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Characteristic emotional intelligence and emotional well-being

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Both theory and previous research suggest a link between emotional intelligence and emotional well-being. Emotional intelligence includes the ability to understand and regulate emotions; emotional well-being includes positive mood and high self-esteem. Two studies investigated the relationship between emotional intelligence and mood, and between emotional intelligence and self-esteem. The results of these studies indicated that higher emotional intelligence was associated with characteristically positive mood and higher self-esteem. The results of a third study indicated that higher emotional intelligence was associated with a higher positive mood state and greater state self-esteem. The third study also investigated the role of emotional intelligence in mood and self-esteem regulation and found that individuals with higher emotional intelligence showed less of a decrease in positive mood and self-esteem after a negative state induction using the Velten method, and showed more of an increase in positive mood, but not in self-esteem, after a positive state induction. The findings were discussed in the light of previous work on emotional intelligence, and recommendations were made for further study.

Emotional intelligence has been defined as the ability to adaptively perceive, understand, regulate, and harness emotions in the self and others (e.g., Salovey & Mayer, 1990; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). Those who write about emotional intelligence usually postulate that high levels of it contribute to success in important realms of life, such as education, work, and relationships (e.g., Goleman, 1995; Salovey & Mayer,

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1990). Evidence exists that emotional intelligence can be conceptualised and validly measured as either an ability (Ciarrochi, Chan, & Caputi, 2000; Mayer, Caruso, & Salovey, 1999) or a personality trait (Schutte & Malouff, 1999; Schutte et al., 1998).

Various authors have theorised that high emotional intelligence would lead to greater feelings of emotional well-being (Goleman, 1995; Saarni, 1999; Salovey & Mayer, 1990; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Those who are able to understand and regulate their emotions should be able to generally maintain a better outlook on life and experience better emotional health. Some empirical evidence that emotional intelligence is associated with emotional well-being comes from research indicating that higher emotional intelligence is associated with less depression (Martinez-Pons, 1997; Schutte et al., 1998), greater optimism (Schutte et al., 1998), and greater life satisfaction (Ciarrochi et al., 2000; Martinez-Pons, 1997). Thus, both theory and previous research suggest a link between emotional intelligence and emotional well-being.

Two important aspects of individuals' emotional well-being are characteristic mood and self-esteem, a component of which is affective evaluation of the self. Mood is a cornerstone of emotional well-being (e.g., Ekman & Davidson, 1994; Salovey et al., 1995; Thayer, 1996). Research indicates that in addition to having a state component, mood also is a lasting characteristic, similar to a personality trait (e.g., Watson & Clark, 1994; Watson, Clark, & Tellegen, 1988). This research also indicates that there are two distinct mood characteristics, typical positive and typical negative affect. Positive and negative affect seem to be separate dimensions that do not correlate substantially with each other (e.g., Watson & Clark, 1994; Watson et al., 1988). High positive affect comprises feelings of enthusiasm and alertness, whereas low positive affect involves feelings of sadness and lethargy; high negative affect comprises aversive affect such as anger and fear, whereas low negative affect involves feelings of calmness and serenity (e.g., Watson et al., 1988). Positive mood seems to support approach behaviour, while negative mood seems to support avoidance behaviour, and the two affect systems appear to follow somewhat different neural processes (Watson, Weise, Vaidya, & Tellegen, 1999). Both low positive affect and high negative affect have been found to relate to general distress and dysfunction, depression, and state anxiety (Watson et al., 1988). It should be noted that although much research supports categorising mood along the dimensions of positive and negative, there are also other useful conceptualisations of the structure of mood, such as pleasant versus unpleasant and aroused versus calm (Mayer, Salovey, Gomberg-Kaufman, & Blainey, 1991).

Individuals' self-esteem is their positive or negative affective self-evaluation, which is tied to perception of self-worth or value (e.g., Leary, 1999a,b; Mruk, 1995). Bednar, Wells, and Peterson (1989) suggested that level of self-esteem is the outcome of a self-evaluative affective process. In other words, when people

feel they are doing well they feel good about themselves and have higher self-esteem.

Much research has focused on the beneficial aspects of self-esteem and has found that high self-esteem is related to a variety of positive mental health indices, such as less depression, less anxiety, less loneliness, less social anxiety, and less alcohol and drug abuse (e.g., Leary, 1999b). Smith and Petty (1995) found that high self-esteem was related to positive thinking in an unpleasant situation. However, recent research has also found that in some individuals excessively high self-esteem may also have negative correlates, such as higher aggression (Baumeister, Smart, & Boden, 1996).

One might expect that individuals with higher emotional intelligence would use their ability to understand and regulate emotions to maintain more positive mood and higher self-esteem. For instance, an emotionally intelligent man who earns a top score on a graduate admissions test might think back to the high score frequently and recall his happiness, which might help him maintain a positive mood and high self-esteem and encourage him to work hard enough to continue to achieve at a high level in the future.

One might also expect that individuals higher in emotional intelligence would be better able to resist situational threats to positive mood and self-esteem. For instance, when an emotionally intelligent girl is teased by her classmates, she might minimise how much her mood and self-esteem are harmed by interpreting the teasing as showing bad manners and feel glad that she does not engage in that behaviour or succumb to it.

Ciarrochi et al. (2000) used the Multi-factor Emotional Intelligence Scale to study emotional intelligence as an ability (e.g., to determine emotions of others through facial or other clues). The researchers found a correlation between emotional intelligence and characteristic self-esteem. After having research participants complete the test, the researchers showed some participants a humorous film, some a neutral film, and some a film about dying from cancer. The researchers then asked the participants to complete a mood measure created for the study. As hypothesised, individuals with high emotional intelligence (EI) reported a higher mood after the humorous film than did low EI participants. However, high EI participants did not show a higher mood than did low EI participants after the film about dying. The researchers speculated that high EI individuals might not experience better mood than low EI individuals after a negative experience like a film about dying from cancer because high mood may not be adaptive at that time. It may be better for a person to continue with the negative mood.

One purpose of the following studies was to test empirically whether emotional intelligence measured as a trait is related to: (a) trait and state mood, with separate measures of positive and negative moods, and (b) trait and state self-esteem. A second purpose was to test whether emotional intelligence measured as a trait predicts effectiveness of mood management and self-esteem management after psychological manipulations intended to alter these states.

STUDY 1

Overview

Emotional intelligence comprises the ability to adaptively understand and regulate emotions. Thus, individuals higher in emotional intelligence should experience a higher level of positive affect and a lower level of negative affect. Initial support for this hypothesis comes from research by Ciarrochi et al. (2000), who found that individuals who scored higher on an ability measure of emotional intelligence had more positive mood after watching a humorous film than did individuals who scored low on the measure. Ciarrochi et al. (2000) assessed positive and negative mood as one construct. An extension of this research would be to examine the two mood dimensions separately. Study 1 tested the hypothesis that higher emotional intelligence measured as a trait is associated with higher characteristic positive mood and lower characteristic negative mood.

Method

Participants

A total of forty participants were recruited from among employees of a retail store in the southeastern United States. These individuals, who were not paid for their participation, had an average age of 30.16 (SD = 10.93); 31 were women and 9 were men.

Measures

Emotional Intelligence Scale. This 33-item self-report scale, developed by Schutte et al. (1998), assesses the extent to which respondents characteristically identify, understand, harness, and regulate emotions in themselves and in others. Sample items include "I can tell how other people are feeling by listening to the tone of their voice", "I know why my emotions change", "When I feel a change in emotions, I tend to come up with new ideas", and "I help other people feel better when they are down". Respondents rate themselves on each item from 1 (strongly disagree) to 5 (strongly agree). Scale scores can range from 33 to 165.

Schutte et al. (1998) reported internal consistency of .87 to .90 and two week test-retest reliability of .78. Evidence of validity includes correlations with measures of attention to feelings, clarity of feelings, mood repair, optimism, impulse control, lack of depressed affect (Schutte et al., 1998), empathic perspective taking, self-monitoring in social situations, closeness and warmth of relationship, and marital satisfaction (Schutte et al., 2001). Emotional Intelligence Scale scores predicted cooperation in a Prisoner's Dilemma situation (Schutte et al., 2001), persistence under frustrating circumstances (Schutte,

Schuettpelz, & Malouff, in press), adjustment to college in college freshmen (Malouff & Schutte, 2000a,b), first year college grades (Schutte et al., 1998), and performance ratings in an undergraduate psychology internship (Malouff & Schutte, 1998). Scale scores also significantly discriminated between psychotherapists and both substance abusers and prisoners (Schutte et al., 1998). The scale showed some evidence of discriminant validity in that in a sample of college students the scale was not related to SAT scores. In another sample, scores on the scale were significantly correlated ($r = .54$) with only one of the big five factors, openness to experience; correlations with the other big five factors ranged from .21 to .28 (Schutte et al., 1998).

Based on a factor analysis which suggested a strong first factor encompassing all branches of the Salovey and Mayer (1990) emotional intelligence model which provided the theoretical basis for the scale, Schutte et al. (1998) recommended using total scores on the 33-item scale and not using subscale scores. An unpublished data analysis by Malouff and Schutte using scores from a different large set of respondents largely confirmed this original one-factor solution. However, a factor-analytic study by Petrides and Furnham (2000), indicated a four-factor solution for the 33 items. The four could be labelled as follows: perception of emotions, managing emotions in the self, social skills or managing others' emotions, and utilising emotions. Using a confirmatory factor analysis, Ciarrochi, Chan, and Bajgar (in press) found a best fit for the four-factor model. However, they also obtained a satisfactory fit for the one-factor model (Ciarrochi et al., in press).

Positive Affect and Negative Affect Schedule (PANAS). The PANAS (Watson et al., 1988) measures positive and negative affect. It has 10 self-report items for each construct. The positive affect scale includes items such as "enthusiastic", "proud", and "active". The negative affect scale includes items, such as "upset", "hostile", and "nervous". Respondents rate themselves on each item from 1 (very slightly or not at all) to 5 (extremely). Scores on each scale can range from 10 to 50. The PANAS has different instructions for different time periods ranging from how the respondent feels right now this moment (state affect) to how the respondent generally feels (characteristic or trait affect). Study 1 used the instruction for how the respondent generally feels.

The PANAS scales were developed through orthogonal factor analysis. The initial report of the scale by Watson et al. (1988) provided the following psychometric data. Cronbach's alpha for the two scales ranged from .85 to .88 for the moment and general time instructions. Eight week stability correlations for the scales ranged from .68 to .71 for the general time instruction and from .45 to .54 for the right now time instructions. Positive affect and negative affect scores discriminated between psychiatric inpatients and normals, with especially large differences on negative affect. Finally, the positive and negative affect scales

correlated positively with measures of psychopathology, with the negative affect scales showing consistently larger correlations.

Procedure

The participants completed a measure of emotional intelligence developed by Schutte et al. (1998) and the PANAS measures of characteristic positive and negative affect (Watson et al., 1988). These scales are described above.

Results

The participants' average emotional intelligence score was 130 (SD = 14.99), with a range of 97–154; their average characteristic positive mood score on the PANAS was 39.95 (SD = 5.74), with a range of 28–50; and their average characteristic negative mood score on the PANAS was 19.65 (SD = 6.84), with a range of 10–36. Higher emotional intelligence was significantly associated with greater characteristic positive mood, $r(39) = .55, p < .0001$, but was not associated with lower characteristic negative mood, $r(39) = -.04, n.s.$

STUDY 2

Overview

Because individuals with higher emotional intelligence are better able to understand and regulate emotions, one might expect that they would maintain a more positive affective self-evaluation, resulting in higher self-esteem. Preliminary support for this notion comes from research by Ciarrochi et al. (2000), who found that individuals who scored higher on an ability measure of emotional intelligence reported higher self-esteem. Study 2 tested the hypothesis that higher emotional intelligence measured as a trait is related to greater self-esteem.

Method

Participants

A sample of 50 participants was recruited from nursing home employees and students at a college in the southeastern United States. These individuals, who were not paid for their participation, had an average age of 28.10 (SD = 8.75); 38 of the participants were women and 12 were men.

Measures

Emotional Intelligence Scale. The emotional intelligence scale developed by Schutte et al. (1998) has good reliability and validity. See Study 1 for a full description.

Rosenberg Self-Esteem Scale. The Rosenberg Self-Esteem Scale (Rosenberg, 1965, 1989) has 10 self-report items. Respondents use a 4-point Likert scale (strongly disagree to strongly agree) to rate themselves on items such as ‘‘I am satisfied with myself’’. Scale scores can range from 10 to 40. This widely used scale has good reliability. Fleming and Courtney (1984), for instance, found a Cronbach’s alpha of .88 and one-week test-retest reliability of .82. Scores on the scale have been found to be associated with a plethora of theoretically related measures, including positive correlations with other measures of self-esteem and negative correlations with measures of maladjustment and unhealthy perfectionism (Fleming & Courtney, 1984; Rosenberg, 1965, 1989; Stumpf & Parker, 2000).

Procedure

The participants completed the measure of emotional intelligence developed by Schutte et al. (1998) and the Rosenberg Self-Esteem Scale. These scales are described above.

Results

The participants’ average emotional intelligence score was 133.46, $SD = 14.62$, with a range of 93–157; and their average self-esteem score was 34.00, $SD = 5.60$, with a range of 21–40. Higher emotional intelligence was significantly associated with higher self-esteem, $r(49) = .57, p < .0001$.

STUDY 3

Overview

The first two studies found that emotional intelligence was associated with more characteristic positive mood and higher characteristic self-esteem. Emotional intelligence allows individuals to more easily recognise, understand, and regulate their emotions. These qualities might allow individuals with higher emotional intelligence to better resist influences from the environment that could depress their mood or lead them to view themselves in a negative light. If this is the case, then the characteristically higher positive mood and self-esteem of those with high emotional intelligence may be due to an accumulation of instances in which these individuals were able to ward off negative situational influences or maximise the impact of positive situational influences. In order to study this possibility, it was necessary to shift from studying mood and self-esteem as traits to studying them as situationally influenced states.

There is agreement among theorists and researchers (e.g., Watson et al., 1988; Watson & Clark, 1994; Lazarus, 1994) that moods manifest themselves as both states and traits. Further, according to the sociometer theory of self-esteem (Leary, 1999a,b) an individual’s self-esteem is based on feedback recently

received by others. Thus, it is possible that self-esteem has state as well as trait elements.

In Study 3, we set out to examine the relationship between the trait of emotional intelligence and mood and self-esteem states and the role of emotional intelligence in mood and self-esteem management by testing the following six hypotheses:

1. That higher emotional intelligence would be related to a greater momentary positive mood (i.e., positive mood assessed as a state). Study 1 found higher emotional intelligence was related to greater characteristic positive mood. If many state-episodes of greater positive mood combine to create this greater characteristically positive mood, then one might expect that higher emotional intelligence is also generally related to momentary positive mood.

2. That higher emotional intelligence would be related to greater momentary self-esteem (i.e., self-esteem assessed as a state). Study 2 found that higher emotional intelligence was related to higher trait self-esteem. If many state-episodes of higher self-esteem combine to create higher trait self-esteem, then one might expect that higher emotional intelligence is also generally related to momentary self-esteem.

3. That higher emotional intelligence would be related to less of a decrease in positive mood after a negative state induction. The ability to adaptively recognise, understand, and regulate emotions should make individuals less vulnerable to the effects of environmental influences on positive mood.

4. That higher emotional intelligence would be related to less of a decrease in self-esteem after a negative state induction. Higher emotional intelligence should make individuals less susceptible to the effects of environmental influences on self-esteem.

5. That higher emotional intelligence would be related to a greater increase in positive mood after a positive state induction. Those with higher emotional intelligence might be better able to maximise the impact of positive environmental influences, dwelling on positive environmental cues to intensify positive mood.

6. That higher emotional intelligence would be related to a greater increase in self-esteem after a positive state induction. Those with higher emotional intelligence might maximally harness positive cues from the environment to enhance feelings of self-esteem.

Method

Participants

A sample of 47 participants was drawn from among the employees and students in several colleges and universities in the midwestern and southeastern United States. These individuals, who were not paid for their participation, had

an average age of 37.44 ($SD = 14.01$). Thirty-five were women, 11 were men, and one did not report gender.

Procedure

Participants completed the measure of emotional intelligence developed by Schutte et al. (1998) described in Study 1, the previously validated state version of the PANAS positive mood scale (Watson et al., 1988) described in Study 1, and a new state version of the Rosenberg (1965) Self-Esteem Scale. A state version of the Rosenberg Self-Esteem Scale described in Study 2 was created for purposes of the present study by modifying items so that participants could describe their current feelings of self-esteem.

After completing the first set of measures, participants went through the Velten (1968) negative state induction, reading a set of 35 statements that have previously been found to induce a negative mood state. Some of these Velten statements, such as "Every now and then I feel so tired and gloomy that I'd rather just sit than do anything" related primarily to mood; other statements, such as "I've had important decisions to make in the past, and I've sometimes made the wrong ones" related primarily to self-worth; and some statements, such as "I can remember times when everybody but me seemed full of energy" related to both mood and self-worth. In a review of state induction procedures, Gerrards-Hesse, Spies, and Hesse (1994) reported that in 94 studies comparing the Velten negative state induction to either a neutral or positive state induction, 82 showed the Velten negative state induction to be successful. After reading the Velten statements, participants again completed the state PANAS positive mood scale and the state self-esteem scale.

Finally, participants went through the Velten (1968) elation induction, reading 35 statements that previously have been found to induce a positive state. Some of these Velten statements such as "I feel cheerful and lively" related primarily to mood; other statements, such as "I'm able to do things accurately and efficiently" related primarily to self-worth; and some statements such as "In a buoyant mood like this one, I can work fast and do it right the first time" related to both mood and self-worth. In their review of state induction procedures, Gerrards-Hesse et al. (1994) reported that in 80 studies comparing the Velten positive state induction to either a neutral or negative state induction, 66 showed the Velten positive state induction to be successful. After reading the statements participants again completed the state PANAS positive mood scale and the state self-esteem scale.

Results

Main analyses

Because we used a modified (state) Rosenberg Self-Esteem Scale for this study, we first tested the reliability and validity of the scale. Cronbach's alpha

was .82, suggesting adequate reliability for research purposes. Scores on the scale correlated significantly with positive mood before the negative state induction, $r(47) = .47$, $p < .001$, after the negative state induction, $r(45) = .72$, $p < .0001$, and after the positive state induction, $r(46) = .56$, $p < .0001$, providing the state self-esteem scale with initial evidence of validity.

The average emotional intelligence score of the participants was 131.17, $SD = 14.37$, with a range of 93–158. Table 1 shows their average scores on positive affect and self-esteem before and after the negative state induction, and after the positive state induction.

The negative state induction was successful in decreasing participants' positive mood, $t(46) = 4.89$, $p < .001$, and self-esteem, $t(46) = 3.44$, $p < .001$. The positive state induction was successful in significantly increasing participants' positive mood; $t(46) = 4.75$, $p < .0001$, and self-esteem; $t(46) = 3.46$, $p < .001$.

Hypothesis 1 was supported in that higher emotional intelligence was associated with a significantly more positive mood state, as measured before the induction, $r(46) = .47$, $p < .001$. Hypothesis 2 was supported in that higher emotional intelligence was also associated with greater state self-esteem, as measured before the induction, $r(46) = .54$, $p < .0001$.

To calculate the association between emotional intelligence and decreases in positive mood and self-esteem after the negative induction and increases in positive mood and self-esteem after the positive state induction, we used partial correlations holding constant the immediately prior level of the state being assessed. For example, the pre-negative state induction measure of positive mood was held constant in the correlation between emotional intelligence and positive mood after the negative state induction.

Hypothesis 3 was supported in that higher emotional intelligence measured before the negative state induction was associated with less decrease in positive mood, $r(43) = .38$, $p < .01$. Hypothesis 4 was supported in that higher emotional intelligence was associated with less decrease in self-esteem, $r(42) = .38$, $p < .01$, after the negative state induction. Hypothesis 5 was supported in that higher

TABLE 1
Average scores on positive affect and self-esteem before and after a negative state induction and after a positive state induction ($N = 47$)

Induction	Positive affect		Self-esteem	
	Mean	(SD)	Mean	(SD)
Before induction	38.57	(8.39)	34.70	(4.27)
After negative induction	32.50	(12.22)	32.31	(6.09)
After positive induction	38.20	(9.65)	34.78	(4.92)

emotional intelligence was associated with a greater increase in positive mood from before to after the positive state induction; $r(42) = .35, p < .02$. Hypothesis 6 was not supported in that there was no significant association between emotional intelligence and change in self-esteem from before to after the positive state induction, $r(42) = .17, n.s.$

Supplementary analyses

Overview. Studies 1 and 2 showed a strong association between emotional intelligence and characteristic mood and characteristic self-esteem. This raises the issue of the extent to which emotional intelligence is different from positive affect and self-esteem. If there is substantial overlap in the constructs, then it might be that the high characteristic self-esteem or positive affect associated with high emotional intelligence accounts for the maintenance of a higher positive mood state and a higher self-esteem state after a negative state induction and more rapid recovery of a high positive mood state after a positive state induction found in Study 3. To examine this issue, we split the items on the emotional intelligence scale according to how related they were to characteristic mood, as assessed in Study 1, and how related they were to characteristic self-esteem, as assessed in Study 2. If effect of emotional intelligence on mood and self-esteem maintenance and recovery is completely distinct from the effects of characteristic mood and self-esteem, then the split item sets should show similar patterns of relationships to mood and self-esteem maintenance and recovery in Study 3; however, if there is overlap between the constructs, then the split item sets should show a different pattern of results.

Selection of emotional intelligence items related and unrelated to mood and self-esteem. We calculated the correlation between each of the 33 items on the emotional intelligence scale and characteristic positive mood using the Study 1 dataset. On the basis of this analysis we selected the 16 items that were most correlated with positive mood and the 16 items that were least correlated with positive mood. The item in the middle of this median split was not included in either set. The combined 16 items from the first set were highly related to characteristic positive mood, $r(39) = .71, p < .0001$, while the combined 16 items from the second set were not significantly related to characteristic positive mood, $r(39) = .20, n.s.$

We also calculated the correlation between each of the emotional intelligence items and characteristic self-esteem using the Study 2 dataset, and on the basis of this analysis selected the 16 items most correlated with self-esteem and the 16 items least correlated with self-esteem. The combined 16 items from the first set were highly related to self-esteem, $r(49) = .73, p < .0001$, while the combined 16 items from the second set were not significantly related to self-esteem, $r(49) = .21, n.s.$

Re-analysis of the relationship between emotional intelligence and state positive mood and state self-esteem in Study 3. Higher scores on the set of 16 emotional intelligence items associated with characteristic positive mood were associated with a significantly more positive mood state, as measured before the induction, $r(46) = .42, p < .001$; higher scores on the 16 emotional intelligence items not associated with characteristic positive mood state were also significantly associated with a more positive mood state, $r(46) = .45, p < .001$. Higher scores on the 16 emotional intelligence items associated with characteristic self-esteem were associated with significantly more state self-esteem, as measured before the induction, $r(46) = .47, p < .001$; higher scores on the 16 emotional intelligence items not associated with characteristic self-esteem were also significantly associated with more state self-esteem, $r(46) = .35, p < .02$.

We next examined the relationship between the split item sets and decreases in positive mood and self-esteem after the negative induction and increases in positive mood and self-esteem after the positive state induction. As in the original analyses, we used partial correlations holding constant the immediately prior level of the state being assessed. Higher scores on both the characteristic-mood related and the characteristic-mood unrelated sets of emotional intelligence items were associated with less decrease in positive mood after the negative state induction, $r(43) = .46, p < .001$ and $r(43) = .34, p < .01$, respectively. Higher scores on both the characteristic self-esteem related and the characteristic self-esteem unrelated sets of emotional intelligence items were associated with less decrease in positive mood after the negative state induction, $r(43) = .56, p < .0001$ and $r(43) = .27, p < .04$, respectively.

Higher scores on both the characteristic-mood related and the characteristic-mood unrelated sets of emotional intelligence items were associated with a greater increase in positive mood after the positive state induction, $r(43) = .32, p < .02$ and $r(43) = .34, p < .01$, respectively. Scores on neither the characteristic self-esteem related nor the characteristic self-esteem unrelated sets of emotional intelligence items were associated with a greater increase in state self-esteem after the positive state induction, $r(43) = .11, n.s.$ and $r(43) = .10, n.s.$, respectively.

DISCUSSION

Two studies showed that higher emotional intelligence was associated with more characteristically positive mood and higher self-esteem, but not with lower characteristically negative mood. A third study found that higher emotional intelligence was related to a more positive mood state and greater state self-esteem. The third study also found that individuals with higher emotional intelligence were better able to maintain positive mood and self-esteem when faced with a negative state induction and maximise the positive mood impact of a positive state induction.

The three studies provide some insight into possible connections between emotional intelligence and emotional well-being. Individuals high in emotional intelligence have a greater ability to perceive, understand, regulate, and harness emotions (e.g., Salovey & Mayer, 1990; Schutte et al., 1998). This ability may enable them to maintain higher characteristic positive mood states, explaining the association between higher emotional intelligence and positive mood found in Study 1. This characteristically positive mood may be the product of many episodes of positive mood states. Some support for this view comes from the finding of Study 3 that higher emotional intelligence was related to a more positive mood state. A low positive mood state comprises feelings of sadness and lethargy (e.g., Watson et al., 1988), which may be components of depression. Thus the present findings that lower emotional intelligence is related to lower positive mood fits the pattern of previous research by Schutte et al. (1998) and Martinez-Pons (1997) who found that lower emotional intelligence was related to more depression, which is characterised by low positive mood.

Contrary to what we had hypothesised, individuals high in emotional intelligence did not show lower characteristic negative mood. Watson et al. (1988) and others have found that positive and negative mood are two separate dimensions. Even though the two types of mood states are distinct, we would have expected the mood regulation component of emotional intelligence to enable those high in emotional intelligence to maintain lower negative moods. This finding that there was no significant correlation between emotional intelligence and negative mood may shed some light on the finding of Ciarrochi et al. (2000) that level of emotional intelligence did not predict which individuals would keep their mood up after watching a film about dying from cancer. The mood measure in that study included elements of both positive and negative mood, and the participants may have focused on negative mood elements. The present findings suggest that emotional intelligence does not play a role in minimising negative mood.

The finding of Study 2 that individuals with higher emotional intelligence had higher characteristic self-esteem confirms the earlier finding of Ciarrochi et al. (2000) that emotional intelligence measured as an ability correlated with characteristic self-esteem. The finding also supports the view of Bednar et al. (1989) that self-esteem is the outcome of a self-evaluative affective process. The understanding and regulation of emotions components of emotional intelligence may facilitate positive affect in the self-evaluative process. The finding of Study 3 that self-esteem assessed as a state significantly decreased after a negative state induction and significantly increased after a positive state induction supports Leary's (1999a,b) view that self-esteem is the result of specific feedback from the environment and that it can thus be a state as well as a trait.

Individuals high in emotional intelligence may be able to maintain higher positive mood states and higher self-esteem states because their emotion regulation abilities enable them to counter some of the influence of negative

situations and maximise the influence of positive situations. Evidence for this idea comes from the findings of Study 3 that individuals higher in emotional intelligence showed less decrease in positive mood and less decrease in self-esteem after a negative state induction and more of an increase in positive mood after a positive state induction. However, Study 3 did not find that those higher in emotional intelligence showed a greater increase in self-esteem after a positive state induction.

Studies 1 and 2 showed a strong association between emotional intelligence and characteristic mood and characteristic self-esteem. This raises the issue of the extent to which emotional intelligence is different from positive affect and self-esteem. If there is substantial overlap in the constructs or the way the constructs are assessed, then it might be that the high characteristic self-esteem or positive affect associated with high emotional intelligence accounts for the maintenance of a higher positive mood state and a higher self-esteem state after a negative state induction and more rapid recovery of a high positive mood state after a positive state induction found in Study 3. A supplementary analysis of the data from Studies 1, 2, and 3 explored this possibility. A median split of the items comprising the emotional intelligence scale according to their degree of relatedness to characteristic positive mood, as measured in Study 1, resulted in one set of emotional intelligence items highly related to characteristic positive mood and another set not significantly related to characteristic positive mood. Similarly, a median split of the items comprising the emotional intelligence scale according to their degree of relatedness to characteristic self-esteem, as measured in Study 2, resulted in one set of emotional intelligence items highly related to characteristic self-esteem and another set not significantly related to characteristic positive mood. Splitting the items on the emotional intelligence scale in this fashion allowed us to examine the contribution of emotional intelligence to maintenance and recovery of positive mood and self-esteem in Study 3 independent of characteristic positive mood and characteristic self-esteem. Each of the hypotheses that was supported when emotional intelligence was assessed using the entire set of emotional intelligence items was also supported when only the set of emotional intelligence items not related to characteristic positive mood and characteristic self-esteem was used. However, for several analyses the association between the item set associated with either characteristic positive mood or self-esteem was higher than the association for the item set not associated with in the characteristic mood or self-esteem. The difference between the association of the self-esteem related emotional intelligence items and maintenance of self-esteem after a negative state induction and the association between the self-esteem unrelated emotional intelligence items and maintenance of self-esteem after a negative state induction was especially noteworthy. Our interpretation of this pattern of findings is that there is indeed some overlap between emotional intelligence and characteristic mood and self-esteem, and that this accounts for some of the mood maintenance and recovery

findings. However, there also seems to remain a significant contribution of emotional intelligence that is not accounted for by characteristic mood and self-esteem.

The findings of the present studies should be viewed in light of several limitations in the methods used. First, a high percentage of the research participants were female, so the possibility exists that the results might not generalise to males.

Second, all the assessment of constructs was through self-report and only the variables hypothesized to be associated were assessed. The use of all self-report measures and the lack of assessment of variables not expected to be associated with the variables of interest raises the possibility that common method covariance explains the correlations in Studies 1 and 2. Study 3 seems less susceptible to this influence because the outcome was change in self-report.

Third, in Study 3 the positive state manipulation always followed the negative mood manipulation. There was a significant difference between baseline mood and self-esteem and mood and self-esteem after the negative state induction; there was also a significant difference between mood and self-esteem after the negative state induction and mood and self-esteem after the positive state induction. However, the scores after the positive state induction were similar to those at baseline; therefore, it is hard to know whether the positive state induction led to the rise in mood and self-esteem or whether just the passage of time resulted in mood and self-esteem returning to baseline levels. Thus, the finding that higher emotional intelligence was associated with a greater increase in positive mood after the positive state manipulation might mean either that those higher in emotional intelligence are more responsive to positive stimuli or that they recover more rapidly after exposure to negative stimuli.

Fourth, the research methods were either correlational or quasi-experimental, raising the question of the direction of causation. Study 3 came closest to demonstrating causation in its finding that emotional intelligence predicted state mood/self-esteem change after a situational manipulation. It seems unlikely that changes in state measures caused a pre-existing trait level of emotional intelligence, so one could conclude that the association between emotional intelligence and positive mood/self-esteem is not explained by positive mood or self-esteem causing emotional intelligence. However, the possibility still exists that some unknown third variable underlies both emotional intelligence and situationally prompted level of change in mood and self-esteem.

If there is a third variable operating, emotional intelligence would still be important if the third variable operates through emotional intelligence. If, however, the third variable causes emotional intelligence and independently causes positive mood and self-esteem, emotional intelligence could not be said to contribute to positive mood or self-esteem. To test further the relationship between emotional intelligence and both mood and self-esteem, researchers

could use experimental interventions aimed at enhancing emotional intelligence for the purpose of increasing positive mood and self-esteem.

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