

Reliability and construct validity of factors underlying the emotional intelligence of Iranian EFL teachers

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ABSTRACT

The 133-item Emotional Quotient Inventory (EQ-i) designed by Bar-On (1997) and translated by Dehshiry (2003) was revised and modified by removing the response validity items, changing reverse indicators into positively worded statements and revising the remaining 117 Persian indicators on the basis of schema theory. It was administered to 669 instructors most of whom were teaching English as a foreign language (EFL) in national branches of Iran Language Institute in 15 cities. The application of the Principal Axis Factoring to the data and rotating the extracted factors via Varimax with Kaiser Normalization yielded 15 latent variables (LVs) called Humanistic, Self-Satisfying, Self-Confident, Self-Aware, Self-Controlled, Research-Oriented, Content, Sociable, Empathetic, Tolerant, Flexible, Realistic, Independent, Emotional and Happy in this study. Not only did the modified Persian EQ-I proved to be more reliable than its original version, but also its thirteen LVs reached very high and acceptable levels of reliability. With the exception of the last, all the LVs also correlated significantly with each other and thus established the EI as a multifactorial construct whose constituting LVs are closely related to each other. The findings question correlating the so-called competences of EI and offer employing the factorially valid LVs as the best factors to explore the relationship between EI and variables involved in teaching and learning EFL.

Keywords: emotional intelligence, competences, components, EFL teaching

1. Introduction

As a trait emotional intelligence (EI) is defined in terms of “an array of emotional and social abilities, competencies and skills that enable individuals to cope with daily demands and be more effective in their personal and social life” (Bar-On *et al.*, 2003, p. 1790). Although a fairly large number of self-report questionnaires have been developed to measure the EI, e.g., Emotional Competence Inventory (Sala, 2002), Schutte Self Report Index (Schutte *et al.* 1998) and Trait Emotional Intelligence (Petrides, & Furnham, 2003), the Emotional Quotient Inventory (EQ-I) designed by Bar-On (1997) has been used widely by a number of researchers in Iran to explore the relationship between EI and various variables involved in teaching and learning English as a foreign language (EFL).

While Motallebzadeh (2009), for example, investigated whether the EI, reading comprehension and structural ability were significantly related to each other, Pishghadam and Tabataba’ian (2011) examined whether “people with different levels of EI performed differently on different test formats” (p.1). The EI has also been studied in relation to personality (Pishghadam & Sahebjam, 2012), teacher burnout (Pishghadam & Sahebjam, 2012; Vaezi & Fallah, 2011), academic success (Meshkat, 2011) and achievement (Fahim & Pishghadam (2007). Most studies have employed the short 90-item EQ-I validated in Persian by Samouei (2003). Others have, however, employed its 133-item version (e.g., Ghanizadeh & Moafian 2009; Feizbakhsh, 2010).

According to Bar-On (1997), the EQ-I consists of five competences, i.e., Intrapersonal, Interpersonal, Stress Management, Adaptability, and General Mood. Each competence in turn consists of at least two components. While the Intrapersonal competence, for example, comprises five components, i.e., Self-Regard, Emotional Self-Awareness, Assertiveness, Independence, and Self-Actualization, the Interpersonal drops to three, i.e., Empathy, Social Responsibility, and Interpersonal Relationships, as does the Adaptability competence, i.e., Reality Testing, Flexibility, and Problem Solving. The Stress Management competence; however, consists of two components, i.e., Stress Tolerance and Impulse Control, as does the General Mood competence, i.e., Optimism and Happiness.

The establishment of competences on the basis of factorial components seems to be questionable if not unempirical. For example, Flexibility which is considered to be a component of Adaptability competence is as much related to Interpersonal competence as it is to Stress Management. Establishing close relationships not only with colleagues but also with learners, for example, demands flexibility as does the ability to change one's inappropriate teaching activities as one of the possible causes of emotional disturbance faced in EFL classes. While it is empirical to accept the components as the latent variables (LVs) underlying the EQ-I, subsuming the LVs under five competencies remains questionable in terms of their relation to the LVs extracted. The very confusion produced by establishing subjective competencies might explain why most researchers have not reported correlations between the EQ-I components and the variables they have investigated (e.g., Feizbakhsh, 2010)

Ghanizadeh and Moafian (2009), for example, administered the Persian version of the 133-item EQ-I validated by Dehshiry (2003) and 47-item Characteristics of Successful EFL Teachers (CSEFLT) questionnaire designed by Moafian and Pishghadam (2008) to 89 EFL teachers and their 826 EFL learners in Mashhad, Iran, and reported a relatively high and significant correlation between the EFL teachers' EI and their success i.e., $r = .39, p < .05$, as measured by the CSEFLT. They did not, however, report any correlations between the EQ-I competencies and teacher success. Nor did they report any correlations between the EQ-I components and the CSEFLT and its 12 underlying factors.

Feizbakhsh (2010) replicated Ghanizadeh and Moafian's (2009) study and administered the Persian EQ-I and CSEFLT to 83 teachers and 1461 EFL students in the same city. She also obtained their self-reported scores on English achievement in order to explore the relationship between teachers' EI, success and EFL achievement. Contrary to her expectations she found significant correlations neither between the EI and teacher success nor with the EI and students' English achievement. Feizbakhsh did not, however, report any correlations between the 15 components of the EQ-I and 12 factor of the CSEFLT, implying that she could find no significant correlations.

Khodadady (2010) replicated Moafian and Pishghadam's (2008) study and administered the CSEFLT to 1469 EFL learners who were more homogeneous in terms of their age and educational background. While Moafian and Pishghadam had administered the questionnaire to 250 EFL learners whose majors and/or occupations were not specified and their age ranged from 14 to 36 (mean = 17.07), Khodadady's participants were all high school students whose age ranged between 14 and 19 (mean = 15.82). They were learning EFL in public and private schools and institutes. Instead of 12 factors, he extracted five LVs from the CSEFLT, i.e., Rapport, Fairness, Qualification, Facilitation and Examination.

Khodadady (2012) also replicated Ghanizadeh and Moafian's (2009) study and administered the EQ-I and CSEFLT renamed as CEELT (Characteristics of Effective English Language Teachers) to 1704 EFL learners and their 95 EFL teachers, he found a significant *but* negative relationship between the two measures, i.e., $r = -.05, p < .05$. Khodadady attributed the difference in the findings to Ghanizadeh and Moafian's unacceptable inclusion of "the positive impression (PI) scale, negative impression (NI) scale, and inconsistency index (II)" (p. 2064) in their statistical analyses. According to Bar-On (1997), these two scales and index are inserted to ensure response validity and must not be employed in correlations.

In still another study, Pishghadam (2009) administered the Persian EQ-I (Dehshiry, 2003) to 508 university students majoring in English language, translation and teaching and correlated their responses with their average scores on courses related to reading, listening, speaking and writing skills. (The scores had been collected from the register's office.) Surprisingly, he could not find any significant relationship between the students' EI and their reading and writing achievements. The EI did, however, correlate significantly with listening ($r = .21, p < .05$), speaking ($r = .23, p < .05$), and GPA ($r = .21, p < .05$). Although Pishghadam acknowledges that the EQ-I comprises

five competences and 15 factorial components, he provides his readers only with correlations between the EI competences and achievement scores.

While correlating the 15 factorial components with ability variables such as academic achievement makes sense in that these components underlie whatever abilities the EQ-I measures, doing the same with the five subjective competences falls short of objectivity as hypothesized in this study. Furthermore, the inclusion of seven NI and eight PI and one II indicators just to check response validity seems unwarranted as will be discussed shortly. And finally, 63 items on the EQ-I are *reverse* showing the *lack* of EI. These items were, therefore, changed into positive indicators and revised on the basis of schema theory (Khodadady, 2001) as described in the instrument section of this study. The positive 117-item EQ-I was administered to EFL teachers to find out whether they would load on 15 LVs and whether the items loading acceptably on these LVs belonged to the competences under which the LVs were originally subsumed by Bar-On (1997).

2. Methodology

2.1 Participants

Six hundred ninety six, 499 female and 197 male, EEL teachers as well as three who had not specified their gender took part in the present research project voluntarily. Their age ranged between 19 and 70 (Mean = 33.56, SD = 8.7). While eight teachers had not specified how long they had been teaching the EFL, the teaching experience of the rest ranged from one to 41 years (Mean = 9.97, SD = 6.3). Thirty five (5%) had not mentioned what level they had taught English. Elementary, Intermediate, advanced, Elementary and intermediate, Elementary and Advanced, and Intermediate and advanced levels of English proficiency had; however, been taught by 97 (13.9%), 77 (11%), 13 (1.9%), 131 (18.7%), 6 (.9) and 40 (5.7%), respectively, while 300 (45.9%) had taught all levels. Eight EFL teachers (1.1%) had not mentioned their marital status, 435 (62.2%) were married and 256 (36.6%) were single.

The participants had studied 48 different fields ranging from Accounting (n = 3, .4%) to Water Resources Engineering (n = 1, 0.1%); however, the majority had majored in Teaching English as a Foreign Language (n = 231, 33.0%), English Language and Literature (n = 211, 30.2%) and English Translation (n = 102, 14.6%). The classification of the fields into five major branches showed that the EFL teachers had educational backgrounds in Agriculture (n = 11, 1.6%), Art (n = 5, 0.7%), Basic Sciences (n = 35, 5.0%), Engineering (n = 51, 7.3%), Humanities and Social Sciences (n = 579, 82.8%), and Medical Sciences (n = 10, 1.4%). They were holding High School Diploma (n = 1, 0.1%), Above Diploma (n = 6, 0.9%), BA/BS (n = 345, 49.4%), MA/MS/MD (n = 332, 47.5%) and PhD (n = 12, 1.7%) degrees and spoke in Arabic (n = 2, 0.3%), English (n = 37, 5.3%), Kurdish (n = 74, 10.6%), Lori (n = 1, 0.1%) and Persian (n = 486, 69.5%) as their mother language.

2.2 Instruments

Two measures were employed in this study, i.e., a Demographic Scale and the Emotional Quotient Inventory.

2.2.1 Demographic Scale

The Persian Demographic scale consisted of 11 short answer and multiple choice items dealing with the participants' age, years of teaching English, work place, city, levels of English proficiency taught, gender, marital status, field of study, field branch, degree of education, and mother language. (To limit the scope of the present study, the relationships of these variables with the EI will be explored in a separate study.)

2.2.2 Emotional Quotient Inventory

The Persian 133-item Emotional Quotient Inventory (EQ-I) designed by Bar-On (1997) and translated by Dehshiry (2003) was employed, revised and modified in a number of ways in this study. First, the fifteen items, i.e., 5, 12, 25, 34, 41, 50, 57, 65, 71, 79, 94, 101, 109, 115 and 123, dealing with NI and PI as well as one II items were removed from the Persian EQ-I because no participant was forced to take the questionnaire and therefore there was no necessity to secure response validity. Besides, the present researchers believe that whoever participates in a research project *voluntarily* and spends his valuable time on answering the questions would not deliberately mislead a project especially when s/he stays *anonymous*. Furthermore, removing these items helped shorten the questionnaire and thus save some time and effort in its administration and tabulation of results.

In addition to deleting sixteen NI, PI and II items, the 63 reverse indicators were converted into positive indicators of EI because answering reverse items poses an unreal situation. For example, item 18 in the 133-item EQ-I (item nine in the present 117-item EQ-I) reads, "I'm **unable** to understand the way other people feel".

Educationally speaking these items predispose the respondents to thinking negatively whereas their positive versions sound more normal, i.e., "I am able to understand the way other people feel". This very positive expression of reverse EI indicators has resulted in eliciting the percentages of responses which reflect the respondent's self-evaluation of item 18, as a representative example, more normally, i.e., Never (2%), Seldom (4%), Sometimes (14%), Usually (40%), and Always (39%). (The percentage of all responses are given in Appendix). Besides bringing up positive items indicative of EI existence, tabulating the responses becomes much easier because there is, for example, no need to assign a value of 5 for the negative value of "never true of me".

All the 117-positively worded English items were then analysed in terms of Dehshiry's (2003) Persian translations by employing schema theory (Khodadady, 2001, 2008). The theory views the English words/phrases or schemata as the constituents of EI indicators and focuses on their meanings not only of and by themselves but also in terms of the syntactic, semantic and discoursal relationships they hold with each other. Thus, in the process of revision it was realized that a number of indicators had been translated subjectively. First, Dehshiry had deleted some English schemata in the process. For example, the schema "fairly" employed in the English item "I'm a *fairly* cheerful person" is missing in the Persian translation "FARDE SHADI HASTAM". To comply with the theory, all the missing schemata were restored in the Persian indicators, e.g., FARDE KAMELAN SHADI HASTAM.

Secondly, with the exception of the syntactic schemata "with" and "my", the main semantic schemata of "feel comfortable" and "body" in indicator 89, i.e., "I feel comfortable with my body", had been replaced with the two irrelevant schemata of "satisfied" and "appearance" in Dehshiry's (2003) Persian sentence "AZ ZAHERI KE DARAM RAZI HASTAM" whose back translation reads, "I am satisfied with my appearance". It was translated as "EHSAS MIKONAM BA BADAN VA HEIKAL KHODAM RAHAT HASTAM" by the present researchers. However, when the revised Persian EQ-I was submitted to the authorities in the ILI where most of the respondents taught EFL, they announced that the schemata "BADAN VA HEIKAL" had an inappropriate cultural load and suggested that it be changed to "TANASOB ANDAM" whose rough English equivalent would be "FIT BODY". To avoid any type of cultural misunderstanding their suggested Persian equivalent was adopted in the translation.

Thirdly, not only did Dehshiry (2003) drop some English schemata in the process of translation but also he had changed the meaning of some others. The schemata "weekend" and "enjoy" in item 93, "I enjoy weekends and holidays", for instance, exemplified the first and second cases, respectively, i.e., ROOZHAYEH TATIL RA DOOST DARAM. Its back translation reads, "I like holidays". The missing English schema was restored with the Persian schemata "ROOZHAYE AKHAR HAFTEH" and the English schema "enjoy" was rendered as LAZAT MIBARAM to develop the Persian items as "AZ ROOZHAYE AKHAR HAFTEH VA TATILAT LAZAT MIBARAM".

And finally, due to his possible unfamiliarity with schema theory Dehshiry (2003) has fallen short of looking up several key schemata such as "assertiveness" which comprise items such as "Others think that I lack assertiveness." He has used GHATEIYAT as the best Persian equivalent for "assertiveness" whose back translation can be found among English equivalents provided in Persian to English dictionaries such as *The Yadvereh Persian English Collegiate Dictionary* (Saatchi, 1992), i.e., decisiveness, peremptoriness, cutting effect, trenchancy (p. 1882). As can be seen, none of these four meanings offered for the Persian schema GHATEIYAT mean "assertiveness." However, it must be acknowledged that some English to Persian dictionaries provide synonyms for source schemata whose translation must be based on their discoursal relationships within a given item rather than the translator's subjective choice as stipulated by schema theory. *Farhang Moaser Millennium English-Persian Dictionary* (Haghshenas, Samei, & Entehabi, 2001), for example, does offer GHATEIYAT for "assertiveness" among five other synonyms, i.e., ETEMAD BE NAFAS, JESSARAT, GHODRAT, ESTEHKAM, and GOSSTAKHI (p. 67).

2.3 Procedure

The final version of the 117-positively-worded Persian EQ-I accommodating the schema-based revisions was printed in the ILI main headquarter in Tehran and sent to its branches in fifteen cities in Iran, i.e., Ahvaz, Bablosar, Babol, Esfahan, Ghaemshahr, Karaj, Mashhad, Rasht, Sari, Shiraz, Tabriz, Tehran, Tonakabon, Urmia, and Yazd. The directors of these branches had the EQ-I administered to 626 (89.6%) EFL teachers who accepted to take it voluntarily and anonymously. The completed questionnaires were then sent to the researchers via post. The present researchers also copied enough number of the EQ-I and administered it to 73 participants who taught EFL at high schools (n= 43, 6.2%), Jahad Daneshgahi (n= 17, 2.4%), Vesal (n= 1.1%), Azaran (n= 2, 0.3%), Imam Reza (n= 1, 0.1%), IELTS Club (n= 1, 0.1%), and Khorassan (n= 1, 0.1%) language institutes in Mashhad in person.

2.4 Data Analysis

Each of the 177 EI indicators on the Persian EQ-I was presented as a statement with five choices. The 699 EFL teachers were required to indicate whether it *always*, *usually*, *sometimes*, *seldom* and *never* held true for them. The values of 5, 4, 3, 2 and 1 were then assigned to the choices, respectively, to conduct the statistical analyses. The reliability of the EQ-I was estimated via Cronbach's Alpha. For extracting the LVs underlying the EQ-I the Principal Axis Factoring (PAF) was employed and the extracted LVs were rotated via Varimax with Kaiser Normalization (VKN). For determining the number of LVs to be extracted, the eigenvalues of one and higher were adopted as the main criterion. Furthermore, following Tabachnick and Fidell (2001) only the loadings of 0.32 and higher were considered acceptable because 0.32 explains approximately 10% of overlapping variance with the other indicators in the factor upon which they load. The relationships between LVs were explored by using Pearson Bivariate Correlations. All the descriptive, factorial and inferential statistical analyses were conducted via IBM SPSS Statistics 20 to test the following two hypotheses.

H1. The 117 indicators comprising the EQ-I will load acceptably on 15 LVs corresponding to Bar-On's 15 components.

H2. The LVs extracted in this study will pertain to the competences under which they are subsumed by Bar-On.

H3. The LVs extracted in this study will correlate significantly with each other.

3. Results and Discussion

In order to secure sampling adequacy Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test were run first. The high KMO statistic of .95 was obtained showing that the common-factor model is appropriate because the LVs extracted in the study explain the observed correlations among the variables. According to Kaiser (1974 cited in DiLalla and Dollinger, 2006) KMOs in the .90s are "marvelous" (p. 250). The significant Bartlett's Test of Sphericity ($\chi^2 = 46944.341$, $df = 6786$, $p < .001$) provided further support for the appropriateness of factor analysis and indicated that the correlation matrix was not an identity matrix

Table 2 presents the descriptive statistics for the 117 items along with their initial (I) and extraction communalities (ECs). As can be seen, the skewness indices range from -0.28 (item 83) to -3.61 (item 84), indicating that the items have elicited different responses from the participants as they were designed to. Similarly, the ECs ranged between .26 (item 38) and .77 (item 42). The three items having the lowest ECs, i.e. 38, 27, 34, did not load acceptably on any LVs extracted in this study. (Appendix provides the acceptable loadings of the 117 items and the factors upon which they have loaded.)

Table 2
 Descriptive statistics as well as Initial (I) and Extraction Communalities (ECs) of 117 items

No	M	SD	Skew	Kurt	ICs	ECs	No	M	SD	Skew	Kurt	ICs	ECs
1	3.77	0.93	-1.30	3.09	.417	.363	60	3.87	0.88	-1.35	4.07	.542	.452
2	3.68	0.94	-0.86	1.30	.601	.590	61	4.01	0.88	-1.52	4.58	.580	.507
3	4.42	0.84	-2.25	7.47	.364	.334	62	4.04	0.93	-1.43	3.50	.602	.579
4	3.69	0.86	-0.87	1.96	.585	.550	63	4.03	0.90	-1.18	2.57	.498	.463
5	4.28	0.87	-1.95	6.34	.497	.474	64	3.95	0.98	-1.03	1.46	.578	.514
6	3.67	1.09	-0.66	0.26	.653	.636	65	3.44	0.93	-0.63	0.96	.535	.508
7	3.78	1.02	-0.86	0.87	.530	.565	66	3.62	0.94	-1.10	2.73	.579	.481
8	4.09	0.89	-1.48	4.07	.517	.536	67	3.82	1.14	-1.11	1.12	.401	.344
9	4.10	0.99	-1.50	3.28	.599	.561	68	3.34	1.04	-0.87	1.04	.478	.479
10	4.00	0.89	-1.16	2.45	.651	.624	69	3.53	0.97	-1.08	2.13	.641	.611
11	3.48	0.95	-0.79	1.18	.613	.607	70	3.90	0.91	-1.17	2.71	.578	.519
12	3.50	1.03	-0.62	0.58	.512	.462	71	4.19	0.95	-1.99	5.68	.568	.549
13	3.92	0.98	-0.95	1.30	.551	.471	72	3.29	1.13	-0.41	-0.14	.549	.479
14	4.52	0.71	-2.11	8.24	.536	.508	73	3.48	1.17	-0.86	0.49	.479	.468
15	4.30	0.91	-1.66	3.83	.532	.489	74	3.81	1.06	-1.18	2.05	.535	.472
16	4.03	0.94	-1.92	6.01	.480	.501	75	4.08	0.93	-1.63	4.39	.615	.584
17	3.10	0.98	-0.34	0.22	.394	.356	76	3.49	1.00	-1.18	2.34	.459	.401
18	3.85	0.89	-1.17	3.17	.533	.468	77	3.49	0.96	-0.71	1.11	.636	.655
19	4.04	0.86	-1.25	3.39	.566	.518	78	4.04	0.96	-1.53	3.74	.504	.417
20	4.01	0.97	-1.32	2.84	.555	.507	79	3.98	0.95	-1.43	3.50	.658	.669
21	3.41	1.14	-0.43	-0.22	.596	.579	80	4.58	0.75	-3.15	14.87	.486	.438
22	3.91	0.95	-1.04	1.65	.720	.743	81	3.97	0.96	-1.29	2.67	.723	.701
23	3.88	0.94	-1.12	2.11	.623	.614	82	3.67	1.03	-0.83	1.17	.545	.516
24	3.93	0.93	-1.21	2.41	.453	.407	83	3.15	1.01	-0.28	0.00	.541	.535
25	3.92	0.97	-1.20	2.28	.574	.567	84	4.60	0.82	-3.61	16.57	.648	.633
26	3.95	0.96	-1.09	1.83	.566	.553	85	3.76	0.99	-1.07	2.10	.635	.620
27	4.49	0.97	-2.50	6.96	.376	.301	86	3.76	1.00	-1.18	2.30	.470	.390
28	3.63	0.96	-0.98	1.89	.611	.551	87	4.14	0.93	-1.86	5.59	.650	.645
29	4.08	0.86	-1.36	3.59	.509	.507	88	4.25	0.84	-2.40	9.71	.715	.709
30	3.47	1.00	-0.81	0.77	.569	.515	89	3.66	1.17	-0.97	0.74	.416	.334
31	4.08	0.89	-1.65	5.09	.564	.523	90	3.45	1.08	-0.82	0.77	.669	.672
32	3.88	1.00	-1.10	1.77	.458	.411	91	3.41	1.03	-0.82	1.26	.676	.731
33	3.36	1.11	-0.38	-0.18	.548	.468	92	4.34	0.99	-2.20	6.07	.530	.494
34	3.93	1.03	-1.70	4.33	.405	.302	93	3.81	1.17	-1.24	1.75	.486	.411
35	3.92	1.02	-0.98	1.04	.537	.531	94	3.85	1.02	-1.32	2.80	.646	.633

36	4.41	0.83	-1.93	5.59	.598	.550	95	4.44	0.86	-2.45	8.72	.618	.616
37	3.32	1.10	-0.83	1.17	.389	.312	96	4.00	0.95	-1.40	3.49	.724	.683
38	3.14	0.97	-0.30	0.33	.308	.256	97	4.19	0.96	-1.88	5.31	.743	.733
39	3.92	0.96	-1.44	3.69	.495	.440	98	3.80	1.08	-1.42	2.79	.575	.521
40	4.09	0.94	-1.37	3.01	.620	.617	99	3.98	0.98	-1.36	2.91	.630	.627
41	4.21	0.85	-1.68	5.30	.538	.480	100	4.11	1.01	-1.67	3.81	.688	.654
42	3.92	0.93	-1.11	2.05	.749	.774	101	4.07	0.96	-1.73	4.74	.710	.687
43	3.76	0.98	-1.06	1.98	.556	.512	102	3.81	1.05	-0.99	1.39	.754	.743
44	3.46	1.05	-0.71	0.41	.576	.558	103	4.06	0.88	-1.90	6.70	.668	.651
45	4.11	0.86	-1.51	4.81	.606	.615	104	4.01	1.00	-1.68	4.22	.702	.689
46	3.93	1.02	-1.13	1.93	.651	.609	105	4.56	0.85	-3.07	12.12	.600	.583
47	3.43	0.92	-0.91	1.87	.506	.450	106	4.46	0.92	-2.72	9.59	.528	.509
48	3.81	1.05	-0.98	1.43	.562	.533	107	3.49	1.12	-0.94	1.30	.413	.364
49	4.34	0.88	-2.13	7.00	.472	.390	108	3.08	1.01	-0.59	0.59	.600	.536
50	4.02	0.94	-1.66	4.47	.677	.622	109	4.44	0.93	-2.85	10.25	.554	.459
51	3.31	1.11	-0.54	0.04	.477	.425	110	3.89	0.97	-1.63	4.29	.629	.603
52	3.75	1.07	-1.37	2.65	.518	.478	111	3.61	1.03	-0.95	1.52	.636	.616
53	3.97	0.92	-1.23	2.84	.682	.685	112	3.88	0.85	-1.56	5.32	.640	.597
54	4.29	0.94	-1.89	4.92	.422	.333	113	3.84	1.06	-1.09	1.75	.550	.441
55	3.93	0.94	-1.82	5.64	.571	.571	114	4.01	0.95	-1.70	4.69	.713	.694
56	4.16	0.86	-1.76	5.77	.613	.609	115	3.39	1.10	-0.68	0.45	.720	.745
57	3.40	0.96	-0.64	0.56	.666	.649	116	3.35	1.25	-0.72	-0.02	.439	.379
58	4.19	0.90	-1.63	4.65	.569	.508	117	3.92	0.98	-1.38	3.19	.674	.650
59	3.64	1.01	-0.71	0.84	.597	.596							

The application of the PAF to the data resulted in the extraction of 20 LVs whose eigenvalues were higher than one explaining 53.6 percent of variance in the EQ-I. However, when they were rotated via VKM with 187 iterations, only 15 LVs showed eigenvalues of higher than one explaining 49.99 percent of variance in the scale. This was further supported when the acceptable cross loadings of some items on more than one LV were removed. Item 57, for example, loaded on LV2 (.409), LV5 (.412) and LV10 (.389). Since its loading on LV5 was the highest, its other two cross loadings on LV2 and LV10 were deleted. This very step resulted in the identification of 15 LVs upon which 112 items loaded acceptably. (Items 3, 24, 27, 34, and 38 did not load acceptably on any LV). The results thus *confirmed* the first hypothesis that *the 117 indicators comprising the EQ-I will load acceptably on 15 LVs corresponding to Bar-On's 15 components*.

Table 2 presents the descriptive statistics of the Persian EQ-I and its 15 LVs extracted in this study. As can be seen, the EQ-I is a highly reliable measure of emotional intelligence, i.e., $\alpha = .97$. This alpha reliability coefficient (RC) is much higher than .76 and 0.86 reported by Dehshiry (2003) and Pishghadam (2009), respectively. The RCs of its LVs are also high and range from .95 (LV1) to .52 (LV13). The RCs of LV14 and LV15 could not, However, be estimated because they consisted of only one item.

Table 2
 Descriptive statistics of 15 LVs, their reliability coefficients and Variance (V) explained

No	# of item	Factors	Mean	SD	Skew	Kurt	Alpha	Rotation Sums of Squared Loadings		
								Total	% of V	Cumulative %
1	28	Humanistic	112.55	17.72	-3.65	21.03	0.95	12.562	10.74	10.74
2	30	Self-Satisfying	117.14	16.58	-2.55	15.33	0.93	10.943	9.35	20.09
3	12	Self-Confident	47.74	7.28	-1.92	9.58	0.89	6.669	5.70	25.79
4	10	Self-Aware	36.99	7.10	-0.43	-0.03	0.87	5.179	4.43	30.22
5	7	Self-Controlled	23.58	5.19	-0.46	0.14	0.84	4.092	3.50	33.71
6	5	Research-Oriented	19.70	3.49	-0.91	1.60	0.79	3.322	2.84	36.55
7	4	Content	15.20	3.03	-0.88	1.21	0.81	3.014	2.58	39.13
8	4	Sociable	16.66	2.67	-1.89	7.90	0.72	2.575	2.20	41.33
9	2	Empathetic	7.94	1.65	-1.30	3.81	0.65	2.016	1.72	43.05
10	2	Tolerant	6.61	1.79	-0.45	0.32	0.67	1.806	1.54	44.60
11	2	Flexible	6.90	1.77	-0.51	0.32	0.74	1.526	1.30	45.90
12	2	Realistic	7.26	1.83	-0.58	0.24	0.56	1.332	1.14	47.04
13	2	Independent	7.18	1.52	-0.82	2.32	0.52	1.287	1.10	48.14
14	1	Emotional	4.09	0.89	-1.48	4.07	-	1.134	0.97	49.11
15	1	Happy	3.34	1.04	-0.87	1.04	-	1.032	0.88	49.99
	112	EQ-I	432.89	52.69	-0.92	2.37	0.97			

Table 3 presents the LVS and their constituting indicators comprising Bar-On's (1997) components. As can be seen, out of the 15 LVs, seven consist of indicators contributing to more than one competence and component. For example, 28 items loading on LV1 in this study contributing to Bar-On's 13 components. Among these components, Assertiveness, Empathy, Flexibility, Happiness and Impulse Control belong to the five competences of Intrapersonal, Interpersonal, Adaptability, General Mood and Stress Management, respectively. These results thus disconfirm the *second* hypothesis that *the LVs will pertain to the competences under which they are subsumed*.

Table 4 LVs underlying the EQ-I and their items contributing to Bar-On's (1997) components

No	Name	Bar-On's components and their constituting items
1	Humanistic	Assertiveness (98 and 111), Empathy (87, 105, 109), Flexibility (116), Happiness (93, 106), Impulse Control (103), Independence (95, 107), Interpersonal Relationship (88, 100 and 113), Optimism (94, 96, 117), Problem Solving (104), Reality Testing (86, 99, 112), Self-Actualization (84, 97, 110), Self-Regard (89, 101, 114) and Social responsibility (92),
2	Self-Satisfying	Assertiveness (72), Emotional Self-Awareness (56, 78), Empathy (49, 54, 63), Flexibility (52, 65), Happiness (55), Impulse Control (64, 76), Independence (43 and 82), Interpersonal Relationship (61, 74), Optimism (48, 70), Problem Solving (66, 79), Reality Testing (47, 60), Self-Actualization (45, 58, 71), Self-Regard (50, 62, 75), Social responsibility (67, 80) and Stress Tolerance (69)
3	Self-Confident	Emotional Self-Awareness/ Reality Testing (31), Flexibility (12), Optimism (10, 18, 23), Self-Actualization (5, 19, 32), Self-Regard (22, 36), Social responsibility (41) and Stress Tolerance (4)
4	Self-Aware	Assertiveness (20, 33, 59 and 85), Emotional Self-Awareness (6, 21, 46, and 102), Impulse Control (37) and Interpersonal Relationship (9)
5	Self-Controlled	Impulse Control (11, 51, 90 and 115) and Stress Tolerance (30, 57 and 108)
6	Research-Oriented	Problem Solving (1, 13, 26, 40, and 53)
7	Content	Happiness (2, 42 and 81) and Happiness and Interpersonal Relationship (28)
8	Sociable	Flexibility (25), Happiness (15), Interpersonal Relationship (35), and Social Responsibility (14)
9	Empathetic	Empathy (16 and 39)
10	Tolerant	Stress Tolerance (44 and 83)
11	Flexible	Flexibility (77 and 91).
12	Realistic	Reality Testing (7 and 73)
13	Independent	Independence (17 and 29)
14	Emotional	Emotional Self-Awareness (8)
15	Happy	Happiness (68)

Since seven LVs contained indicators contributing to more than one component they were named differently and called *Humanistic*, *Self-Satisfying*, *Self-Confident*, *Self-Aware*, *Self-Controlled*, *Content*, and *Sociable* in this study. Eight LVs, however, consisted of items contributing to a single component each. With the exception of Problem-Solving which was renamed as *Research-Oriented*, the labels employed by Bar-On (1997) for the last seven LVs were kept. They were, nonetheless, changed into adjectives to describe the EFL teachers' emotional attributes as specifically as possible, i.e., *Empathetic*, *Tolerant*, *Flexible*, *Realistic*, *Independent*, *Emotional* and *Happy*. These results thus show 15 LVs underlie the EFL teachers' EI in Iran. However, the indicators constituting these LVs are different from those established by Bar-On in the west.

Humanistic EFL teachers have good relations with others, enjoy what interests them, and do not cling to others. It is hard for them to see people suffer. They try to get the most out of whatever they enjoy, have a good temper, believe in their ability, feel good about themselves, are happy with the way they look, keep things in the right perspective, are sensitive to the feelings of others, like to have fun, avoid hurting other people's feelings, feel successful before beginning something new, know what they want to do in life, give importance to being a law-abiding citizen, are sociable in people's eyes, think about different ways of solving problems, expect things will turn out all right, pull out of daydreams easily, assert themselves well, stand up for their rights, and keep in touch with friends. *Humanistic* EFL teachers enjoy weekends and holidays, tend not to exaggerate, feel comfortable with their body, are needed by others and adjust themselves easily if they are forced to leave their home.

Self-Satisfying EFL teachers enjoy what they do, feel good about themselves, accept themselves just the way they are, are aware of the way they feel and are happy with the type of person they are. These teachers develop what they enjoy, are motivated to continue even when things get difficult, are able to respect others, get excited about their interests, think of as many approaches as they can to handle situations, are well aware of what happens around them, care about what happens to other people and to themselves. Their friends can tell them intimate things about themselves. They get along well with others, are patient and fun to be with, know how to keep calm in difficult situations, decide on the best solution when solving problems, attach importance to their close relationships with their friends, would stop and help a crying child find his or her parents, even if they had to be somewhere else at the same time. They adjust to new conditions and have strong impulses that are easy to control. *Self-Satisfying* EFL teachers are able to change old habits. People understand the way they think. They hope for the best, are more of a leader than a follower, make decisions on their own, say "no" when they want to and do not break the law even if they can get away with.

Self-Confident EFL teachers' have self-confidence, feel sure of themselves in most situations, believe that they can stay on top of tough situations, have good self-respect, know what they are good at, know how to deal with upsetting problems, and are optimistic about most things they do. It's easy for them to begin new things. *Self-Confident* EFL have accomplished a lot in the past few years. They try to make their life as meaningful as they can. Others find it easy to depend on them and it is easy for them to understand the way they feel.

It is fairly easy for *Self-Aware* EFL teachers not only to express their feelings but also to describe and share them with others. When they are angry with others, they can tell them about it. They can easily tell people what they think and express their intimate feelings. They are also able to express their intimate feelings and ideas to others. If they disagree with someone, they are able to say so. They can show affection and their impulsiveness does not create problems for them.

Self-Controlled EFL teachers do not become angry easily. Neither are they impulsive. They control their anger and can handle stress without getting too nervous. They do not raise their voice in discussions. They do not get anxious because they feel that it's easy for them to control their anxiety.

Research-Oriented EFL teachers stop and think when they face a problem. They like to get an overview of the problem before trying to solve it. They also explore all possibilities before deciding on the best way. Similarly, when they are faced with a difficult situation, they collect all the relevant information and move step by step.

Content EFL teachers are satisfied and happy with their life. It is also easy for them to enjoy their life because they are fairly cheerful persons.

Sociable EFL teacher find it easy to make friends. They make adjustments in general and smile. They like to help people.

Empathetic EFL teachers are not only good at but also able to understand the way other people feel.

Tolerant EFL teachers find it easy to face unpleasant things and they hold up well under stress.

Flexible EFL teachers find it easy to change their ways which applies generally to making changes in their daily life.

Realistic EFL teachers try to see things as they really are, without fantasizing or daydreaming about them. Furthermore, they do not get carried away with their imagination and fantasies.

Independent EFL teachers tend to rely more on their own ideas when they work with others. They also prefer to make decisions themselves.

Emotional EFL teachers are in touch with their emotions. As the fourteenth LV underlying the teachers EI,

Emotional LV correlates the highest with *Self-Confident* LV, i.e., $r = .48, p < .01$, as shown in Table 4. It also correlates significantly with the other thirteen LVs as do the fourteen LVs with each other and thus confirms the third hypothesis that *the LVs extracted in this study will correlate significantly with each other.*

Table 4 Correlations between the LVs underlying the EFL teachers' EI

Factor	EQ-I	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EQ-I	1	.80*	.82*	.80*	.69*	.65*	.62*	.65*	.62*	.45*	.55*	.63*	.48*	.33*	.43*	.42*
1 Humanistic	.80*	1	.47*	.52*	.47*	.50*	.38*	.42*	.42*	.33*	.29*	.53*	.29*	.16*	.27*	.22*
2 Self-Satisfying	.82*	.47*	1	.55*	.49*	.48*	.48*	.51*	.40*	.27*	.56*	.53*	.42*	.19*	.29*	.43*
3 Self-Confident	.80*	.52*	.55*	1	.60*	.45*	.56*	.60*	.62*	.45*	.41*	.43*	.38*	.46*	.48*	.27*
4 Self-Aware	.69*	.47*	.49*	.60*	1	.27*	.37*	.44*	.51*	.34*	.31*	.37*	.24*	.34*	.32*	.18*
5 Self-Controlled	.65*	.50*	.48*	.45*	.27*	1	.47*	.39*	.31*	.22*	.52*	.43*	.38*	.14*	.21*	.41*
9 Research-Oriented	.63*	.38*	.48*	.56*	.37*	.47*	1	.35*	.41*	.35*	.30*	.31*	.43*	.23*	.37*	.27*
7 Content	.65*	.42*	.51*	.60*	.44*	.39*	.35*	1	.53*	.30*	.32*	.38*	.27*	.21*	.29*	.38*
8 Sociable	.62*	.42*	.40*	.62*	.51*	.31*	.41*	.53*	1	.45*	.26*	.28*	.23*	.20*	.37*	.17*
9 Empathetic	.45*	.33*	.27*	.45*	.34*	.22*	.35*	.30*	.45*	1	.13*	.17*	.22*	.19*	.33*	.05
10 Tolerant	.55*	.29*	.56*	.41*	.31*	.52*	.30*	.32*	.26*	.13*	1	.41*	.28*	.20*	.13*	.35*
11 Flexible	.63*	.53*	.53*	.43*	.37*	.43*	.31*	.38*	.28*	.17*	.41*	1	.28*	.14*	.19*	.24*
12 Realistic	.48*	.29*	.42*	.38*	.24*	.38*	.43*	.27*	.23*	.22*	.28*	.28*	1	.13*	.28*	.39*
13 Independent	.33*	.16*	.19*	.46*	.34*	.14*	.23*	.21*	.20*	.19*	.20*	.14*	.13*	1	.26*	.07
14 Emotional	.43*	.27*	.29*	.48*	.32*	.21*	.37*	.29*	.37*	.33*	.13*	.19*	.28*	.26*	1	.12*
15 Happy	.42*	.22*	.43*	.27*	.18*	.41*	.27*	.38*	.17*	.05	.35*	.24*	.39*	.07	.12*	1

And finally, *Happy* EFL teachers do not get depressed. As the fifteenth LV underlying the teachers' EI, being *Happy* correlates the highest with *Self-Satisfying* LV, i.e., $r = .43, p < .01$. As it can be seen in Table 4, *Happy* LV is also the only factor which does not show any significant relationships with *Independent* and *Empathetic* LVs, implying either more local indicators are required to establish such a relationship among these important constructs among EFL teachers in Iran, or independent and empathetic teachers are not usually happy.

4. Conclusions

The 133-item EQ-I developed by Bar-On (1997) and translated into Persian by Dehshiry (2003) was revised on the basis of schema theory and reduced to 117-positively-expressed indicators. It was then administered to 696 EFL teachers in fifteen cities of Iran and their responses were subjected to PAF and rotated via VKN. The results showed 15 LVs underlie the emotional intelligence of EFL teachers, i.e., Humanistic, Self-Satisfying, Self-Confident, Self-Aware, Self-Controlled, Research-Oriented, Content, Sociable, Empathetic, Tolerant, Flexible, Realistic, Independent, Emotional and Happy. Not only did the EQ-I itself but also its 13 underlying LVs show very high and acceptable levels of reliability. Since the constituting indicators of these LVs contribute to several competences established by Bar-On, they question the validity of studies in which the relationship of the EI with variables such as academic achievement is explored on the basis of competences rather than LVs (e.g., Fahim & Pishghadam, 2007; Pishghadam, 2009).

In addition to the unacceptability of employing competences rather than LVs in correlational analyses, the validation of EQ-I with anonymous samples is questioned by the findings of this study. Fahim and Pishghadam (2007), for example, employed Dehshiry's (2003) translation of the EQ-I without specifying with what sample he had validated his Persian EQ-I. The validation of the Persian EQ-I revised, modified and administered in this study shows that with EFL teachers as its sample, the first LV, i.e., Humanistic, consists of 28 indicators whereas none of the 15 components referred to by Fahim and Pishghadam comprises more than 11 indicators. However, similar to Pishghadam (2009), they correlated their participants' GPAs with the EQ-I and its competencies rather than components. Future studies must show what degree of relationship the LVs rather than the logical competencies

established by Bar-On (1997) will reveal with academic achievement and other variables of concern in EFL learning and teaching.

With the exception of Happy LV, the other 14 LVs do correlate significantly with each other and thus confirm the EI as a multifactorial construct whose underlying LVs hold significant relationships with each other. The fairly strong correlations among the LVs are suggested to be built on and utilized in order to address and improve EFL teacher's effectiveness in their classes. Humanistic LV, for example, is strongly related to Flexible LV whereas such a relation is revealed between Self-Confident and Sociable LVs, specifying what type of EFL teachers are more flexible and how closely their sociability relates to their self-confidence factorially. Recent research shows that teachers play a key role in EFL classes where learners have no source other than their teachers to help them learn not only what schemata presented in teaching materials stand for but also the syntactical, semantic and discursal relationships they enter to convey their message (Khodadady & Elahi, 2012; Khodadady, Alavi & Khaghaninezhad, 2011). Future research must show what emotional LVs are more closely related to teacher effectiveness and which explains it most.

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Appendix

Loadings (L) and latent variables (LVs) of EQ-I indicators (I) along with the percentage of their five values, i.e., never (N%), rarely (R%), sometimes (S%), usually (U%) and always (A%) true of me

I	LV	L	N %	R %	S %	U %	A %	I	LV	L	N %	R %	S %	U %	A %
1	6	.450	2	6	20	54	18	60	2	.554	2	3	21	53	21
2	7	.552	2	7	26	48	17	61	2	.528	2	2	15	53	28
3			1	1	6	34	57	62	2	.603	2	4	15	47	33
4	3	.527	1	7	27	51	14	63	2	.545	1	4	16	46	32
5	3	.390	2	1	10	42	46	64	2	.519	2	6	20	41	32
6	4	.718	3	12	26	35	25	65	2	.445	2	12	35	41	10
7	12	.574	2	8	22	42	25	66	2	.483	2	5	32	46	14
8	14	.535	1	3	14	47	34	67	2	.361	5	6	20	38	31
9	4	.399	2	4	14	40	39	68	20	.358	6	11	34	41	9
10	3	.685	1	4	16	48	30	69	2	.490	3	8	30	47	11
11	5	.670	3	10	32	44	10	70	2	.583	1	5	20	49	24
12	3	.461	2	14	30	38	16	71	2	.584	2	3	8	45	41
13	6	.526	2	6	21	40	31	72	2	.377	6	18	31	31	14
14	8	.390	1	0	7	32	61	73	12	.502	7	10	24	40	17
15	8	.478	1	3	11	33	51	74	2	.472	3	5	23	41	27
16	9	.583	3	1	15	52	29	75	2	.587	2	3	13	48	34
17	13	.500	5	21	40	29	6	76	2	.447	4	8	31	47	10
18	3	.561	1	4	23	50	21	77	11	.573	2	12	32	42	12
19	3	.541	1	2	18	48	31	78	2	.540	2	4	14	47	33
20	4	.536	2	4	18	42	34	79	2	.567	2	4	17	47	30
21	4	.675	5	16	29	31	18	80	2	.578	1	0	3	30	66
22	3	.708	2	6	18	46	27	81	7	.653	2	4	17	46	30
23	3	.525	2	7	18	49	24	82	2	.424	3	8	28	40	21
24			2	5	17	49	27	83	10	.528	4	21	37	30	8
25	8	.484	2	6	18	46	29	84	1	.729	2	0	2	26	70
26	6	.617	1	6	18	44	30	85	4	.549	2	6	25	44	22
27			2	3	6	20	69	86	1	.460	3	5	24	47	21
28	7	.400	3	6	30	46	15	87	1	.634	2	2	12	47	37
29	13	.458	1	4	13	50	32	88	1	.738	2	1	5	53	39
30	5	.515	4	11	28	45	11	89	1	.454	6	9	21	39	25
31	3	.336	2	1	15	49	33	90	5	.686	5	12	28	41	14

32	3	.392	2	6	20	43	28	91	11	.598	3	12	33	39	12
33	4	.581	4	18	31	31	16	92	1	.610	2	2	9	30	57
34			3	2	18	47	29	93	1	.482	4	6	22	36	32
35	8	.538	2	8	19	39	32	94	1	.565	3	5	21	45	26
36	3	.548	1	2	8	32	57	95	1	.713	1	1	7	31	59
37	4	.360	5	12	36	35	11	96	1	.655	2	3	18	45	32
38			4	20	41	28	7	97	1	.682	2	2	12	41	43
39	9	.522	2	3	19	48	27	98	1	.498	3	6	19	47	25
40	6	.671	1	4	15	42	38	99	1	.561	2	4	17	45	31
41	3	.387	1	2	11	46	40	100	1	.605	2	4	12	41	40
42	7	.757	2	5	18	48	27	101	1	.642	2	3	14	47	34
43	2	.405	2	7	23	47	21	102	4	.673	2	8	23	38	28
44	10	.486	4	15	25	43	13	103	1	.667	2	1	13	55	29
45	2	.615	1	1	16	48	34	104	1	.597	3	3	15	46	33
46	4	.540	2	6	21	38	33	105	1	.694	2	1	4	24	69
47	2	.433	3	9	36	43	8	106	1	.628	2	1	6	28	63
48	2	.427	3	6	25	37	29	107	1	.446	5	9	33	36	17
49	2	.532	2	1	9	36	52	108	5	.439	6	19	40	31	5
50	2	.605	2	3	13	51	30	109	1	.620	3	0	4	33	60
51	5	.510	6	17	29	36	12	110	1	.611	3	3	17	53	24
52	2	.454	3	7	19	48	22	111	1	.489	3	9	28	42	18
53	6	.542	2	3	19	47	29	112	1	.640	2	2	20	58	19
54	2	.455	2	3	9	35	51	113	1	.488	3	6	24	38	30
55	2	.514	2	2	16	56	24	114	1	.651	2	3	13	52	29
56	2	.595	2	1	12	48	37	115	5	.716	5	14	30	37	14
57	5	.412	3	14	32	43	9	116	1	.333	9	15	22	37	17
58	2	.571	1	2	13	42	41	117	1	.619	3	3	20	46	28
59	4	.513	2	10	29	40	19								