

Examining the Reliability and Validity of the MSCEIT Faces Scale
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ABSTRACT

The ability to perceive emotions accurately is probably the most important sub-skill in the area of Emotional Intelligence. One of the most commonly used measures of Emotional Intelligence (the Mayer-Salovey-Caruso Emotional Intelligence Test; MSCEIT; Caruso, Mayer, Salovey, & Sitarenios, 2003) contains a scale designed to measure this ability: the Faces scale. The purpose of this research was to examine the quality of the MSCEIT Faces scale with regards to internal consistency and convergent validity with the MSCEIT Pictures scale, and to determine how these can be improved. A total of 395 students completed the Faces and Pictures scales in return for course credit. Both coefficient alpha and convergent validity with the Pictures scale were moderate. Item analyses identified two weak items: items 1 and 12. Replacing or re-wording the emotion terms used in these items may improve the scale overall.

INTRODUCTION

Emotion is one of the fastest growing areas of psychological research (Ekman, 1993). One area relating to emotion that has sparked major interest within the past fifteen years is the concept of Emotional Intelligence (EI). Caruso, Mayer, Salovey, and Sitarenios (2003) define EI as “a set of skills concerned with the processing of emotion-relevant information” (p. 97). They claim that EI qualifies as a traditional intelligence in that (EI) contains one central aspect (abstract understanding and reasoning) as well as several additional ones (meta-processing, knowledge processing, and input processing) that are seen in traditional intelligences. More specifically, these are the abilities to analyze and identify parts of an emotion, knowledge that helping others would result in a person feeling better about oneself, knowledge of previous feelings, and the ability to recognize emotions in faces (Caruso et al., 2001). They developed a set of ability-based scales to measure this conception of EI.

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Caruso et al., 2003) was designed to measure the following branches of EI: (a) perceiving emotions, (b) using emotions to facilitate thought, (c) understanding emotions, and (d) managing emotions.” (p. 97). The ability to accurately perceive emotions in others is arguably the most important and central skill in the area of EI. In the MSCEIT, the perception of emotions branch was measured with the Faces and Pictures Scales. Initial research indicates the MSCEIT has high reliability and validity across the four branches of EI (Caruso et al., 2003), but little research has examined the individual subscales. The purpose of this research is to examine the validity and reliability of the Faces Scale in detail, and determine how this scale might be improved. In particular this study will examine both the overall internal consistency and convergent validity of this scale, and will also determine how the internal consistency and convergent of the Faces Scale can be improved.

METHOD

Participants

Participants consisted of 395 undergraduate students who received research credit for participating in this study. 160 (40.5%) were men and 235 (59.5%) were women. The mean age was 20.62 years with a standard deviation of 50.62 (minimum 18, maximum 56). The group was ethnically diverse with 60% reporting as White, 12.7% Asian, 10.6% Hispanic, 6.6% Black, .8% Native, 9.1% Other, and .3% missing.

Materials

The Faces task consists of four faces with five emotions each. For each face, participants are asked to indicate the extent to which each of the emotions are present, using a 5-point scale. Different emotion terms are used for different faces

The Pictures task consisted of 6 pictures (3 landscapes and 3 designs), each with 5 emotions. For each picture, participants are asked to indicate the extent to which the emotions are present, using a 5-point scale. Different emotion terms are used for different pictures.

RESULTS

The value of coefficient alpha for the Faces Scale was moderate (coefficient alpha = .75). This is an acceptable level of internal consistency in order to use this scale for research purposes, but it is not high enough to make decisions about individuals. An item analysis was conducted to see how the internal consistency of the Faces Scale could be improved (see Table 1). The internal consistency of the Faces Scale would increase if items 1, 7, 12, and 16 were revised or removed.

Convergent validity was assessed by correlating the Pictures Scale with the Faces Scale. The correlation was moderate ($r = .30, p < .01$), though it was expected to have been higher. An item analysis was conducted to see how the convergent validity could be improved (see Table 2). The convergent validity of the Faces Scale would improve if items 1 and 12 were revised.

DISCUSSION

The purpose of this paper was to examine the quality of the Faces Scale with respect to internal consistency and convergent validity. Internal consistency was acceptable for research purposes but not for making decisions about individuals. Convergent validity was moderate. Two item analyses were conducted to determine how internal consistency and convergent validity could be improved. Four items decreased internal consistency, and two items had negative convergent validity correlations. These two item analyses agreed that items 1 and 12 were weak. Replacing the emotion terms used in these items might improve internal consistency and convergent validity. Before such revisions can be justified, however, replication of this study with other groups of

people is needed to see if these items are weak with all groups of people or just college students.

Table 1
Item Analysis to Improve Internal Consistency of the Faces Scale

Item	Alpha-If-Item-Deleted	Corrected Item-Total Correlations
1	-.04	.76
2	.41	.74
3	.41	.74
4	.20	.75
5	.35	.74
6	.41	.74
7	-.04	.76
8	.28	.75
9	.49	.73
10	.45	.73
11	.45	.73
12	-.05	.76
13	.09	.75
14	.41	.74
15	.43	.73
16	-.01	.77
17	.41	.74
18	.45	.73
19	.42	.73
20	.42	.73

Note. Coefficient alpha for the 20-item scale was = .75.

Table 2
Correlation of Faces Scale Items with Pictures Scale Total Score

Item	Correlation
1	-.09
2	.26**
3	.14**
4	.07
5	.12*
6	.06
7	.01
8	.25**
9	.17**
10	.11*
11	.24**
12	-.05
13	.08
14	.16**
15	.15**
16	.04
17	.17**
18	.19**
19	.26**
20	.17**

* $p < .05$. ** $p < .01$.

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