills for enhancing social abilities and managing social and emotional relationships. Emotional competence plays a crucial role in social interactions and impacts various emotional and behavioral functions of individuals. According to the definition of emotional competence, it can be inferred that possessing this skill is crucial and beneficial for university students. Given the significance of emotional competence and the rising number of educational initiatives aimed at enhancing this skill among university students, the psychometrics of a suitable questionnaire to assess this aspect is of particular importance. Following a thorough search, the Profile of Emotional Competence (PEC) questionnaire appeared to be well-suited for evaluating emotional competence in university students.

The present study aimed to examine the reliability and validity of the Persian version of the Emotional Competence Questionnaire. During the validation process, we observed that the original 10-factor model, which underlies the English version of the questionnaire, was not supported by the results of exploratory factor analysis (EFA). Given this, we proposed an alternative 5-factor model based on EFA results for the Persian version. Goleman (1995) introduced the emotional competence model, which emphasizes the behaviors that drive performance (Goleman, 1995). This model views emotional competence as encompassing a variety of traits and skills, spanning from inherent characteristics to acquired abilities. Goleman has organized these competencies into five groups, each of which is divided into several components. The following are the categories: (1) self-awareness; (2) motivation; (3) self-regulation; (4) social awareness and empathy; and (5) social skills (Goleman, 1998). Other scholars have defined emotional competence as consisting of three fundamental elements: (a) displaying emotions, (b)

comprehending emotions, and (c) encountering emotions (LoBue et al., 2019). Based on the explanation provided, upon reviewing the data obtained from the statistical analysis of the questionnaire and analyzing the questions within each subcategory, we found that the Persian subcategories bear a striking resemblance to Goleman's classification of the components of emotional competence. The categorization we established in the Persian questionnaire comprises: 1. The utilization of emotions, 2. Experience of emotions, 3. Empathy, 4. Self-control, and 5. Social skills. We first examined the items with factor loadings below 0.50 in the EFA for conceptual alignment with other items within their respective subcategories. Upon review, questions 6, 10, and 16 in the Utilization of Emotions subcategory were found to be conceptually unrelated to the other items in that category. Additionally, question 37, which was part of the Experience of Emotions subcategory, did not demonstrate a meaningful association with this factor based on the exploratory analysis. As a result, these four items were removed from further analysis to ensure the conceptual and statistical integrity of the revised model. Subsequently, we assessed both models using confirmatory factor analysis (CFA) and internal consistency measures to determine their goodness-of-fit and reliability.

When comparing the two models, the 5-factor structure proposed by EFA demonstrated stronger psychometric properties. Both EFA and CFA supported this structure, and it exhibited higher internal consistency (Cronbach's alpha = 0.92) compared to the original 10-factor model (α = 0.72). Moreover, with fewer factors, the 5-factor model offers a simpler and more practical structure for statistical analyses. However, despite these advantages, the 10-factor model remains the original structure of the questionnaire, which may make it preferable in some contexts. Nevertheless, since EFA did not confirm the 10-factor structure in the Persian version, its applicability in this population remains uncertain.

Our study extends beyond a simple CFA-based validation of the Persian version of the Emotional Competence Questionnaire, as seen in previous research (Bakhshi & Yousefi, 2020). Instead, we incorporated EFA to determine whether the Persian version maintains the same 10-factor structure as the original English version, despite linguistic and cultural differences. Our findings suggest that the factor structure differs between the Persian and English versions, as the 10-factor model was not replicated in the Persian population. Several factors may explain this discrepancy. Apart from cultural and linguistic variations, differences in emotional expression norms, conceptual understanding of emotions, and response styles across populations could contribute to the observed structural differences. This highlights the necessity of adapting psychometric tools beyond mere translation, ensuring their conceptual alignment with the target population. Consequently, we propose a 5-factor model, which appears to be statistically robust and may be preferable for use in Persian-speaking populations, given its superior fit and reliability. However, further research is required to confirm its utility.

Future studies should validate this proposed model using larger and more diverse samples. Due to sampling limitations, we were unable to test our new 5-factor model on an independent sample; both CFA and reliability analyses were conducted using the same dataset. Therefore, future research should replicate these analyses with an independent validation sample to confirm the stability of this factor structure. Additionally, comparative studies should directly test both models (5-factor and 10-factor) against each other to determine which structure more accurately captures emotional competence in Persian-speaking university students (ages 18–22). These investigations will be essential in establishing the most appropriate factor structure for measuring emotional competence in this population.

Ultimately, our findings suggest that the Persian version of the Emotional Competence Questionnaire may require a modified factor structure to reflect cultural and linguistic specificities. While further research is needed to confirm these conclusions, the proposed 5-factor model provides a promising alternative, demonstrating superior fit, reliability, and practical usability. Future studies will be crucial in refining this model and determining its applicability across different Persian-speaking populations, ensuring that it serves as a valid and reliable tool for assessing emotional competence in this cultural context.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

References

Austin, E. J., Saklofske, D. H., Huang, S. H., & McKenney, D. (2004). Measurement of trait emotional intelligence: Testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, 36(3), 555–562. https://doi.org/10.1016/S0191-8869(03)00114-4

Bakhshi, N., & Yousefi, F. (2020). Psychometric Properties of the Profile of Emotional Competence. *Journal of Psychology*, *24*, 150-166. https://doi.org/10.1001.1.18808436.1399.24.2.2.7

Baudry, A. S., Lelorain, S., Mahieuxe, M., & Christophe, V. (2017). Impact of emotional competence on supportive care needs, anxiety and depression symptoms of cancer patients: A multiple mediation model. *Support Care in Cancer*, *26*(1), 223-230. https://doi.org/10.1007/s00520-017-3838-x

Brasseur, S., Grégoire, J., Bourdu, R., & Mikolajczak, M. (2013). The profile of emotional competence (PEC): Development and validation of a self-reported measure that fits dimensions of emotional competence theory. *PLoS One*, *8*(5). https://doi.org/10.1371/journal.pone.0062635

Choi, S. Y. (2025). The Necessity of Parent Education to Improve Korean Social Emotional Competency. *Association Stud Parents Guardians*, *12*(1), 1-23. https://doi.org/10.56034/kjpg.2025.12.1.1

Denham, S. A., Blair, K. A., De Mulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child development*, *74*(1), 238-256. https://doi.org/10.1111/1467-8624.00533

Elias, M. J., Marsili, F., Fullmer, L., Morganti, A., & Bruno, E. (2025). The social-emotional competencies of gifted children must be intentionally developed, ideally in inclusive education contexts. *Gifted Education International*, *41*(1), 57-75.

Goleman, D. (1995). *Emotional Intelligence: Why It Can Matter More Than IQ*. Bantam Books. https://eric.ed.gov/?id=EJ530121

Goleman, D. (1998). *Working with Emotional Intelligence*. Bantam Book. https://doi.org/10.1002/ltl.40619981008

Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership: Realizing the power of emotional intelligence*. Harvard Business School Press. https://www.sidalc.net/search/Record

Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). "Affective social competence". *Social Development*, *10*(1), 79-119. https://doi.org/10.1111/1467-9507.00150

Izard, C. E., King, K. A., Trentacosta, C. J., Morgan, J. K., Laurenceau, J. P., Krauthamer-Ewing, E. S., & Finlon, K. J. (2008). Accelerating the development of emotion competence in Head Start children: Effects on adaptive and maladaptive behavior. *Development and Psychopathology*, 369-397. https://doi.org/10.1017/S0954579408000175

Leroy, V., Grégoire, J., Magen, E., Gross, J. J., & Mikolajczak, M. (2012). Resisting the sirens of temptation while studying: Using reappraisal to increase focus, enthusiasm, and performance. *Learning and Individual Differences*, *22*(2), 263-268. https://doi.org/10.1016/j.lindif.2011.10.003

LoBue, V., Pérez-Edgar, K., & Buss, K. A. (2019). *Handbook of Emotional Development*. Springer. https://doi.org/10.1007/978-3-030-17332-6

Mikolajczak, M., Luminet, O., Leroy, C., & Roy, E. (2007). Psychometric properties of the Trait Emotional Intelligence Questionnaire: Factor structure, reliability, construct, and incremental validity in a French-speaking population. *Journal of Personality Assessment*, *88*(3), 338-353. https://doi.org/10.1080/00223890701333431

Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and individual differences*, *36*(2), 277-293. https://doi.org/10.1016/S0191-8869(03)00084-9

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta- Mood Scale. In *Emotion, disclosure, and health* (pp. 125-154). https://doi.org/10.1037/10182-006

Sarhammami, A. P., Neudehi, M. F., Bouzari, B., Ramezani, N., & Zekri, F. A. (2024). Investigating the effect of emotional intelligence and moral intelligence on marital satisfaction among married students. *International Journal of Body, Mind and Culture*, 11(6), 115–122. https://doi.org/10.61838/rmdn.ijbmc.11.6.14

Scherer, K. S. (2018). Comment: Comorbidity between mental and somatic pathologies: Deficits in emotional competence as health risk factors. *Emotion Review*, *10*(1), 55-57. https://doi.org/10.1177/1754073917719331

Suardi Wekke, I., Iswanto, A. H., Abed, A. M., Hussein Ali, M., Samal, A., Abdullah Talib, H., Islam, Z., Fakri Mustafa, Y., H. Kzar, H., & Beheshtizadeh, N. (2022). The Relationship between Emotional Intelligence and Academic Achievement among the Students of Trisakti University, Indonesia.

International Journal of Body, Mind and Culture, *10*(1), 90-98. https://doi.org/10.22122/ijbmc.v10i1.390

Ulu, E., Coşkun, U. H., & Karabey, B. (2025). Understanding gaming behavior: Academic and emotional competence as predictors of gaming disorder in gifted youth. *Educational Research & Implementation*, 2(1), 1–12. https://doi.org/10.14527/edure.2025.01

Villegas, M. T. D. (2025). Emotional Competencies and Psychological Well-Being in Costa Rican Emerging Adults: The Mediating Role of Self-Esteem and Resilience. *European Journal of Investigation in Health Psychology and Education*, *15*(5), 89. https://doi.org/10.3390/ejihpe15050089