Personality and Individual Differences 45 (2008) 432–436

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Development and preliminary validation of an emotional self-efficacy scale

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ARTICLE INFO

Article history:
Received 21 August 2007
Received in revised form 9 June 2008
Accepted 10 June 2008
Available online 30 June 2008

Keywords:
Self-efficacy
Emotional intelligence
Emotional self-efficacy

ABSTRACT

Building on research in the areas of emotional intelligence and self-efficacy, a measure of emotional self-efficacy was developed and validated. Two hundred and seven participants rated their self-efficacy for adaptive emotional functioning as operationalized by the facets of Mayer and Salovey's (1997) and Mayer, Salovey and Caruso's (2004) model of emotional intelligence and completed measures of constructs expected to be related to emotional self-efficacy. Items grouped into a one-component solution, and the internal consistency of the scale based on this solution was .96. Two week test–retest reliability was .85. High emotional self-efficacy was associated with greater dispositional emotional intelligence, greater performance emotional intelligence, higher positive mood and lower negative mood. Emotional self-efficacy showed evidence of incremental predictive validity in that it remained associated with positive and negative mood after dispositional emotional intelligence was controlled and with positive mood after performance emotional intelligence was controlled.

1. Introduction

Higher self-efficacy for a behavioral realm is associated with better functioning in that realm. This beneficial effect of self-efficacy has been found for a variety of outcomes, including overcoming eating problems (Terence, Fairburn, Agras, Walsh, & Kraemer, 2002), counseling effectiveness (Larson & Daniels, 1998), coping with trauma (Benight & Bandura, 2004), and academic performance (Bandura, 1997). Self-efficacy consists of "beliefs in one's capabilities to organize and execute the courses of action required to produce a given attainment" (Bandura, 1997, p. 3). As self-efficacy is an important predictor of realm-specific functioning, self-efficacy for emotional functioning may influence actual emotional processes as well as the outcomes associated with adaptive or maladaptive emotional functioning.

Emotional intelligence is a term used to describe adaptive emotional functioning. A meta-analysis (Van Rooy & Viswesvaran, 2004) of research done with 59 samples of participants found that higher emotional intelligence was associated with a variety of better outcomes, including employment and academic performance. A meta-analysis (Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007) focusing on the relationship between emotional intelligence and health examined 44 effect sizes from 35 samples of participants and found that higher emotional intelligence was associated with better mental and physical health.

The four-branch model of emotional intelligence (Mayer et al., 2004) holds that emotional intelligence consists of the interrelated functions of (a) accurately perceiving emotion in the self and others; (b) using emotion to assist thinking, including decision making; (c) understanding emotion in the self and others; and (d) effectively managing emotion in the self and others. These processes are components of emotional information processing and are interrelated such that more integrated processes, such as understanding emotion, build on more basic processes, such as perception of emotion. Some research indicates that as well as forming separate factors, the functions described by the model group into an overall adaptive ability factor and both the subfactors and overall factors have some evidence of validity (Mayer, Salovey, Caruso, & Sitarenios, 2003). We believe that ability as well as trait operationalizations (Neubauer & Freudenthaler, 2005; Petrides & Furnham, 2001, 2003) can fit within this four-branch model of emotional intelligence (Mayer et al., 2004). Using cognitive intelligence as an analogy, functions such as memory and word fluency can be both an ability, generally assessed through performance tests, and can be typically manifested in daily living. In the case of emotional intelligence, an individual may have, for example, the ability to assist others regulate emotions, but not typically use this ability for motivational or other reasons.

Mayer et al. (2004) argued that emotional intelligence is best conceived of as an ability. In line with this conceptualization they recommended assessing emotional intelligence through performance tests that assess maximum performance. Petrides and Furnham (2003) posited that emotional intelligence can also usefully be conceptualized as a trait or as typical functioning. Self-report is the most usual assessment method of trait emotional intelligence, just as self-report is the most common method of assessing other trait constructs. Neubauer and Freudenthaler

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doi:10.1016/j.paid.2008.06.010

(2005) pointed out that ability and trait conceptualizations may each have value and can be complementary.

Petrides and Furnham (2003) and Petrides, Sangareasu, Furnham, and Fredrickson (2006) suggested that trait emotional intelligence can be termed 'emotional-self-efficacy'. Equating trait emotional intelligence completely with emotional self-efficacy may be an overgeneralization. As Petrides and Furnham (2003) pointed out, trait emotional intelligence includes dispositions as well as self-perceptions related to emotional functioning. We suggest that a finer distinction among operationalizations of emotional intelligence is that self-perceptions related to emotional functioning include emotional self-efficacy, but that there are other aspects of self-perception and other dispositions not encompassed by emotional self-efficacy. Thus, emotional self-efficacy may be an aspect of trait emotional intelligence, but it is not identical to what Petrides and Furnham (2003) described as trait emotional intelligence. Petrides et al. (2006).

Self-efficacy has been found to be an important aspect of functioning in a variety of realms (e.g. Bandura, 1997) and Saarni (1999) insightfully posited that self-efficacy for emotional functioning may be a cornerstone of emotional competence. Thus, we set out to develop a measure of self-efficacy for adaptive emotional functioning. Mayer and Salovey's (1997) and Mayer et al.'s (2004) four-branch model of emotional intelligence presents a conceptually and empirically well-grounded description of adaptive emotional functioning and we used this model to define the realm of adaptive emotional functioning. Bandura (2001) presented specific guidelines on how to assess self-efficacy in a given realm, and we used these guidelines in developing a measure of emotional self-efficacy. Bandura specified that self-efficacy should be measured as an individual's perception of what he or she can do rather than what he or she does, be domain-specific, and be explained to respondents in terms of their present confidence in being able to carry out a certain type of function.

Because emotional self-efficacy may be an aspect of trait or dispositional emotional intelligence, one would expect a measure of emotional self-efficacy to be related to, but not redundant with, a measure of trait emotional intelligence. As both emotional self-efficacy and ability emotional intelligence may be aspects of adaptive emotional functioning, one would expect these constructs to be somewhat associated. Because adaptive emotional functioning leads to better mood regulation and more positive mood (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002), one would expect emotional self-efficacy to be related to mood.

2. Item development

The authors generated an initial pool of items that reflected the main dimensions described by the Mayer and Salovey (1997) and Mayer, Salovey and Caruso (2004) four-factor model of emotional intelligence. Items focused on (1) perceiving emotions in self and others, (2) using emotions to facilitate thought, (3) understanding emotions and emotional knowledge in the self and others, and (4) regulating emotions in the self and others. The format of the individual items, as well as the general instructions for the measure, followed the guidelines provided by Bandura (2001).

Six experts familiar with emotion theory and research reviewed the items and instructions. One of these experts was a developer of the four-branch model. Modifications in the item pool and instructions were based on this review. The final item pool consisted of 32 items, with eight items representing each of the four branches. Instructions directed respondents to rate their *confidence,* on a five point scale on which a '1' indicated 'not at all' and a '5' indicated 'very', in being at the present able to carry out functions described by the items.

3. Principal components analysis and initial validation

3.1. Method

3.1.1. Participants

Two hundred and seven adults (125 females, 74 males, and 8 not specified), who were recruited from various regions of Australia, including New South Wales, Queensland, and Western Australia, volunteered to participate in this phase of the research. Participants ranged in age from 18 to 72 years ($M = 38.42$, $SD = 14.44$). They had a range of educational attainment; 6.5% had some secondary schooling, 13.6% had completed the school certificate (4 years high school), 29% received a high school certificate (6 years high school), 13.6% possessed a diploma, 2.4% had a graduate certificate, 16.6% had a bachelor's degree, 15.4% had some postgraduate training, 1.1% had obtained a doctorate and 1.8% did not specify their level of education. Most of the respondents (68%) were recruited at their workplaces. An additional 18% were recruited through word of mouth, and 14% were recruited from among university undergraduates at an Australian university.

3.2. Measures

Participants completed a questionnaire packet consisting of the emotional self-efficacy items, the Assessing Emotions measure of emotional intelligence (Schutte et al., 1998), the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), the Marlowe–Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1960) and several work-related measures not associated with the development of the scale. Ninety-two participants also completed a computer-based version of the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002).

The Assessing Emotions Scale (Schutte et al., 1998) is a trait measure of emotional intelligence based on the Salovey and Mayer (1990) original model of emotional intelligence. The scale consists of 33 items and measures the extent to which respondents typically adaptively appraise emotions in self and others, understand emotions in the self and others, regulate emotions in the self and others, and utilize emotions to solve problems. The measure has exhibited good internal consistency, with Cronbach's alpha for the total scale ranging from .87 to .90 across several samples (Schutte et al., 1998). Two week test–retest reliability for the measure was .78 and the measure has evidence of concurrent, predictive and discriminant validity (Schutte et al., 1998). In the present sample, Cronbach's alpha for the scale was .95.

Based on a factor analysis which supported a uni-factorial solution, Schutte et al. (1998) recommended using total scores on the 33-item scale. Several other factor analytic studies focusing on the structure of the scale have also found a one factor solution (Brackett & Mayer, 2003), in some cases as having reasonable fit along with a fit for subfactors (Ciarrochi, Chan, & Bajgar, 2001) or as a higher order factor with associated subfactors (Gignac, Palmer, Manocha, & Stough, 2005). The most widely used subscales derived from the 33-item Assessing Emotions Scale are those based on subfactors identified by Petrides and Furnham (2000), Ciarrochi et al. (2001), and Saklofske, Austin, and Minski (2003). These factor analytic studies suggested a four-factor solution for the 33 items. The four factors were described as follows: perception of emotions, managing emotions in the self, managing others' emotions, and utilizing emotions. The items comprising the subscales based on these factors as described by Ciarrochi et al. (2001) were used in the present study.

The MSCEIT (Mayer et al., 2002) is a computer-based performance measure of emotional intelligence that assesses the