International Journal of Psychology

The Trait Emotional Intelligence Questionnaire in Lebanon and the UK: A comparison of the psychometric properties in each country

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*T*he aim of this study was to validate the Trait Emotional Intelligence Questionnaire (TEIQue v. 1.5) in a Lebanese sample and compare its factorial structure to that of a UK sample. There were similar gender and age distributions in both samples as well as satisfactory structural reliabilities at the global, factor, and facet levels. Results from exploratory factor analysis showed a four-factor structure similar to that originally obtained by the author of the questionnaire. There were strong correlations between the factor scores derived from the two datasets (≥.90). Tucker congruence supported the similarity between the Lebanese and UK factors. Independent-samples *t* tests showed that Lebanese participants scored higher on the Sociability factor and the facets of self-esteem, social awareness and emotion perception, whereas UK participants scored higher on the facets of stress management, optimism and relationships. Gender differences are also reported, and recommendations for future research discussed.

Keywords: Trait Emotional Intelligence Questionnaire; Trait emotional intelligence; Psychometric properties; Validation; Factorial structure.

Emotional intelligence (EI) has been in the frontline of research and popular literature for the last three decades. In the scientific literature, two main theoretical approaches dominate the field, and these relate to the type of measurement used to study each one of these constructs. The first approach, known as ability EI, views EI as a combination of cognitive abilities reflecting emotional reasoning that are best measured via IQ-like maximum performance tests (Mayer, Salovey, Caruso, & Sternberg, 2000). The second approach, popularised as trait EI, conceptualises EI as emotion-related perceptions assessed through self-report questionnaires and rating scales (Petrides, Pita, & Kokkinaki, 2007). Research has consistently demonstrated that there is little, if any, correlation between trait EI and ability EI, thus supporting their theoretical distinction (e.g., Brannick et al., 2009).

This paper focuses on the trait EI construct, which represents the realm of affect-related characteristics of personality (see Table 1) and is located at the lower levels of well-established personality hierarchies such as the Giant Three or Big Five (e.g., Petrides et al., 2007; see also Pérez-González & Sanchez-Ruiz, 2014). One of the most widely used measures of trait EI is the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009a).

The incremental validity of the TEIQue is well-established (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016). In fact, an ever-increasing body of research has linked trait EI with a multitude of factors relating to individuals' psychosocial (e.g., Di Fabio & Saklofske, 2014) and subjective well-being (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016), as well as important outcomes such as academic performance (e.g., Perera & DiGiacomo, 2013; Sanchez-Ruiz, Mavroveli, & Poullis, 2013), job satisfaction (see Petrides et al., 2016 for a review of the latest trait EI findings) and romantic-relationship satisfaction (e.g., Malouff, Schutte, & Thorsteinsson, 2014). Gender differences in trait EI have also been explored across cultures; however, results are inconclusive (Pérez-Díaz & Petrides, 2019). While

Table 1
Brief descriptions of the trait EI factors and facets

	High scorers perceive themselves as …
Well-being	
Self-esteem	… successful and self-confident.
Trait happiness	… cheerful and satisfied with their lives.
Trait optimism	… confident and likely to "look on the bright side" of life.
Self-control	
Emotion control	… capable of controlling their emotions.
Stress management	… capable of withstanding pressure and regulating stress.
Impulse control	… reflective and less likely to give into their urges.
Emotionality	
Emotion perception (self and others)	… clear about their own and other people's feelings.
Emotion expression	… capable of communicating their feelings to others.
Relationships	… capable of having fulfilling personal relationships.
Trait empathy	… capable of taking someone else's perspective
Sociability	
Social awareness	… accomplished networkers with excellent social skills.
Emotion management (others)	… capable of influencing other people's feelings.
Assertiveness	… forthright, frank, and willing to stand up for their rights.
Adaptability[a]	… flexible and willing to adapt to new conditions.
Self-motivation[a]	… driven and unlikely to give up in the face of adversity.
Global trait EI	

Note: Adapted from Sanchez-Ruiz et al. (2011). Factors are shown in boldface; facets are shown in italics. [a]These facets feed directly into the global trait EI score without going through any factor.

global trait EI scores tend to be similar across gender, replicable gender-differences can be observed at the factor and facet levels (Petrides, 2009b). Such differences have been observed in the facets of assertiveness, emotion regulation, relationships and self-esteem as well as the factors of Self-control and Emotionality. Some of these differences are male-favouring while others are female favouring, but they tend to balance out at the global trait EI level (e.g., Aluja, Blanch, & Petrides, 2016).

Studies comparing trait EI measured via the TEIQue to other trait EI questionnaires have shown that the former has better predictive validity, as well as more robust psychometric properties overall (e.g., Freudenthaler, Neubauer, Gabler, Scherl, & Rindermann, 2008; Gardner & Qualter, 2010; Martins, Ramalho, & Morin, 2010). There is a growing interest in accounting for cultural differences in psychological construct validity and reliability (Casillas & Robbins, 2005). To date, the TEIQue has been translated into over 20 languages and has been extensively validated across a wide variety of

contexts, countries, and samples (e.g., Aluja et al., 2016; Aslanidou, Petrides, & Stogiannidou, 2018; Gökçen, Furnham, Mavroveli, & Petrides, 2014; Li, Pérez-Díaz, Mao, & Petrides, 2018; Perazzo et al., 2020). However, to our knowledge, the psychometric properties of the instrument have not yet been scrutinised in any Middle Eastern country.

The present study

Culture plays a pivotal role in influencing emotion-related behaviours and values. The aim of the present study is to investigate the psychometric properties of the English TEIQue in a Lebanese sample by comparing its internal structure to that obtained from a comparable UK sample, as well as to the a priori UK factors derived from the instrument's original factor analysis (Petrides, 2009a). A secondary aim is to investigate differences between and within the two countries as well as any gender differences. Some studies have looked at trait EI in Lebanese samples (e.g., Sanchez-Ruiz & El Khoury, 2020; Sanchez-Ruiz, El-Jor, Kharma, Bassil, & Zeeni, 2019), but there is need to validate the tool to continue its utilisation in psychological assessment and research and ultimately to help expand the nomological network of trait EI in the Middle East. This study is the first to validate the TEIQue as a measure of trait EI in the Arab world in general, and in Lebanon, in particular.

METHOD

Participants

In both Lebanon and the UK, participants were pooled using convenience sampling from introductory courses offered at university to all students, regardless of major. In Lebanon, the sample consisted of 342 Lebanese undergraduates (232 females, 107 males, and 3 unreported), aged between 18 and 24 ($M = 19.76$, $SD = 1.85$). In the UK, the sample consisted of 187 undergraduate university students (130 females, 56 males, and 1 unreported) from 17 to 30 years of age ($M = 20.49$ years, $SD = 1.71$). Most participants in this sample were White-British. In both countries, students were enrolled in arts, sciences, and humanities majors, thus representing a good cross-sectional sample of university students.

Measures

TEIQue (v.1.50; Petrides, 2009a): The TEIQue consists of 153 items that measure global trait EI and 15 distinct facets (as described in Table 1) grouped into four broad factors, namely Well-being, Self-control, Emotionality and Sociability. The self-motivation and adaptability facets feed directly into the global trait EI score and are

Table 2
Descriptive statistics for the TEIQue facet, factor, and global scores, along with alpha reliabilities and country differences in the Lebanese and UK samples

	Lebanese sample (n = 342)			UK sample (n = 187)			Lebanese versus UK sample	
	M	*SD*	*α*	*M*	*SD*	*α*	*t*	*d*
Self-esteem	5.04	.81	.76	4.54	.91	.84	6.50∗∗∗	.59
Emotion expression	4.30	1.24	.87	4.42	1.15	.86	−1.16	−.10
Self-motivation	4.62	.74	.61	4.53	.90	.74	1.31	.11
Emotion regulation	4.07	.86	.75	4.16	.83	.78	−1.07	−.11
Happiness	5.35	1.07	.87	5.45	1.09	.91	−1.06	−.09
Empathy	5.10	.77	.67	5.14	.86	.80	−.61	−.05
Social awareness	5.04	.81	.77	4.75	.92	.84	3.72∗∗∗	.34
Impulse control	4.31	.98	.76	4.34	.95	.78	−.35	−.03
Emotion perception	4.83	.82	.70	4.65	.89	.80	2.23∗	.21
Stress management	4.11	.99	.78	4.31	.98	.82	−2.22∗	−.20
Emotion management	5.18	.82	.73	4.69	.83	.73	6.52∗∗∗	.60
Optimism	4.95	1.01	.80	5.21	1.13	.88	−2.70∗∗	−.25
Relationships	5.15	.77	.56	5.37	.84	.71	−3.08∗∗	−.28
Adaptability	4.31	.79	.64	4.35	.87	.78	−.59	−.05
Assertiveness	5.04	.85	.70	4.60	.91	.76	5.57∗∗∗	.51
Well-being	5.11	.82	.81	5.07	.91	.83	.58	.05
Self-control	4.16	.78	.75	4.27	.70	.64	−1.53	−.15
Emotionality	4.84	.65	.68	4.90	.75	.81	−.89	−.09
Sociability	5.09	.68	.78	4.68	.73	.77	6.34∗∗∗	.59
Global trait EI	4.76	.51	.86	4.70	.57	.88	1.19	.11

Note: Factors are shown in boldface. ∗ $p < .05$. ∗∗ $p < .01$. ∗∗∗ $p < .001$.

not encompassed by any of these factors. Items are rated on a 7-point Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The TEIQue scores have shown excellent psychometric properties (e.g., Petrides, 2009b). Cronbach alphas are presented in Table 2.

Procedure

The study was approved by the Institutional Review Board of ethics at the Lebanese American University, Lebanon, and the Imperial College Research Ethics Committee, Imperial College of London, UK. In both Lebanon and the UK, after obtaining ethical approval from the ethics committees at the relevant institutions, the first two authors recruited participants from regular classes or through email or advertisement. The survey was identical for both countries and was administered in English, as this was the official language of instruction at the targeted universities. Prior to completing a pen-and-paper version of the instrument, students read and signed an informed consent where they were reassured that their data would be kept confidential and that they could withdraw at any point during the study without giving a reason. The data were anonymous, and students only received feedback upon request by providing their email address. The testing time was approximately 30 minutes.

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual adult participants included in the study; assent was obtained from children.

Statistical analyses

Data were analysed using the Statistical Package for Social Sciences (SPSS), version 26, and R 3.6.1. First, descriptive statistics of the facets and factors were generated and Cronbach alphas were calculated as a measure of the internal consistency of the scores. Second, intercorrelations between the TEIQue factors and facets for both countries were calculated, as well as the intercorrelations between the TEIQue factors of the current samples and the a priori UK factors in order to investigate the overlap. Third, in order to evaluate the factor structure of the TEIQue, its facets were subjected to a principal components analysis. Fourth, the Tucker's congruence coefficient was calculated in order to test the degree of similarity between the factors in both samples. Finally, independent sample *t* tests were performed to compare the overall, factor and facet scores between and within the two countries (including gender comparisons).

RESULTS

Descriptive statistics and internal consistencies

Descriptive statistics and internal consistencies of the trait EI facets and factors are presented in Table 2. With respect

to internal consistency, it was generally satisfactory at the global, factor and facet levels of the TEIQue. Among the 15 facets, 11 for the Lebanese data and 14 for the UK data had acceptable-to-excellent reliability values (ranging from .70 to .87 and from .71 to .91, respectively). It is worth noting that those facets with alpha coefficients below .70 in the Lebanese sample (e.g., relationships, adaptability and self-motivation) have shown similar coefficients in other samples (Aluja et al., 2016). Reliabilities were slightly higher in the UK sample. Specifically, the internal consistencies of self-motivation (Lebanon: $\alpha = .61$; UK: $\alpha = .74$), empathy (Lebanon: $\alpha = .66$; UK: $\alpha = .80$), relationships (Lebanon: $\alpha = .56$; UK: $\alpha = .71$) and adaptability (Lebanon: $\alpha = .64$; UK: $\alpha = .77$) were lower for the Lebanese data, while the happiness facet reached particularly high alpha values in both the UK and Lebanese data ($\alpha = .90$ and $\alpha = .87$, respectively). At the factor level though, a lower alpha was observed in the UK data for Self-control (UK: $\alpha = .63$; Lebanon: $\alpha = .75$), while the opposite was true for Emotionality (UK: $\alpha = .80$; Lebanon: $\alpha = .67$). The internal consistency of the global TEIQue score was .86 and .88 in Lebanon and the UK, respectively.

Intercorrelations and factor analysis by country

The matrix of intercorrelations among the TEIQue facets for the Lebanese and English samples in Table 3 shows positive (and significant for the most part) correlations among TEIQue facets in both samples. These correlations ranged between .44 and .77 (average: .58) for the Lebanese data, and from .41 to .61 (average: .61) for the UK data. Intercorrelations among the four factors were all significant and ranged between .22 and .49 (average: .37) for the Lebanese data, and between .31 and .53 (average: .43) for the UK data.

In order to evaluate the factor structure of the Lebanese TEIQue, 13 facets were subjected to a principal components analysis in the total sample. Two of the facets (i.e., self-motivation and adaptation) were excluded from the analysis, as in previous research (Aluja et al., 2016) because they do not load on any particular factor in the original version of the test. Based on the Kaiser eigenvalue criterion ($k > 1$) and scree plot, four factors were extracted via Principal Axis Factoring and rotated to simple structure via Promax rotation with Kaiser normalisation. The Kaiser–Meyer–Olkin measure of sample adequacy was .79. The Bartlett's test of sphericity was used to examine the appropriateness of the factor analysis. The approximate χ^2 value was 1791.348 (df: 78, $p < .001$). The four obtained factors explained 56.27% of the variance. Table 4 presents the factor loadings for this solution. The pattern matrix resembles the original TEIQue factor structure with only self-esteem loading more strongly on Sociability (.49) than its keyed factor of Well-being (.37).

The same solution was applied to the UK data, using principal axis factoring followed by Promax rotation with Kaiser normalisation, yielding a Kaiser–Meyer–Oklin value of .82 and a Bartlett's sphericity value χ^2 1147.620 (df: 78, $p < .001$). The four obtained factors explained 60.31% of variance in the UK sample. Again, a factor structure similar to the original British structure was observed with only two non-keyed loadings: Self-esteem, which loaded more strongly on Sociability (.52) than Well-being (.27), as was the case in the Lebanese sample, and impulse control, which loaded more strongly on Emotionality (.45) than Self-control (.37). These cross-loadings are a direct result of the nature of trait EI as a unitary, multifaceted construct tapping into numerous overlapping affect-laden variables. Similar values were found for the UK sample in terms of factor loadings (see Table 4), which are fully in line with the relevant published literature (see Petrides, 2009a).

The a priori factors obtained from the original factor analysis of the TEIQue in the UK were correlated against the factors obtained from the Lebanese and UK data in this study (see Table 5). Results showed correlations mostly exceeding .90 for both countries (Well-being: .95 Lebanon, .97 UK; Self-control: .96 Lebanon, .90 UK; Emotionality: .96 Lebanon, .98 UK; Sociability: .97 Lebanon, .96 UK) and suggesting strong practical convergence between the two factor structures.

In conclusion, the factor analyses jointly indicated that a four-factor solution is appropriate for the current Lebanese adaptation of the TEIQue in university students.

Differences between Lebanon and the UK

A series of t tests (see Table 2) showed some significant differences across the TEIQue facet and factor scores by country. Specifically, the Lebanese participants scored higher than their UK counterparts on the Sociability factor ($d = .59$), and on the self-esteem ($d = .59$), social awareness ($d = .34$), emotion perception ($d = .21$) and assertiveness ($d = .51$) facets, as shown in Table 2. Higher scores were obtained by the UK participants on stress management ($d = .20$), optimism ($d = .25$) and relationships ($d = .28$).

Culture-specific gender differences

Further t tests (see Table 6) showed significant differences across the TEIQue facet and factor scores with respect to gender. Lebanese males scored higher than Lebanese females on the emotion regulation ($d = .34$), emotion perception ($d = .24$) and stress management ($d = .38$) facets, as well as on the Self-control factor ($d = .38$). Lebanese females scored higher than Lebanese males on the happiness ($d = .39$) and relationships ($d = .40$) facets in addition to the Well-being factor ($d = .23$). On the

Table 3
Intercorrelations among the TEIQue facets, factors, and global scores in the Lebanese and UK samples

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Self-esteem	–	.32	.44	.22	.51	.24	.52	.27	.41	.34	.40	.50	.30	.34	.50	.75	.34	.44	.57	.72
2. Emotion expression	.29	–	.18	.02	.27	.24	.38	.11*	.51	.11*	.24	.24	.37	.24	.20	.32	.10	.81	.33	.54
3. Self-motivation	.42	.20**	–	.13*	.38	.15**	.35	.28	.29	.25	.24	.44	.19	.31	.36	.49	.27	.27	.38	.56
4. Emotion regulation	.36	.16*	.16*	–	.03	.21	.06	.47	.22	.64	.13*	.17	.09	.31	.13*	.16**	.85	.16**	.13*	.44
5. Happiness	.49	.34	.44	.21**	–	.15**	.30	.12*	.20	.27	.13*	.75	.45	.27	.18	.90	.18	.37	.25	.60
6. Empathy	.23	.42	.37	.16*	.46	–	.45	.18	.43	.22	.39	.20	.35	.26	.22	.22	.25	.64	.42	.52
7. Social awareness	.61	.46	.30	.26	.47	.43	–	.15**	.47	.21	.58	.33	.29	.36	.56	.43	.18	.54	.86	.68
8. **Impulse Control**	.18*	.23	.41	.38	.08	.24	.11	–	.38	.42	.15**	.21	.28	.19	.23	.22	.78	.31	.22	.51
9. Emotion perception	.40	.60	.31	.18*	.36	.53	.48	.36	–	.32	.42	.28	.29	.20	.29	.34	.38	.76	.47	.66
10. Stress management	.42	.23**	.15*	.59	.37	.15*	.41	.18*	.18*	–	.18	.40	.24	.42	.09	.39	.84	.29	.19	.59
11. Emotion management	.49	.29	.18*	.20**	.34	.37	.67	.03	.37	.31	–	.18	.18	.25	.47	.26	.19	.41	.82	.55
12. Optimism	.57	.30	.40	.29	.80	.41	.49	.07	.33	.39	.32	–	.35	.40	.24	.90	.32	.36	.30	.67
13. Relationships	.33	.55	.42	.28	.53	.56	.39	.31	.46	.36	.21**	.46	–	.30	.10	.43	.25	.66	.23	.55
14. Adaptability	.32	.28	.23	.36	.48	.31	.32	.05	.21**	.37	.34	.48	.33	–	.25	.39	.37	.34	.34	.58
15. Assertiveness	.43	.22**	.29	.08	.15*	.02	.51	.16*	.25	.17*	.41	.15*	.04	.07	–	.34	.19	.28	.82	.54
16. **Well-being**	.77	.36	.48	.32	.90	.43	.60	.12	.41	.45	.43	.92	.51	.50	.27	–	.32	.45	.42	.77
17. **Self-control**	.42	.27	.32	.84	.29	.24	.34	.69	.32	.78	.24	.33	.42	.34	.18*	.39	–	.31	.22	.63
18. **Emotionality**	.39	.84	.39	.24	.51	.76	.55	.35	.81	.28	.38	.46	.79	.35	.17*	.53	.38	–	.49	.77
19. **Sociability**	.62	.39	.32	.21**	.39	.33	.88	.13	.44	.36	.83	.39	.26	.29	.78	.52	.31	.45	–	.71
20. **Global trait EI**	.71	.62	.58	.50	.73	.62	.76	.41	.66	.58	.59	.72	.68	.56	.43	.83	.65	.80	.72	–

Note: Lebanese data are above the diagonal and UK data are below the diagonal. Factors are shown in boldface. * $p < .05$. ** $p < .01$; correlations significant at the level $p < .001$ are in boldface.

Table 4
Lebanese and UK TEIQue factor structures after principal axis analysis and Promax rotation

	Lebanese sample				UK sample			
	1	*2*	*3*	*4*	*1*	*2*	*3*	*4*
Emotionality								
Emotion perception	.67	.12	−.11	.15	.76	.22	−.12	−.05
Emotion expression	.65	−.02	.07	−.14	.67	.12	−.04	−.04
Relationships	.55	−.20	.29	.02	.64	−.23	.30	.13
Empathy	.47	.14	−.10	.09	.65	−.07	.23	−.09
Sociability								
Social awareness	.24	.68	.04	−.12	.16	.74	.12	−.02
Emotion management	.16	.64	−.13	−.01	.06	.67	.06	−.04
Assertiveness	−.20	.84	.02	−.00	−.05	.76	−.20	−.01
Well-being								
Self-esteem	−.02	.50	.37	.11	−.05	.52	.28	.18
Happiness	.02	−.05	.99	−.10	.08	−.05	.89	−.07
Optimism	−.01	.07	.74	.12	−.04	.01	.89	.03
Self-control								
Emotion regulation	−.12	−.00	−.10	.93	−.01	−.05	−.04	.96
Stress management	.04	−.07	.18	.72	−.09	.14	.22	.54
Impulse control	.16	.01	−.02	.52	.45	−.05	−.28	.38
Variance explained	31.93	10.28	9.38	4.70	37.04	8.26	8.10	6.93

Note: Factors are shown in boldface; facets are shown in italics.

Table 5
Zero-order correlations between the Lebanese and UK TEIQue factor scores obtained in the current factor analyses versus via the a priori scoring key

		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Well-being	–	**.32**	**.45**	**.42**	**.95**	**.36**	**.54**	**.53**
2	Self-control	**.39**	–	**.31**	.22	.28	**.96**	**.39**	**.31**
3	Emotionality	**.53**	**.38**	–	**.49**	**.42**	**.35**	**.95**	**.57**
4	Sociability	**.52**	**.31**	**.45**	–	**.31**	.26	**.64**	**.97**
5	A priori well-being	**.97**	**.38**	**.57**	**.49**	–	.29	**.49**	**.39**
6	A priori self-control	**.44**	**.90**	**.33**	**.31**	**.43**	–	**.41**	**.37**
7	A priori emotionality	**.55**	**.45**	**.98**	**.49**	**.59**	**.38**	–	**.72**
8	A priori sociability	**.64**	**.38**	**.49**	**.96**	**.58**	**.38**	**.54**	–

Note: Lebanese data are above the diagonal and UK data are below the diagonal. Correlations significant at the level *p* < .001 are in boldface.

other hand, UK males scored higher than UK females on the emotion regulation (*d* = .48) and stress management (*d* = .52) facets, as well as on the Self-control factor (*d* = .40). UK females scored higher than UK males on the self-motivation (*d* = .45), happiness (*d* = .48), empathy (*d* = .54) and relationships (*d* = .40) facets and, additionally, on the Emotionality factor (*d* = .40).

DISCUSSION

Previous research has often generalised Western findings in psychological testing to other cultures. However, examining the factor structure and internal consistency of psychometric instruments, such as the TEIQue, in different countries remains an essential task, as the cultural context plays a key role in influencing behaviours and values regarding emotions and emotional responses to situations (Boiger & Mesquita, 2012). For this reason, this study

investigated the psychometric properties of the TEIQue in a Lebanese sample, comparing its structure and means with those obtained from a UK sample. Differences between the two countries as well as culture-specific gender differences were observed for many TEIQue factors and facets.

Internal consistencies

Overall, internal consistencies for the global, factor and facet scores across samples were satisfactory and similar to those obtained in previous research. The four facets with alpha coefficients below .70 in the Lebanese sample are self-motivation, empathy, adaptability and relationships (from highest to lowest). These facets had similar coefficients in other samples (e.g., Aluja et al., 2016; Chirumbolo, Picconi, Morelli, & Petrides, 2019; Martskvishvili, Arutinov, & Mestvirishvili, 2013). The

Table 6
Descriptive statistics for the gender differences in the TEIQue facet, factor and global scores in Lebanese and UK samples

| | Lebanese sample | | | | | | UK Sample | | | | | |
| | Males (n = 107) | | Females (n = 232) | | | | Males (n = 56) | | Females (n = 130) | | | |
	M	SD	M	SD	t	d	M	SD	M	SD	t	d
Self-esteem	5.05	.82	5.04	.80	.19	.01	4.71	.86	4.46	.93	1.73	.27
Emotion expression	4.31	1.10	4.29	1.30	.17	.01	4.26	1.01	4.50	1.21	1.27	.18
Self-motivation	4.64	.70	4.61	.74	.41	.04	4.25	.90	4.65	.87	−2.85**	−.45
Emotion regulation	4.28	.89	3.99	.84	2.85**	.34	4.43	.74	4.04	.84	3.02**	.48
Happiness	5.07	1.14	5.48	1.01	−3.32**	−.39	5.09	1.28	5.61	.97	−3.07**	−.48
Empathy	4.99	.77	5.14	.75	−1.76	−.19	4.83	.85	5.28	.83	−3.37**	−.54
Social awareness	5.11	.77	5.01	.83	1.06	.12	4.75	.85	4.74	.92	.08	.01
Impulse control	4.46	1.08	4.24	.94	1.88	.22	4.31	.89	4.36	.99	−.29	−.06
Emotion perception	4.95	.79	4.76	.81	2.02*	.24	4.54	.86	4.71	.90	−1.18	−.19
Stress management	4.35	.99	3.98	.98	3.22**	.38	4.64	.96	4.16	.96	3.17**	.52
Emotion management	5.25	.80	5.15	.82	1.08	.12	4.82	.57	4.64	.92	1.31	.21
Optimism	4.81	.92	5.01	1.05	−1.67	−.19	5.30	1.10	5.01	1.19	1.58	.24
Relationships	4.94	.77	5.24	.75	−3.33**	−.40	5.14	.79	5.47	.85	−2.42*	−.40
Adaptability	4.39	.72	4.27	.82	1.24	.15	4.39	.93	4.34	.84	.39	.05
Assertiveness	5.18	.76	4.98	.88	1.96	.23	4.74	.88	4.53	.92	1.41	.23
Well-being	4.98	.82	5.17	.82	−2.04*	−.23	4.94	.99	5.12	.87	−1.28	−.19
Self-control	4.36	.82	4.07	.74	3.23**	.38	4.46	.62	4.18	.72	2.50*	.40
Emotionality	4.80	.61	4.86	.67	−.77	−.09	4.69	.67	4.99	.77	−2.48*	−.40
Sociability	5.18	.65	5.05	.70	1.65	.19	4.77	.66	4.64	.76	1.11	.17
Global trait EI	4.79	.50	4.75	.51	.66	.08	4.66	.56	4.72	.58	−.62	−.10

Note: Factors are shown in boldface. * $p < .05$. ** $p < .01$.

relationships facet specifically is the only facet with a low reliability score, however, this has also been observed in many other countries, such as Italy (Chirumbolo et al., 2019), France (Mikolajczak, Luminet, Leroy, & Roy, 2007), Germany (Freudenthaler et al., 2008), Georgia (Martskvishvili et al., 2013) among others. As for the factors, the alpha for Self-control was lower in the UK than Lebanon, and the opposite applied to Emotionality. This has not been previously observed in the UK (Petrides, 2009a), although a similar finding was reported in Italy ($\alpha = .69$; Chirumbolo et al., 2019). Regarding Emotionality, a similar value was observed in Georgia ($\alpha = .69$; Martskvishvili et al., 2013). Nevertheless, further investigation is still required.

Intercorrelations and factor analyses

The TEIQue factors and facets showed significant intercorrelations (see Table 3), consistent with their theoretical rationale and structure. The TEIQue has been developed to provide comprehensive coverage of the sampling domain of trait EI (Petrides, 2009b). Based on our findings, all facets had high loadings only on their keyed factors, with the exception of self-esteem, which loaded higher on Sociability than Well-being in both the Lebanese and UK datasets and "impulse control," which loaded higher on Emotionality than Self-control in the UK sample only. Congruence coefficients between the two samples were excellent. This indicates that the structure

of the personality traits within the individuals of both samples are very similar, despite any cultural differences that may influence how the traits manifest (Mikolajczak, Luminet, et al., 2007). Overall, these findings support the cross-cultural stability of the TEIQue factor structure, which has been consistently replicated in many countries around the world (e.g., Chirumbolo et al., 2019; Mikolajczak, Luminet, et al., 2007; Petrides, 2009b).

Differences between Lebanon and the UK

Cross-cultural research has shown that certain trait EI factors and facets, such as emotional expression and regulation, may vary across Western and Eastern cultures. This is often attributed to the individualistic versus collectivistic (I-C) nature of the cultures studied (e.g., Çelîk & Denîz, 2008). Unlike the UK, which is more individualistic (Hofstede, Hofstede, & Minkov, 2010), recent research has shown that Lebanon has mixed I-C due to the diverse background of the country (Ayyash-Abdo, 2001; Dirani, 2008). Moreover, according to Sagie and Schwartz (2000), 10 universal value types exist, which are beliefs that act as guiding principles that can have psychological outcomes (Sagie & Schwartz, 2000), including the ways in which emotion-related traits are expressed. Despite the universality of these values, Schwartz (1992, 1994) acknowledged their differential prevalence in each culture.

The results of the present study showed that Lebanese participants scored higher than UK participants on the factor of Sociability and the emotion perception facet of Emotionality, which might reflect Lebanon's collectivistic tendencies that promote inclusiveness and positive social interactions, which are necessary for maintaining harmony and strong social ties within groups (Hofstede, 2011). The Lebanese sample also scored higher on the self-esteem facet, which reflects Lebanon's more individualistic tendencies that contribute to positive self-relevant information (e.g., Falk, Heine, Yuki, & Takemura, 2009). This may also be due to the predominant authoritative parenting style in Lebanon (followed by the permissive style) found in previous studies (Dwairy et al., 2006). This means that although efforts are made at a fair exercise of parental control, parents also encourage the autonomy of the child and tend to avoid confrontation while displaying higher than average levels of warmth, support and nurturance.

Compared to the Lebanese sample, UK participants scored higher on the facets of optimism, relationships and stress management. The lower score on optimism in Lebanon may be due to its political insecurity and youth's perception of a bleak future for themselves (Dibeh, Fakih, & Marrouch, 2018). This finding can also be explained by the UK's high score on the indulgence versus restraint cultural dimension, described by Hofstede et al. (2010) as the degree to which cultures embrace the enjoyment of life, which, according to this author, is associated with optimism. The higher scores on relationships in the UK could be linked to Baumgarte's (2016) notion that "idealists," associated with individualistic cultures, tend to hold their closest friends in unrealistic positive regard and rate their friendships higher, while in collectivistic societies, individuals are more likely to be "realists" who are more critical and uninhibited when evaluating their friendships and rating their relationships in surveys.

With respect to stress management, a tentative explanation for UK participants scoring higher than their Lebanese counterparts could be the former's lower scores on Hofstede's cultural dimension of uncertainty avoidance (Hofstede et al., 2010). This dimension is concerned with a culture's "tolerance for ambiguity," where cultures that score high in this dimension experience lower stress, higher self-control and are more comfortable with unstructured and uncertain situations (Hofstede et al., 2010).

Culture-specific differences

The results of the present study revealed gender differences in scores in both Lebanon and the UK. Previous research has shown conflicting findings (e.g., Chirumbolo et al., 2019; Petrides, 2009b), which can be explained by the fact that males and females tend to have similar global trait EI scores but differ at the factor and facet levels, as in the case of Aluja et al. (2016).

In the present study, Lebanese and UK males scored higher than Lebanese and UK females, respectively, on the emotion regulation and stress management facets as well as on the Self-control factor. This accords well with the literature on male advantages in emotion control, as males are traditionally expected by society to "hide" their emotions; consequently, they report better emotion and stress management skills (e.g., McKinley et al., 2014). In contrast, Lebanese and UK females scored higher than male peers in the relationships and happiness facets. There is evidence that close relationships are crucial for females, who are also more meticulous than males in maintaining them (e.g., Meshkat & Nejati, 2017). As for happiness, the rationale behind females' higher happiness scores is unclear, though in line with previous studies (e.g., Zweig, 2015). However, due to the small to medium effect size and the limited male sample size in the UK, future research is warranted.

In Lebanon, males scored higher than females on emotion perception, and females scored higher than males on the Well-being factor. The finding that Lebanese males scored higher than their female counterparts on emotion perception contradicts previous literature (Chirumbolo et al., 2019; Petrides, 2009b). The finding that Lebanese females scored higher than Lebanese males on the Well-being factor also contradicts the findings by Chirumbolo et al. (2019). These conflicting findings might also be related to the small effect size of the differences and require further investigation. As for the UK, British females scored higher than British males on the self-motivation and empathy facets as well as the Emotionality factor, which is consistent with previous literature (Chirumbolo et al., 2019; Petrides, 2009b).

Limitations and recommendations for future research

One of the limitations of the present study concerns the relatively small samples that also consisted entirely of undergraduate university students, which limits the generalisability of the results. Future studies can benefit from administering the TEIQue and investigating its psychometric properties in more representative samples. We conducted this research with the English version of the TEIQue because a large part of the population in Lebanon, especially youth between 15 and 28 years speaks English in addition to Arabic (the official language) and French (see UNSD report; Rio + 20, 2012). Furthermore, approximately 80% of universities in Lebanon use English as the language of instruction and the sample for this study was pooled exclusively from English-speaking universities, which facilitates comparisons with the UK data by limiting the influence of language. Nevertheless, the validation

of the Arabic version of the TEIQue in Lebanon remains crucial and is currently ongoing (Sanchez-Ruiz, Abi-Habib, Tohme, Nasser, & Petrides, in progress). In addition, despite the observed culture-specific differences, the UK male sample is not large enough to allow strong conclusions. These differences ought to be replicated and considered in the context of larger studies, including cross-cultural meta-analyses, focusing explicitly on the question of gender differences in trait EI.

Overall, the psychometric properties of the TEIQue were sufficiently robust in both of the Lebanese and UK samples and the original factor structure was replicated, in line with other studies. Alpha coefficients across both samples were satisfactory and similar to those obtained in previous research, and there was also strong evidence of congruence. The findings specifically indicate that the English version of the TEIQue can be recommended for research and professional use in English-speaking populations in Lebanon until the Arabic adaptation becomes widely available. More broadly, they add to the evidence base supporting the utility and efficacy of the TEIQue as the dedicated and prime operationalisation vehicle for trait EI theory.

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