A psychometric evaluation of the Mayer–Salovey–Caruso Emotional Intelligence Test Version 2.0

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Abstract

There has been some debate recently over the scoring, reliability and factor structure of ability measures of emotional intelligence (EI). This study examined these three psychometric properties with the most recent ability test of EI, the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT V2.0; Mayer, Salovey, & Caruso, [Mayer, J. D., Salovey, & P., Caruso, (2000). Models of emotional intelligence. In R. J., Sternberg (Ed.). *Handbook of intelligence* (pp. 396–420). New York: Cambridge; Mayer, J. D., Salovey, P., & Caruso, D. R., (2000). *The Mayer, Salovey, and Caruso emotional intelligence test: Technical manual*. Toronto, ON: MHS]), with a sample (n=431) drawn from the general population. The reliability of the MSCEIT at the total scale, area and branch levels was found to be good, although the reliability of most of the subscales was relatively low. Consistent with previous findings, there was a high level of convergence between the alternative scoring methods (consensus and expert). However, unlike Mayer et al.'s [Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2. 0. *Emotion, 3*, 97–105.] contentions, there was only partial support for their four-factor model of EI. A model with a general first-order factor of EI and a three first-order branch level factors was determined to be the best fitting model. There was no support for the Experiential Area level factor, nor was there support for the Facilitating Branch level factor. These results were replicated closely using the Mayer et al. [Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G., (2003). Measuring emotional intelligence with the MSCEIT V2. 0. *Emotion, 3*, 97–105.] data. The results are discussed in light of the close comparability of the two scoring methods.

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Furthermore, the fundamental limitations of the MSCEIT V2.0, with respect to the inadequate number of subscales theorized to measure each branch level factor are identified and discussed.

1. Introduction

Very rarely do psychological constructs receive as widespread attention as the recently conceptualised construct of emotional intelligence (EI). EI has appeared on the cover of Time magazine (Gibbs, 1995), is the topic of the most widely read social science book in the world (Goleman, 1995) and many other popular books, magazine and newspaper articles (Mayer, Salovey, & Caruso, 2000). It has been argued to be a different construct to intellectual intelligence, and, thus, may add to knowledge relevant to individual differences (Mayer et al., 2000), and possibly offer unique predictive validity in wide variety of instances (Goleman, 1995).

Mayer and Salovey (1997) have conceptualised emotional intelligence (EI) as a set of mental abilities concerned with emotions and the processing of emotional information. With such it has been argued that the most valid assessment of EI will be gained from ability-based scales that involve (like other tests of mental ability), items for which there are more and less correct answers, that assess individuals' capacity to reason with and about emotions (Mayer, Caruso, & Salovey, 2000). Over a series of studies Mayer et al. have designed and examined the reliability and validity of a number of ability-based measures of EI (Mayer, Caruso, & Salovey, 1999; Mayer, DiPaolo, & Salovey, 1990; Mayer & Geher, 1996). This work has culminated in their most recent ability-based test of EI, the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT, Mayer et al., 2000). Independent psychometric evaluations of the MSCEIT are few in number as it has only been available for a short period. However, there are conceptual, developmental and correlational criteria inherent within the theoretical framework of the ability model from which it can be evaluated. Furthermore, there are research findings recently put forth by the authors (Mayer, Salovey, Caruso, & Sitarenios, 2003), and research findings with previous measures against which it can be compared (Ciarrochi, Chan, & Caputi, 2000; Mayer et al., 1999; Roberts, Zeidner, & Matthews, 2001).

1.1. Conceptual, developmental and correlational criteria for ability measures of EI

Mayer and Salovey's (1997) ability model of EI comprises four conceptually related abilities arranged hierarchically from the most basic to the more psychologically complex, including: (1) the ability to perceive emotions; (2) the ability to utilise emotion to facilitate reasoning; (3) the capacity to understand the meaning of emotions and the information they convey; and (4) the ability to effectively regulate and manage emotion. Within this hierarchical organisation, the abilities are proposed to develop sequentially implying that they are a function of age and cognitive maturation (Mayer & Salovey, 1997). Consistent with this theoretical framework, measures of EI such as the MSCEIT are expected to; (a) show a positive manifold of correlations amongst the subscales designed to assess these four major areas; (b) a consistent factor structure that comprises a general factor of EI and four correlated primary factors; and (c) show