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# The Revised Emotional Intelligence Scale: Cross Cultural Validation in a Turkish Psychiatric Outpatient Cohort

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## ABSTRACT

The original Emotional Intelligence Scale of Fukunishi utilized 65 items, measuring three basic dimensions: Intrapersonal, Interpersonal and Situational. Subsequently, using a sample of 170 U.S. psychiatric outpatients, it was factor reduced from 65 to 34 items that showed excellent internal consistency both overall and for two of its three hypothesized factors. This study examined the internal consistency of the 34-item solution in a cohort of 123 Turkish psychiatric outpatients. The mean age of the sample was 34.5 years (SD=11.2). The internal consistency of the total scale was 0.91. Scores also were high for the Interpersonal dimension (0.90) and the Intrapersonal dimension (.0.84), but not for the Situational dimension (0.67). A similar lower scoring pattern for the Situational dimension has been seen both in US and Japanese outpatient populations. These data suggest that, in a Turkish psychiatric outpatient population, this scale also appears to maintain excellent internal consistency both overall and for two of its three hypothesized factors. This inventory may be suitable to investigate suitability for psychological treatments.

**Keywords:** Revised Emotional Intelligence Scale, emotional intelligence, cross cultural psychiatry

## ÖZET

### Gözden Geçirilmiş Emosyonel Zekâ Ölçeğinin Türk Poliklinik Hastaları Örnekleminde Kültürler Arası Geçerliliği

Fukunushi'nin 65 itemlik Emosyonel Zekâ Ölçeği orijinal formu "Kişinin kendisi ile ilişkisi", "Kişiler arası ilişki" ve "Durumsal" olmak üzere üç temel boyutu ölçmektedir. Daha sonra Amerika Birleşik Devletlerindeki (ABD) bir psikiyatrik ayaktan hasta örnekleminde, 65 item 34 iteme indirilerek, hem ölçeğin tümü için hem de varsayılan bu 3 faktörün ikisi için çok iyi derecede iç tutarlılık olduğu gösterilmiştir. Bu çalışmada 123 psikiyatri hastadan oluşan bir Türk örnekleminde, 34 itemlik formun iç tutarlılığı değerlendirilmiştir. Tüm ölçeğin iç tutarlılığı 0.91 olarak saptanmıştır. Puanlar kişilerarası ilişkiler alt alanı (0.84), kişinin kendisi ile ilişkisi alt alanı (0.90) için yüksek, durumsal alt alan için ise (0.67) düşüktür. Durumsal alan puanlarının düşük olma örüntüsü hem ABD hem de Japon örnekleminde gözlemlenmiştir. Bu verilerle ayaktan Türk psikiyatri hastaları örnekleminde ölçeğin tümü için ve varsayılan 3 alanın ikisinde çok iyi derecede iç tutarlılık gösterdiği ortaya konulmuştur. Bu ölçek kişilerin psikolojik tedavilere uygunluğu değerlendirmede kullanılabilir.

**Anahtar Kelimeler:** Gözden Geçirilmiş Emosyonel Zeka Ölçeği, emosyonel zeka, kültürler arası psikiyatri

## INTRODUCTION

Emotional intelligence (EI), a construct introduced by Salovey and Mayer (1990), denotes the cognitive skills to introspectively observe and regulate affective states and judge the emotional state of others. EI is a confluence of various personality and cognitive traits that include four fundamental elements, emotional understanding, emotional processing, management of feeling states, and integrating affects. Parker (2005) has noted that this construct which overlaps with alexithymia may be utilized to examine why some subjects do not do well in traditional psychodynamic psychotherapy. 133-item self-report inventory developed by Bar-On (1997) has been superseded by shorter inventories that include a 33-item inventory developed by Schutte et al. (1998) and the 65-item psychometric measure of emotional intelligence developed by Fukunishi et al. (2001a, 2001b). The 65-item Emotional Intelligence Scale (EIS-65) consisted of three dimensions: an Intrapersonal dimension measuring self-awareness, self-motivation and self-control; an Interpersonal dimension measuring empathy, altruism and interpersonal relationships; and a Situational dimension measuring awareness, leadership and flexibility. The EIS-65 was found to be reliable in both Japanese and United States clinical and normative samples (Fukunishi et al. 2001b). To make the EIS-65 easier to use, the original 65 items were reduced to 34 items (EIS-34). In a US cohort of 170 psychiatric outpatients, the original and reduced scales significantly correlated on the Intrapersonal and Interpersonal dimensions, but not on the Situational dimension (Sheridan et al. 2006). The total correlation between the original 65-item and the 34-item scales was 0.94. The inventory demonstrated similar properties in both Japanese and U.S. subjects. To extend the cross-cultural application of the reduced scale, the present study examined the psychometric properties of the EIS-34 in a Turkish sample of psychiatric outpatients. A clinical population was utilized in order to assess the EIS-34's utility in psychiatric settings.

## METHOD

The EIS-34 was translated from English into Turkish by one of the authors (EO) who is both a native Turkish speaker and fluent in English. All items used an ordinal range of response, with 0=Not at all, 1=A little, 2=Moderately, 3=Quite a bit, and 4=Extremely. The psychometric properties of the 34-item scale were assessed by an exploratory factor analysis using squared multiple correlations as prior communality esti-

mates. The principal factor method was used to extract the factors, and this was followed by a promax (oblique) rotation. A screen test suggested three meaningful factors, which were retained for rotation.

The subjects were 123 psychiatric outpatients at a university psychiatric clinic. Eighty-eight subjects were female (71.5%), the mean age of the cohort was 34.5 years (SD=11.2), and the mean educational level was 12.4 years (SD=3.2). These patients presented primarily with panic or anxiety disorder (34%) and major depressive disorder (24%). Other disorders included dysthymic disorder (9%), adjustment disorder (8%), bipolar disorder (7%), and obsessive-compulsive disorder (7%). After giving written consent, each subject completed the EIS-34. The Emotional Intelligence Sca-

### Descriptive Statistics for total and Subfactor Scores (EIS-34)

#### Emotional Intelligence Scale-34 Psychiatric Outpatients (N=123)

Total		
N		123
Mean		2.5
SEM		0.0
Median		2.6
25 <sup>th</sup> Perc		2.2
75 <sup>th</sup> Perc		2.9
Cronbach alpha		<b>0.91</b>

Intrapersonal		
N		123
Mean		2.6
SEM		0.1
Median		2.6
25 <sup>th</sup> Perc		2.2
75 <sup>th</sup> Perc		3.1
Cronbach alpha		<b>0.84</b>

Interpersonal		
N		123
Mean		2.6
SEM		0.1
Median		2.6
25 <sup>th</sup> Perc		2.2
75 <sup>th</sup> Perc		3.1
Cronbach alpha		<b>0.90</b>

Situational		
N		123
Mean		2.2
SEM		0.1
Median		2.2
25 <sup>th</sup> Perc		1.7
75 <sup>th</sup> Perc		2.7
Cronbach alpha		<b>0.67</b>

**Table 1: Rotated Factor Pattern of the Reduced EIS (34 items)**

Item Old	Number New	Factor 1	Factor 2	Factor 3
2	1	-3	36	15
3	2	8	43*	-26
4	3	-5	69*	0
5	4	-11	56*	13
6	5	22	-12	31
7	6	-3	61*	10
8	7	28	6	47*
9	8	63*	-2	17
10	9	67*	5	7
11	10	54*	-4	-1
14	11	82*	0	-8
25	12	2	59*	28
26	13	34	40*	-10
27	14	14	60*	-18
28	15	2	21	29
29	16	8	31	20
30	17	0	4	61*
31	18	60*	5	21
32	19	80*	-6	3
33	20	60*	8	-12
34	21	47*	26	-8
36	22	4	18	-6
39	23	2	-13	67*
45	24	51*	5	-8
46	25	29	26	5
48	26	13	44*	-2
49	27	-4	69*	-2
50	28	-16	9	53*
51	29	7	68*	4
53	30	85*	-1	0
54	31	78*	-6	11
55	32	74*	2	-5
56	33	44*	15	0
58	34	61*	-3	1
% Variance Explained		51	31	18

le is a self-report inventory developed from the construct outlined by Davies et al. (1998) and validated in samples of college students and psychiatric outpatients, both in the United States and Japan (Fukunishi et al. 2001b, Sheridan et al. 2006).

In interpreting the rotated factor pattern, an item was said to load on a given factor if the factor loading was at 0.40 or greater for that factor, and was less for others. Using these criteria, 14 items were found to load on the first factor, which was labeled Intrapersonal. Ten items were found to load on the second factor, which was labeled Interpersonal. Four items were found to load on the third factor, which was labeled Situational. Six of the 34 items did not load significantly

on any of the factors. All analyses were performed using SAS software (v8.2, SAS Institute, Cary, NC).

### FINDINGS

Table 1 shows a three-factor solution similar to that seen in an U.S. and Japanese psychiatric outpatient population (Fukunishi et al. 2001b, Sheridan et al. 2006). Cronbach coefficient alphas for the Turkish cohort were high for the total scale (0.91) and the Interpersonal factor (0.90). The Turkish scores were somewhat lower for the Intrapersonal factor (0.84), and quite a bit lower for the Situational factor (0.67). The factor loadings are presented in Table 2 and the EIS-34 questionnaire in Figure 1. For the Turkish version of

## FIGURE 1. Items of the Revised Emotional Intelligence Scale (EIS-34)

1. I know what I am capable of and can say "yes" or "no" clearly.
2. I want to continue to believe in what I think is worthwhile, regardless of the consequences.
3. I will make the effort necessary to achieve my goals.
4. I am capable of making my own choice between two alternatives.
5. I do not raise my voice, even when I feel I have been offended.
6. I am determined to achieve my goals.
7. I am careful not to say anything that would hurt someone else's feelings.
8. I feel compelled to help those stricken by disaster.
9. I like pleasing others.
10. When someone tells me about his or her troubles, I do not simply dismiss it as someone else's problems.
11. I am willing to help anyone.
12. I like to find some value in any work I do.
13. If necessary, I can make decisions on my own.
14. If necessary, I can keep my emotions under control.
15. I do not respect a person who doesn't carry out what they have planned to do.
16. I am afraid to say anything that might offend someone else.
17. I would like to do some volunteer work.
18. I feel happy when others are happy.
19. I am more than willing to listen to others talk about their problems.
20. I am able to bring out the best in others.
21. I can talk in a friendly manner to difficult people.
22. When it is necessary, I make decisions easily.
23. I am able to direct others.
24. I use foresight at work.
25. I do not like to stop what I am doing, even if it is just play.
26. I try to behave in a straightforward manner; when it is time to push, I push.
27. When I am upset, I do not take it out on those around me.
28. I am determined to overcome any obstacles in my path to accomplish a goal.
29. Hurting others is the last thing I want to do.
30. I want to think about how to make someone happy.
31. When I see someone in distress, I cannot help talking to him.
32. People often ask me to help settle a problem.
33. I am good at making friends.
34. I am able to direct younger colleagues or my subordinates in a clear fashion.

the EIS-34, the proportion of common variance accounted for by each factor was: Intrapersonal (0.51), Interpersonal (0.31), and Situational (0.18).

### DISCUSSION

An evaluation of the EIS-34 in a population of 123 Turkish psychiatric outpatients produced acceptable internal consistency both for the total scale and for two of the three hypothesized factors. Similar to other analyses both of the 65-item and 34-item Emotional Intelligence Scale (Fukunishi et al 2001b, Sheridan et al 2006) lower Cronbach alphas were found for the Situational factor. This strongly suggests that the Situational domain is poorly specified and requires further refinement. Compared to the U.S. psychiatric cohort, internal consistency scores for the total scale and the Interpersonal factor were similar while the Cronbach alphas for the Intrapersonal and Situational factors were lower in the Turkish population. It is difficult to know whether the translation of the scale into Turkish or the sample size, smaller than the U.S. cohort (123 versus 170), may have affected measurement. Another possibility is that there is cultural difference in these

dimensions in this population. Studies in nonclinical populations in both Iranian and Kuwaiti subjects have also found similar differences utilizing inventories other than the EIS to measure EI (Alkhadher 2007, Yousefi 2006). Whether emotional intelligence differs between cultures as an artifact of social desirability, due to translational issues in specific inventories or is in fact different is very complex and requires further investigation (Early and Mosakowski 2004).

### CONCLUSION

A shorter inventory with good internal consistency for assessing emotional intelligence would be desirable. It could reduce task time and limit fatigability when multiple psychiatric inventories are being co-administered. However, several limitations must be kept in mind. First, the sample population consisted of psychiatric outpatients without substance abuse disorders or major psychotic illnesses, such as schizophrenia. How subjects with other psychiatric disorders would perform on this inventory is unknown. Second, compared with the Intrapersonal and Interpersonal factors, the internal consistency of the Situational factor continues to be lower, for

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reasons that are not completely clear. Third, the EIS-34 needs to be replicated both in larger and different psychiatric populations. Finally, criterion-related validation studies need to be performed. Work in progress will attempt to address these limitations.

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