Emotional Intelligence Scale: A Study of Scale Adaptation

Şehri Nur Kayıhan*

Serhat Arslan**

Abstract

The purpose of this study is to adaptation of Emotional Intelligence (EI) scale to the Turkish language. Research was implemented on the 249 high school students. The 3 dimensional models which were consisted of 20 items were found coherent in the confirmatory factor analysis. Internal consistency, item and factor analysis studies were conducted for the aim of examining psychometric features of the scale. The results of reliability of the scale analyses were .83, scale was found reliable. Confirmatory factor analysis' results exhibit that scale's original 3 dimensional models were appropriate for the Turkish sample (x^2=399.55, df=167, RMSEA=.075, NNFI=.90, CFI=.91, IFI=.91, SRMR=.080, GFI=.86). In this case, scale is considered as a reliable and valid instrument in terms of measuring learners' emotional intelligence degree in the education process of learners in Turkey.

Keywords: Emotional intelligence, adaptation, validity, reliability.

Duygusal Zeka Ölçeği: Bir Ölçek Uyarlama Çalışması

Öz

Bu araştırmanın amacı Güney Kore'de Hyuneung Lee ve Yungjung Kwak[1] tarafından 2011'de geliştirilen Duygusal Zeka ölçeğini Türk diline uyarlayarak Türk kültürüne uygulamaktır. Araştırma 249 lise öğrencileri üzerinde uygulanmıştır. 20 maddeden oluşan 3 boyutlu model doğrulayıcı faktör analizinde uyumlu bulunmuştur. Ölçeğin psikometrik özelliklerini incelemek amacıyla iç tutarlılık, madde ve faktör analiz çalışmaları yürütülmüştür. Güvenilirlik analizleri sonucunda ise ölçeğin tümü için Cronbach Alfa katsayısı .83 olarak bulunmuştur. Doğrulayıcı faktör analiz sonuçları ölçeğin 3 boyutlu modelinin Türk örneklemine uygun olduğu bulunmuştur (x^2=399.55, df=167, RMSEA=.075, NNFI=.90, CFI=.91, IFI=.91, SRMR=.080, GFI=.86). Çalışma sonucunda, ölçek Türkiye'deki öğrencilerin eğitim süreçlerindeki duygusal zeka derecelerini ölçmede kullanılan bir araç olarak güvenilir ve geçerli bulunmuştur.

Anahtar Kelimeler : Duygusal zeka, uyarlama, geçerlilik, güvenilirlik.

*   English Language Teacher, Ministry of Education, Sakarya/Turkey, kayihan_nur@hotmail.com

** Asist. Prof. Dr., Sakarya University Faculty of Education, Sakarya/Turkey, serhatarslan@sakarya.edu.tr

1   Hyuneung Lee & Yunjung Kwak, *Development and initial validation of a trait emotional intelligence scale for Korean Adults,* Asia Pacific Education Review Volume 13, Issue 2, pp 209-217, June 2012.

Introduction

Emotional Intelligence (EI) came into prominence in 21th century and Salovey and Mayer[2] firstly defined Emotional Intelligence (EI) as a frame of social intelligence that includes the talent to monitor and comprehend one's own and others' senses and emotions to distinguish among them, and to use this knowledge to guide one's thought and action.   Furthermore, according to Salovey and Mayer social intelligence is capacity to: (1) overcome effectively psychological and social problems; (2) definitely express feelings and truly measure the emotions of others; (3) self-organize one's own emotions and (4) utilize one's emotions to   accomplish one's aims. On the other hand, Snarey and Vaillant[3] further indicated that the essential skills and qualities   required to be successful   derived from within which is emotional rather than from cognitive intelligences and that emotional intelligence performs a vital role in designating life achievement as people   reach   the career goals of their life. In addition to these assertions, having a significant role for gratification in casual relationships of individuals, emotional intelligence can be described as expression and assessment of emotions, adjustment of emotions, and usefulness of emotional knowledge in considering and behaving. Moreover, as it is indicated by Labby& Lunenburg&State[4] Emotional Intelligence was published by Goleman[5] in 1995. This book was the first book which argued the value and importance of the "Emotional Intelligence" in business and education. Five emotional   and social talents and abilities   were propounded for emotional Intelligence by Goleman in 1995; a- self-awareness or having an honest measurement of one's own feeling, b- self-regulation or managing emotions properly c- motivation or inner desire, d- empathy or constructing consciousness about other people's emotions, e- social skills or the talent   to accomplish others' emotions in a positive attitude. In additionally, Goleman [6]in 1998 in his book Working *with emotional intelligence,* propounded that emotional intelligence does not mean setting emotions totally free- "letting all hang out." But rather it advocates managing feelings whether they are represented effectively and appropriately, allowing people to work cooperatively according to their goals.   Based on personal and social competence Goleman improved   the term of emotional competence. He presented how particular emotional abilities were

2   Salovey, P.,&Mayer, J.D., Emotional Intelligence. Imagination, Cognition, and Personality, 9, 185-211,1990.

3   Snarey, J. R., & Vaillant, G. E., How lower- and working-class youth become middle-class adults: The association between ego defense mechanisms and upward social mobility. Child Development, 56(4), 899-910, 1985.

4   Labby, Lunenburg, Slate, *Emotional Intelligence and Academic Success: A conceptual   Analysis for Educational Leaders, http://files.eric.ed.gov/fulltext/EJ971568.pdf, 4, 2012.*

5   Goleman, D., Emotional Intelligence. NY: Bantam Books, 1995.

6   Goleman, D., Working with Emotional Intelligence, 6-7, 1998.

improved and learned. On the one side, Fayombo,[7] indicated in his article that according to Nasir and Masur[8] effective learning takes place when learners have an understanding of how to learn and this understanding demands such emotional talents as self-reliance, self-control, the ability to communicate and collaborate with others.In addition to all implications, Gray[9] also indicated that individuals' tempers and senses are associated with their thoughts and behaviors. Tempers are generalized emotional occasions that are not generally connected to particular events or situations.   But, emotions are more dominant than moods, claim our contiguous attention and probably affect our thinking process; influent our appreciation, retention, creativeness and reasoning. Thus, the purpose of this study to increase   EI measurement within Turkish context. EI scale, which   was developed by Lee and Kwak in 2011, was   implemented university and high school learners for attempting to measure Turkish adult learners' Emotional Intelligence.

Method

Participants

The participants of this research included 249 students from a public and private high schools located in Sakarya, Turkey. 92   participants were male which constituted of %36 the sample and 157 participants were female which constituted of %63the sample.

Procedure

Prior to the study   Permission was obtained by contacting via email with the developers of the scale Lee and Kwak. The questionnaire was developed according to the Mayer and Salovey's[10] framework of Emotional Intelligence. Their framework was included four dimensions which were named as emotional recognition, emotional understanding, emotional facilitation and emotional regulation. But in the Lee and Kwak's study researchers reached three dimensional models (emotional recognition, emotional facilitation and emotional regulation) after brainstorming and discussing among each other. Additionally, if it is nec-

7   Grace A. Fayombo., Emotional Intelligence and Gender as Predictors of Academic Achievement among Some University Students in Barbados, 102,2012.
8   Nasir, M. & Masrur, R., An Exploration of Emotional Intelligence of the Students of IIUI in Relation to Gender, Age and Academic Achievement. Bulletin of Education and Research. 32, (1), 37- 51,2010.
9   Gray, Emotional Intelligence and School Leadership, *http://files.eric.ed.gov/fulltext/ EJ1071402.pdf, 2,2009.*
10   Mayer, J. D., & Salovey, P.,*What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), Emotional development and emotional intelligence: Implications for educators* (pp. 3–31),1997.

essary to mention validity of the Emotional Intelligence Scale, it has satisfactory validity since the 20 -item test was implemented on various types of samples such as; one electronic institution, two assurance institutions and two finance institutions for validating the factor structure of the questionnaire. Furthermore, since the Cronbach's alpha coefficient subscale was .72 for emotional recognition, .71 for emotional facilitation, and .76 for emotional regulation scale was recognized as a reliable tool for the research. During the adaptation of the Emotional Intelligence Scale, the scale was translated into Turkish by 10 English Language instructors and the translations were regulated by debating and examining them one by one. Secondly, identical Turkish forms translated into English once more, internal consistency was examined between two forms and final Turkish form was obtained via debating on the Turkish forms. Afterwards, Turkish form was analyzed for reaching the accurate meaning and grammar. Turkish form Tentative Turkish form was scrutinized by the assessment and evaluation instructors and in accordance with experts' thoughts some modifications were practiced. The construction of the original scale in Turkish culture was sanctioned by finding the Confirmatory factor analysis (CFA) after measuring the validity and reliability analyses of the scale. Besides these evaluations, item-total correlations and internal consistency reliability were analyzed. Data analyses were carried out by utilizing LISREL 8.54 and SPSS 22.0 package programs.

Results

Item-Total Correlations for the Turkish Version of Emotional Intelligence Scale are displayed in Table 2.

Table 2. Item-Total Correlations for the Turkish Version of Emotional Intelligence Scale

	Items	Item-Total Correlations (r_{jx})
1	Başkalarını çok iyi tanımasam bile onların duygularını ve ruh hallerini anlayabilirim.	.40
2	Başka insanların duygularını ve ruh hallerini onların ses tonlarından ve yüz ifadelerinden anlayabilirim.	.40
3	Kendi duygularımı ve başkasının duygularını sınıflandırabilirim.	,57
4	Resimlerde ve müzikte ifade edilen duyguları ve hisleri anlayabilirim.	,38
5	Karmaşık ve hassas duygu veya hislerin var olduğunu anlayabilirim.	,47
6	Bir insanın diğer bir insandan aynı anda hem nefret edip hem de onu sevebileceğini anlarım.	,08

7	Eğer sevmediğim bir şeyi yapmak zorunda kalırsam, fikrimi değiştirmeeye çalışır ve o şeyden zevk alırım.	,27
8	Bir görevi tamamladıktan kendimi boş hissettiğimde neşelenmeye çalışır ve bir sonraki olay için hazır olurum.	,38
9	Yaptığım işten hoşlanmadığımda, duygularımla baş edebilmek için elimden gelenin en iyisini yapmaya çalışırım.	,44
10	Eğer meslektaşım hakkında iyi haberler duyarsam, memnun olur ve birlikte kutlama yapmak isterim.	,39
11	Kötü şeyleri çabuk unutmaya çalışırım.	,33
12	Bir şeyden korktuğumda korkuma engel olamam, ancak kaçmak yerine korkumla yüzleşirim.	,43
13	Duygularımı iyi bir şekilde kontrol edebilirim.	,49
14	Depresif hissettiğimde ruh halimi değiştirebilirim.	,38
15	Üzüldüğümde kendimi neşelendirmek için kendi yöntemlerim vardır.	,47
16	Öfkeyi nasıl sakinleştireceğimi bilirim.	,39
17	Duygularımı duruma göre değiştirebilirim.	,52
18	Olaylar kötü gittiğinde bile umudumu kaybetmem.	,49
19	Bir şeyleri sırayla yapmak için duygularımı düzenleyebilirim.	,51
20	Başkalarını etkin bir biçimde teselli edebilir ve rahatlatabilirim.	,43

The item-total correlations of EIS   ranged from .08 to .57 and each item's total correlation had better to be   at least .30 for being accepted as a reliable item. Because of that reason sixth and seventh items could have eliminated from the EIS. However; since the Cronbach's Alpha internal consistency reliability coefficients of the scale were calculated as .83 there was no need to delete the sixth and seventh items from the questionnaire.

Construct Validity

Confirmatory factor analysis is highly functional for the investigators in terms of handling apparent   hypotheses like the number of factors or extents   underlying its items, connections between absolute   items or factors and the link between factors. To put it other way, with CFA   investigators assess "measurement hypothe-

ses" regarding scale's internal structure. Furr and Bacharach[11] propounded that CFA provides investigators to measure the degree to which their assessment hypotheses are consistent with the factual data of the scale. The conclusion of confirmatory factor analysis indicated that the three-dimensional model was well fit (x^2=399.55, df=167, RMSEA=.075, NNFI=.90, CFI=.91, IFI=.91, SRMR=.080, GFI=.86). Factor loadings and path diagram for Turkish version of EIS are displayed in Figure 1.1
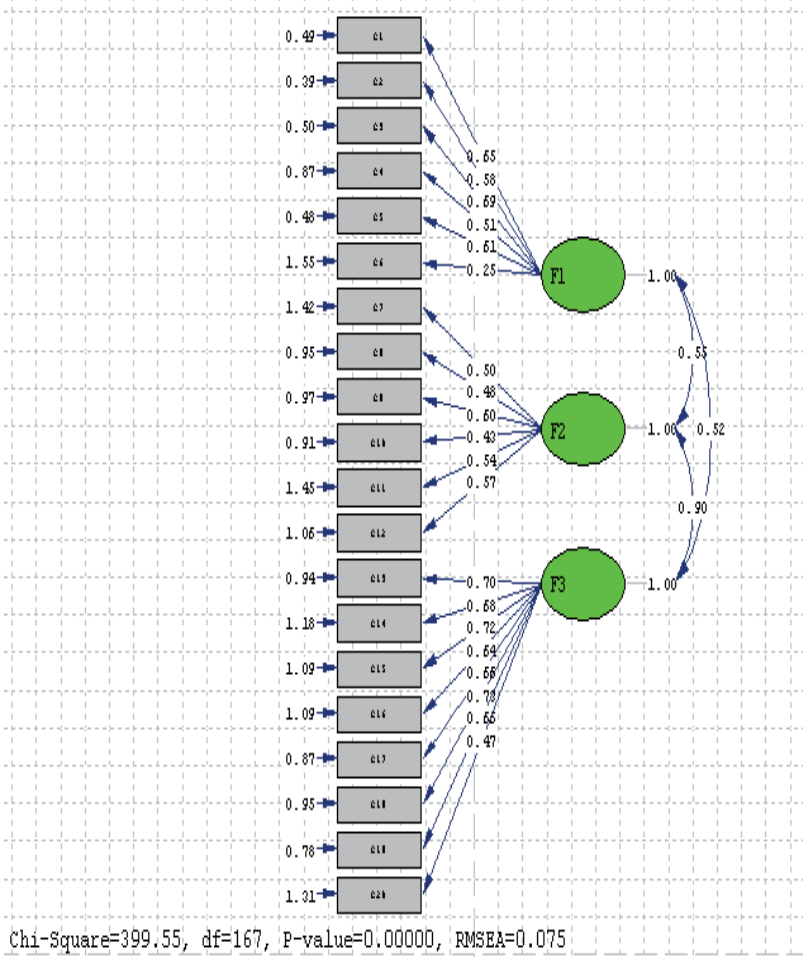

Figure 1.1

F1: Emotional recognition/understanding, F2: Emotional facilitation, F3: Emotional regulation

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11   Furr, R, M., & Bacharach, V.R., Psychometric: An Introduction. Thousand Oaks, CA:Sage Organizational Research Methods, 14(3) 574-576,2008.

Reliability

The Cronbach's Alpha internal consistency reliability coefficients of the scale were calculated as .83 for whole scale.

Discussion

The main purpose of this study was to adapt Emotional Intelligence Scale into Turkish and examine its psychometric properties. The whole results of the EIS Turkish version declared reliability and validity with adaptive proficiency. Accordingly, the research sustained that the Turkish version of the Emotional Intelligence Scale was valid and reliable measures (x^2=399.55, df=167, RMSEA=.075, NNFI=.90,CFI=.91,IFI=.91,SRMR=.080, GFI=.86). The internal consistency reliability coefficients of the scale were calculated as .83 for the whole scale. The items which were below .30 weren't removed from the scale. However; if the internal consistency reliability score wasn't enough for providing enough reliability, these items would be eliminated from the EIS. Additionally, it is still possible and appropriate to remove the items for reaching higher reliability. Hence, this research indicates that the adapted EIS is a valid data collection tool for assessing students' Emotional Intelligence in Turkey. Findings of this research are useful instruments for cross-cultural comparison as well as Emotional Intelligence Scale research within Turkey. However, this research possesses some restrictions which are worth considering. The sample size of the current research is one of the limitations that it was conducted only two high schools in the same city which limits the validity of the findings. Generalizability of these results cannot be accurate with all populations in Turkey. In order to generalize the results of this research, further inquiries should be conducted with different countries and populations. Furthermore, future research should aim to investigate different individuals as well as a wider age, range, to attempt to confirm the factor structure of the scale. Although further research is needed, the findings of this study reveal that Turkish adaptation of the Emotional Intelligence scale is   an effective tool for assessing   learners' emotional intelligence in the Turkish context, with successful psychometric strength. As a result, findings of the reliability and validity tests demonstrated that Turkish version of the Emotional Intelligence Scale is valid and reliable.

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Duygusal Zeka Ölçeği

Her sorunun karşısında bulunan; **(1), Hiç katılmıyorum (2) katılmıyorum (3) Kararsızım (4)Katılıyorum ve (5) Tamamen katılıyorum** anlamına gelmektedir. Lütfen her ifadeye mutlaka TEK yanıt veriniz ve kesinlikle boş bırakmayınız.					
1	Başkalarını çok iyi tanımasam bile onların duygularını ve ruh hallerini anlayabilirim.	1	2	3	4	5
2	Başka insanların duygularını ve ruh hallerini onların ses tonlarından ve yüz ifadelerinden anlayabilirim.	1	2	3	4	5
3	Kendi duygularımı ve başkasının duygularını sınıflandırabilirim.	1	2	3	4	5
4	Resimlerde ve müzikte ifade edilen duyguları ve hisleri anlayabilirim.	1	2	3	4	5
5	Karmaşık ve hassas duygu veya hislerin var olduğunu anlayabilirim.	1	2	3	4	5
6	Bir insanın diğer bir insandan aynı anda hem nefret edip hem de onu sevebileceğini anlarım.	1	2	3	4	5
7	Eğer sevmediğim bir şeyi yapmak zorunda kalırsam, fikrimi değiştirmeye çalışır ve o şeyden zevk alırım.	1	2	3	4	5
8	Bir görevi tamamladıktan kendimi boş hissettiğimde neşelenmeye çalışır ve bir sonraki olay için hazır olurum.	1	2	3	4	5
9	Yaptığım işten hoşlanmadığımda, duygularımla baş edebilmek için elimden gelenin en iyisini yapmaya çalışırım.	1	2	3	4	5
10	Eğer meslektaşım hakkında iyi haberler duyarsam, memnun olur ve birlikte kutlama yapmak isterim.	1	2	3	4	5
11	Kötü şeyleri çabuk unutmaya çalışırım.	1	2	3	4	5
12	Bir şeyden korktuğumda korkuma engel olamam, ancak kaçmak yerine korkumla yüzleşirim.	1	2	3	4	5
13	Duygularımı iyi bir şekilde kontrol edebilirim.	1	2	3	4	5
14	Depresif hissettiğimde ruh halimi değiştirebilirim.	1	2	3	4	5
15	Üzüldüğümde kendimi neşelendirmek için kendi yöntemlerim vardır.	1	2	3	4	5
16	Öfkeyi nasıl sakinleştireceğimi bilirim.	1	2	3	4	5
17	Duygularımı duruma göre değiştirebilirim.	1	2	3	4	5
18	Olaylar kötü gittiğinde bile umudumu kaybetmem.	1	2	3	4	5
19	Bir şeyleri sırayla yapmak için duygularımı düzenleyebilirim.	1	2	3	4	5
20	Başkalarını etkin bir biçimde teselli edebilir ve rahatlatabilirim.	1	2	3	4	5