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Associations between trait emotional intelligence, actual–ideal weight discrepancy, and positive body image

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1. Introduction

There is now ample evidence suggesting that negative body image is a ‘normative’ experience among girls and women in most, if not all, developed nations (e.g., Cash, 2004; Cash & Pridinsky, 2002; Rodin, Silberstein, & Striegel-Moore, 1984; Smolak, 2006; Swami et al., 2010). This is of particular importance because of reliable associations between negative body image and the development of eating disorders (e.g., Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Stice, 2001; Stice & Shaw, 2002) and lower psychological well-being more generally (e.g., higher rates of depression and diminished confidence in interpersonal relationships; Keery, van den Berg, & Thompson, 2004; Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006).

It has been suggested that emotions and affective states are an influencing factor in body image and, more distally, eating disorders (e.g., Markey & Vander Wal, 2007; Sassaroli & Ruggiero, 2005). For instance, the affect regulation model of binge eating centrally implicates dysregulation of emotions in the development and maintenance of disordered eating (Agras & Telch, 1998; Lynch, Everingham, Dubitzky, Hartman, & Kasser, 2000; Polivy & Herman, 1993; Wisniewski & Kelly, 2003). More generally, factors such as anxiety, mood, and self-esteem have all been suggested to be important risk factors for body dissatisfaction and eating disturbance (Fairburn, Cooper, & Shafran, 2003).

Recently, it has also been postulated that negative body image may be altered through improvements to emotional expression and regulation (Hayaki, Friedman, & Brownell, 2002). This suggestion is partly based on evidence that women with eating disturbance symptomatology are less assertive than control participants without eating pathology (e.g., Mizes, 1989; Williams et al., 1993). Indeed, psychotherapeutic approaches that emphasize more effective interpersonal communication and emotional regulation appear to be successful at alleviating body image and eating disordered symptoms (e.g., Abraham, 2003; Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000; O’Dea & Abraham, 2000).

1.1. Emotional intelligence

Based on the above conceptual postulations, a number of recent studies have begun to examine the association between emotional intelligence (EI) and body image or eating disorders. It is important, at the offset, to distinguish between ability EI and trait EI (Petrides & Furnham, 2000, 2001). The former typically refers to an ability to use and understand emotions and emotional knowledge, and ought to be measured using tests of maximal performance (Salovey & Mayer, 1990), although this has proved problematic (Brody, 2004). In this sense, ability EI (or cognitive-emotional ability) is viewed as a novel form of intelligence and,
conceptually at least, there is no reason to expect ability EI to be associated with body image. Trait EI (or trait emotional self-efficacy) is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, Pita, & Kokkinaki, 2007). In essence, trait EI concerns people’s self-perceptions of their emotional abilities. While such self-perceptions are prima facie important for the development of body image and psychological well-being more generally (Mikolajczak, Petrides, & Hurry, 2009), only a few broadly relevant studies have been carried out to date.

Thus, one early study reported that emotional expression was inversely related to Body Dissatisfaction (measured using the Body Dissatisfaction scale of the Eating Disorders Inventory), even after controlling for participant weight status (Hayaki et al., 2002). However, to measure emotional expression, the authors designed a novel, 7-item scale comprising standardized items from several sources. Although Hayaki et al. (2002) reported that their scale had adequate internal consistency, further validation of this scale as a measure of emotional expressiveness has not been forthcoming.

More recently, two studies reported that EI was significantly associated with bulimic symptomatology (Markey & Vander Wal, 2007) and disordered eating attitudes (Costarelli, Demerzi, & Stamou, 2009), respectively. However, these studies did not focus specifically on body image and were also not interpreted from the perspective of trait EI theory, which provides a scientific basis for the interpretation of findings from questionnaires of EI and related constructs. It remains unclear, therefore, to what extent trait EI is reliably associated with body image. Certainly, there are additional reasons to think that it should be: trait EI has been negatively associated with body image. Certainly, there are additional reasons to think that it should be: trait EI has been negatively associated with body image (e.g., Mavroveli, Petrides, & Furnham, 2009), respectively. However, these studies did not focus specifically on body image and were also not interpreted from the perspective of trait EI theory, which provides a scientific basis for the interpretation of findings from questionnaires of EI and related constructs. It remains unclear, therefore, to what extent trait EI is reliably associated with body image. Certainly, there are additional reasons to think that it should be: trait EI has been negatively associated with body image. Certainly, there are additional reasons to think that it should be: trait EI has been negatively associated with body image (e.g., Mavroveli, Petrides, & Furnham, 2007), each of which have also been associated with improved adaptive coping (Mikolajczak et al., 2009), relationship satisfaction (Smith, Heaven, & Ciarrochi, 2008), well-being, life satisfaction, subjective happiness, and self-rated physical health (Schutte, Malouff, Thorsteinsson, Bhullar, & Roome, 2007), each of which have also been associated with improved body image.

1.2. The present study

The aim of the present study was to examine the associations between trait EI and body image using a psychometrically robust measure of the former. Specifically, we used the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009), a measure of trait EI that yields scores on 15 facets and four factors (namely Well-being, Self-control, Emotionality, and Sociability), providing comprehensive coverage of the sampling domain of the construct. In addition, we also measured body image using two separate constructs, namely actual–ideal weight discrepancy (a measure closely related to body dissatisfaction or negative body image) and body appreciation (a measure of positive body image). We hypothesized that trait EI would be significantly associated with both measures of body image (negatively associated with actual–ideal weight discrepancy and positively associated with body appreciation).

In addition to examining direct associations between trait EI and measures of body image, we were also interested in the incremental validity of the former over-and-above weight status (conceptualized as self-reported body mass index, or BMI) and perceptions of media influence, which are known to be important factors associated with negative body image (for reviews, see Graber, Ward, & Hyde, 2008; Groesz, Levine, & Murnen, 2002). Should trait EI predict body image, once participant BMI and media influence have been accounted for, it would suggest that the former concept has meaningful real-world applications for the treatment of negative body image.

2. Methods

2.1. Participants

The participants of this study were 108 women from a university in Greater London. Participants had a mean age of 23.94 years (SD = 4.28, range = 19–42 years) and a mean BMI of 22.15 kg/m² (SD = 3.44, range = 15.62–31.22 kg/m²). Based on established BMI categories, 10.2% of or participants were clinically underweight, 23.1% were clinically overweight, 1.9% were clinically obese, and the remainder were of normal weight. The majority of participants were of European Caucasian descent (72.3%), with the remainder being of Asian (16.7%) or African Caribbean descent (11.1%). Most participants were single (44.4%), while others were in a relationship (31.5%), married (19.4%), or of some other marital status (4.6%).

2.2. Measures

2.2.1. Photographic Figure Rating Scale

(PFRS; Swami, Salem, Furnham, & Tovée, 2008). To measure actual–ideal weight discrepancy, we used the PFRS, which consists of 10 photographic figures of real women representing each of the established BMI categories (see Swami, Salem, et al., 2008, for details). Participants were asked to rate the figure that most closely matched their own body and the figure with the body they would most like to possess. Responses were made on a 10-point scale (1 = Figure with the lowest BMI, 10 = Figure with the highest BMI) and, following Swami and Tovée (2009) an actual–ideal weight discrepency score was computed by taking the difference between unsigned (absolute) current and ideal ratings so that scores could only take on positive ratings. Previous work has shown that scores derived from the PFRS have high test–retest reliability after a 3 week interval (Swami, Salem, et al., 2008) and good discriminant validity (Swami, Taylor, & Carvalho, in press).

2.2.2. Body Appreciation Scale

(BAS; Avalos, Tylka, & Wood-Barcalow, 2005). The BAS measures aspects of positive body image and is a 13-item scale with a unidimensional structure when used among Western women (Avalos et al., 2005; Swami, Stieger, Haubner, & Voracek, 2008). All 13 items are rated on a 5-point Likert-type scale (1 = Never, 5 = Always) and scores for all items are averaged to obtain an overall BAS score (higher scores reflect greater body appreciation). The BAS shows good test–retest reliability (Avalos et al., 2005) and good construct and discriminant validity (Avalos et al., 2005; Swami, Stieger, et al., 2008). In the present study, Cronbach’s alpha for this scale was .96.

2.2.3. Sociocultural Attitudes Toward Appearance Questionnaire-3

(SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). The SATAQ-3 is a 30-item scale measuring the multi-dimensional impact of sociocultural influences on body image. The scale consists of four factors assessing the degree to which various media are considered an important source of Information about being attractive (Information), feeling pressured by various media to strive for cultural ideals of beauty (Pressure), endorsement and acceptance of media messages touting unrealistic ideals for female beauty and the striving towards these ideals (Internalization-General), and endorsement and acceptance of an athletic and toned body ideal (Internalization-Athlete). The four factors are internally reliable, with Cronbach’s alpha coefficients generally
exceeding .80 (e.g., Thompson et al., 2004). Items were rated on a 5-point Likert-type scale (1 = Definitely disagree, 5 = Definitely agree), and subscale scores were computed by taking the mean of items associated with each factor. In the present study, Cronbach’s alpha coefficients were as follows: Information, .86; Pressure, .89; Internalization-General, .89; and; Internalization-Athlete, .95.

2.2.4. Trait Emotional Intelligence Questionnaire

(TEIQue v. 1.50; Petrides, 2009). The TEIQue is a 153-item questionnaire that is rated on a 7-point Likert-type scale (1 = Strongly disagree, 7 = Strongly agree). In addition to global trait EI, the TEIQue yields scores on 15 facets and four factors, namely Well-being (covering self-esteem, happiness, and optimism), Self-control (covering low impulsiveness, stress management, and emotion regulation), Emotionality (covering emotion expression, relationships, empathy, and emotion perception), and Sociability (covering assertiveness, emotion management, and social awareness). The TEIQue provides comprehensive coverage of the trait EI sampling domain and has been shown to have very good psychometric properties (e.g., see Frenkenthaler, Neubauer, Gabler, Scherl, & Rindermann, 2008; Mikolajczak et al., 2007), even in small samples (Petrides, Niven, & Mouskounti, 2006). Internal consistencies (Cronbach’s alpha) for global trait EI and the four factor scores in the present study were: global trait EI, .98, Well-being, .96, Self-control, .92, Emotionality, .95, and Sociability, .93.

2.2.5. Demographics

Participants provided their demographic details consisting of age, ethnicity, marital status, height, and weight. The latter items were used to calculate participants’ BMI as kg/m².

2.3. Procedure

Once ethical approval was obtained from the relevant university ethics committee, potential participants were directly recruited by a female experimenter from various campus sites. The only inclusionary criterion was that participants should be of adult age. Of a total of 128 individuals who were invited to take part in the study, 108 individuals agreed, representing a response rate of 84.4%. Participants were provided with a paper-and-pencil questionnaire in which the order of the scales above was partially randomized (participants always provided their demographic details last). All participants took part on a voluntary basis and were not remunerated for participation. They were assured of their anonymity and confidentiality, and were verbally debriefed once they had returned their questionnaire to the experimenter.

3. Results

3.1. Descriptive statistics and correlations

Descriptive statistics (Ms and SDs) for actual–ideal weight discrepancy, body appreciation, SATAQ-3 scores, trait EI scores, and participant BMI are reported in Table 1. As can be seen, actual–ideal weight discrepancy was negatively correlated with all four trait EI facets and global trait EI, whereas body appreciation was positively correlated with them.

3.2. Multiple regressions

To examine the predictive validity of trait EI, we computed two multiple hierarchical regressions with actual–ideal weight discrepancy and body appreciation as the dependent variables, respectively. For these regressions, participant BMI was included in a first block on its own, the SATAQ-3 factors were included in a second block, and the four trait EI factors were entered in a third block. Results are reported in Table 2. In the final model, actual–ideal body weight was only significantly predicted by participant BMI (positively) and trait EI Well-being (negatively), with the trait EI factors, however, accounting for a substantial and statistically significant 6.0% of additional variance over BMI and media influence. In the regression with body appreciation as the criterion, the SATAQ-3 factor of Pressures and trait EI Well-being emerged as the only significant predictors in the final model (negative and positive, respectively). It was notable that, in relation to body appreciation, the trait EI factors accounted for a remarkable 25.0% of additional variance over-and-above BMI and media influence.

4. Discussion

This is the first study to examine the associations between trait EI, operationalised using the TEIQue (Petrides, 2009), actual–ideal weight discrepancy, and body appreciation, respectively. Our results showed that the trait EI Well-being significantly predicted both actual–ideal weight discrepancy and body appreciation, accounting for 6.0% and 25.0% of the variance, respectively. Indeed, Well-being emerged as a significant predictor even after

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Descriptive statistics and bivariate correlations between actual–ideal weight discrepancy, body appreciation, participant body mass index, media influences, and trait emotional intelligence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) AWID</td>
<td>- .58* &lt; .05  .54** .70 .59** .40** .59** .54** .53** .53** .50** .56**</td>
</tr>
<tr>
<td>(2) Body appreciation</td>
<td>-.46** -.16 -.76** -.24 -.36** .88** .84** .83** .80** .87**</td>
</tr>
<tr>
<td>(3) BMI</td>
<td>.16 .48** .22 .12 .41** .42** .39 .39 .33 .40**</td>
</tr>
<tr>
<td>(4) Information</td>
<td>.24** .46** .29 .09 .10 .06 .03 .07</td>
</tr>
<tr>
<td>(5) Pressures</td>
<td>.38** .49** -.70** -.69** .65 .65** -.70**</td>
</tr>
<tr>
<td>(6) I-G</td>
<td>.43** -.15 -.09 .01 .03 .05</td>
</tr>
<tr>
<td>(7) I-A</td>
<td>-.28** -.24** -.21** -.26** -.26**</td>
</tr>
<tr>
<td>(8) Well-being</td>
<td>.91** .91** .90** .95**</td>
</tr>
<tr>
<td>(9) Self-control</td>
<td>.87** .86** .95**</td>
</tr>
<tr>
<td>(10) Emotionality</td>
<td>.93 .97</td>
</tr>
<tr>
<td>(11) Sociability</td>
<td>.96</td>
</tr>
<tr>
<td>(12) Global trait EI</td>
<td>M 1.60 3.46 22.19 3.16 2.61 3.19 2.81 4.70 4.17 4.72 4.52 4.51</td>
</tr>
<tr>
<td>SD</td>
<td>1.43 1.03 3.44 0.47 0.82 0.55 0.61 1.38 1.13 1.29 1.23 1.21</td>
</tr>
</tbody>
</table>

Note: N = 108. AWID = actual–ideal weight discrepancy; BMI = body mass index; I-G = Internalization-General; I-A = Internalization-Athlete; EI = emotional intelligence.

*p < .05.

**p < .001.
controlling for the effects of participant BMI and media influence. In general, our results are consistent with previous work showing a role for EI-related constructs in the development of negative body image (Hayaki et al., 2002) and, by extension, eating disorders (Costarelli et al., 2009; Markey & Vander Wal, 2007).

More specifically, our results suggest that the Well-being component of trait EI is conducive to the development of healthier body image. That is, women who have higher self-esteem, have more positive outlooks, and are more subjectively happy appear to have more positive attitudes and respect towards their bodies and may also select an ideal body size that is nearer to the actual body size. It may further be suggested that disordered eating occurs in response to negative affective states (e.g., lower subjective happiness), which temporarily decreases the levels of negative emotions and thereby reinforces disordered eating habits (Markey & Vander Wal, 2007). Of course, the correlational design of the present study does not preclude an alternative explanation, namely that more positive body image or a smaller discrepancy between actual and ideal body size results in improved psychological Well-being.

It is also noteworthy that trait EI Well-being was more strongly predictive of body appreciation than of actual–ideal body weight discrepancy. This result may have potential implications for the treatment of individuals with negative body image. Specifically, our results suggest that enhancing an individual’s Well-being (that is, their self-esteem, happiness, and optimism) may concurrently improve body appreciation. This is perhaps not surprising given that the operationalization of body appreciation in the present study included a measure of positive esteem towards one’s own body (see Avalos et al., 2005). On the other hand, our results also suggest that improving trait EI Well-being may have limited utility in alleviating body dissatisfaction, where the latter is operationalized as actual–ideal weight discrepancy.

In this sense, our results are consistent with intervention studies showing that improved self-esteem and general Well-being might prevent at-risk women from developing eating disorders (Abraham, 2003; O’Dea & Abraham, 2000). In terms of our results, improved trait EI Well-being may help women deal with negative affect in relation to their bodies, buffering against symptoms of negative body image, such as a greater discrepancy between actual and ideal body sizes. Our results also suggest that trait EI may play a role in moderating perceived pressure from media sources, given that we found substantial negative correlations between the Pressures subscale of the SATAQ-3 and all four TEIQue factors. A number of limitations of the present study should be considered. First, in terms of sampling, our results may be specific to women at university and may not be applicable to women in the wider community. Furthermore, the small sample size, the lack of clinical evaluations of past or present eating disorder symptomatology, and the exclusive focus on women limit the generalizability of our findings. Finally, there was multicollinearity between the four trait EI factors, which affect their regression coefficients when entered together, as in the present study.

Despite these limitations, our results suggest that trait EI plays a role in shaping body image among college-aged women. The fact that this association emerged after controlling for other participant variables, namely weight status and media influence, is important because it suggests that trait EI has an independent relationship with measures of body image. In general, these results highlight a possible intervention path for the alleviation of negative body image through optimizing key aspects of trait EI, including Well-being. Future studies could further elaborate the present results by examining the associations between body image disturbance and EI-related factors, such as alexithymia and coping skills (for related work on bulimic symptomatology, see Markey & Vander Wal, 2007).

### References


### Table 2

Multiple hierarchical regressions with actual–ideal weight discrepancy and body appreciation.

<table>
<thead>
<tr>
<th>Block</th>
<th>Item</th>
<th>Actual–ideal weight discrepancy</th>
<th>Body appreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F (df) Adj. R²</td>
<td>St. β T</td>
</tr>
<tr>
<td>1</td>
<td>BMI</td>
<td>43.96  .29</td>
<td>.54 6.63 &lt;.001</td>
</tr>
<tr>
<td>2</td>
<td>Information</td>
<td>13.34  .06</td>
<td>.39 4.35 &lt;.001</td>
</tr>
<tr>
<td></td>
<td>Pressures</td>
<td>.04  .01  .685</td>
<td>.02 .24 .813</td>
</tr>
<tr>
<td></td>
<td>I-G</td>
<td>.31  .11  .002</td>
<td>.71 8.57 &lt;.001</td>
</tr>
<tr>
<td></td>
<td>I-A</td>
<td>.16  .71  .090</td>
<td>.04 0.50 .622</td>
</tr>
<tr>
<td></td>
<td>I-H</td>
<td>1.50  .136</td>
<td>.01 0.16 .870</td>
</tr>
<tr>
<td>3</td>
<td>BMI</td>
<td>9.87  .06</td>
<td>.34 3.87 &lt;.001</td>
</tr>
<tr>
<td></td>
<td>Information</td>
<td>.02  .21  .831</td>
<td>.01 0.03 .979</td>
</tr>
<tr>
<td></td>
<td>Pressures</td>
<td>.06  .43  .667</td>
<td>.17 2.42 .017</td>
</tr>
<tr>
<td></td>
<td>I-G</td>
<td>.16  .56  .111</td>
<td>.07 1.19 .237</td>
</tr>
<tr>
<td></td>
<td>I-A</td>
<td>.18  .57  .075</td>
<td>.05 0.097 .336</td>
</tr>
<tr>
<td></td>
<td>Trait EI Well-being</td>
<td>.56  .23  .023</td>
<td>.46 3.42 .001</td>
</tr>
<tr>
<td></td>
<td>Trait EI Self-control</td>
<td>.01  .01  .988</td>
<td>.12 1.10 .272</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>.03  .12  .905</td>
<td>.21 1.62 .109</td>
</tr>
</tbody>
</table>

Note: N = 108. BMI = body mass index; I-G = Internalization-General; I-A = Internalization-Athlete. EI = emotional intelligence.

* p < .001.


