



## Brief Report

## Self-esteem moderates affective reactions to briefly presented emotional faces

Anne Richter<sup>a,1</sup>, Nathan Ridout<sup>b,\*</sup><sup>a</sup> Dept. of Addictive Behavior & Addiction Medicine, Central Institute of Mental Health, Square J5, 68159 Mannheim, Germany<sup>b</sup> Cognitive & Affective Neurosciences, School of Life & Health Sciences, Aston University, Aston Triangle B4 7ET, Birmingham, UK

## ARTICLE INFO

## Article history:

Available online 26 February 2011

## Keywords:

Self-esteem  
Emotional facial expressions  
Negative affect  
Mood  
Implicit processing  
Affective priming  
Sociometer

## ABSTRACT

According to the sociometer hypothesis individuals with low self-esteem experience increased negative affect in response to negative social stimuli, even when these stimuli are not perceived consciously. Using an affective priming paradigm, the present study examined whether trait self-esteem would moderate mood following briefly presented facial expressions. Results from 43 undergraduates revealed that, after controlling for baseline mood, anxiety and depression, the degree of negative affect experienced by the participants following exposure to expressions of anger and disgust varied as a function of their self-esteem. Implications for individuals with low-self esteem and our understanding of the link between self-esteem and negative affect are discussed.

© 2011 Elsevier Inc. All rights reserved.

## 1. Introduction

Self-esteem is defined as one's attitude or global affective orientation towards oneself (Rosenberg, 1965). While high levels of self-esteem are associated with happiness, low self-esteem has been linked to increased experiences of negative affect and is considered a vulnerability factor for a number of mental health problems (Leary & Baumeister, 2000). These findings highlight the importance of revealing the mechanisms through which low self-esteem may lead to increased experiences of negative emotion.

Previous research points to a number of ways in which low self-esteem might lead to negative feelings. For example, individuals with low self-esteem tend to overgeneralise the negative consequences of failure (Brown & Dutton, 1995), show a lower motivation to self-enhance after set-backs (Wood, Giordano-Beech, Taylor, Michela, & Gaus, 1994), a diminished motivation to 'repair' negative moods (Heimpel, Wood, Marshall, & Brown, 2002) and an increased tendency to dampen positive affect (Wood, Heimpel, & Michela, 2003).

A more intimate link between negative affect and low self-esteem is proposed by the 'sociometer hypothesis' (Leary, 2004; Leary & Baumeister, 2000). This theory considers self-esteem as a motivational-affective system that functions to continuously monitor a person's social environment for signs of rejection and acceptance. An individual's current feelings of self-esteem act as an internal, subjective marker ('sociometer') of the extent to which

the individual feels included versus excluded by other people. The sociometer hypothesis assumes that low self-esteem is rooted in part in repeated experiences of social rejection and criticism, which leave the individual particularly sensitive to negative social evaluations and preoccupied with potential social exclusion (Leary, 2004; Leary & Baumeister, 2000).

According to the sociometer hypothesis, the self-esteem system is characterised by the following central properties. Negative affect will be generated whenever interpersonal deficiencies are perceived and positive affect will be produced when a person feels accepted by others. In individuals with low self-esteem, the sociometer is thought to be set at a more critical value. As a result, these individuals may exhibit a greater tendency to be oversensitive to cues connoting potential relational devaluation, to detect inadequate amounts of acceptance in their environment, to misinterpret ambiguous interpersonal events as threats to acceptance and to overreact with negative affect and withdrawal to social situations (Leary, 2004). Conceivably, the setting of their sociometers may also predispose individuals with low self-esteem to react less positively to social acceptance. Hence, for these individuals, indices of social rejection might produce particularly intense experiences of negative affect, while social acceptance cues may have a weakened effect on positive moods. In contrast, individuals with high self-esteem may respond less intensely to minor signs of social disapproval. Leary (2004) and Leary and Baumeister (2000) also proposed that the self-esteem system operates automatically, at a level that does not require conscious awareness.

Evidence in support of these characteristics of the self-esteem system includes studies showing that individuals with low self-esteem react with more intense emotional distress to negative feedback (e.g. Pruessner, Hellhammer, & Kirschbaum, 1999) and

\* Corresponding author. Fax: +44 121 204 4090.

E-mail addresses: [anne.richter@zi-mannheim.de](mailto:anne.richter@zi-mannheim.de) (A. Richter), [n.ridout@aston.ac.uk](mailto:n.ridout@aston.ac.uk) (N. Ridout).<sup>1</sup> Fax: +49 621 1703 3505.

the finding that individuals with low, but not high, self-esteem automatically react with self-depreciation and withdrawal after being primed subliminally (90 ms) with interpersonal rejection words (Sommer & Baumeister, 2002).

To our knowledge, no previous studies have examined directly the moderating influence of self-esteem on automatic emotional reactions to subliminally presented valenced social information. Therefore, in order to address this question, we employed a masked affective priming task modelled closely on a paradigm utilised by Chartrand, van Baaren, and Bargh (2006, Study 1). These authors reported that subliminal (60 ms), masked affective words led to valence-congruent shifts in participants' reported moods. However, their study did not address the extent to which self-esteem contributed to the reported changes in mood, which is the primary aim of the present study. Given that faces are arguably the most important source of social information, we replaced the words with photographs of emotional faces in order to test our hypothesis. Drawing on the sociometer hypothesis, it was predicted that, in comparison to those with high self-esteem, individuals with low self-esteem would experience greater negative affect in response to subliminal cues of social rejection (facial expressions of anger & disgust). It was also expected that they would exhibit less positive affect after encountering subliminal stimuli representing social acceptance (happy expressions).

## 2. Method

### 2.1. Participants

Fifty-seven undergraduates participated for research credits. Two participants were excluded due to missing questionnaire data. Given that the focus of this study concerned implicit processes, 12 further participants were dropped from the main analyses because they recalled the correct valence of the face stimuli during debriefing. From the remaining 43 participants (38 females; mean age = 19.50; SD = 1.57), 20 were randomly allocated to the positive exposure condition and 23 to the negative.

### 2.2. Materials and procedure

After providing informed consent, all participants completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the Beck Depression Inventory (2nd ed.; Beck, Steer, & Brown, 1996), the trait scale of the State-Trait-Anxiety Inventory (Spielberger, 1983) and a set of six 100 mm visual analogue scales (VAS) assessing mood. A VAS-format was used to enable the accurate measurement of comparably small-scale mood changes and to reduce response sets. Participants were instructed to rate their momentary mood by marking the appropriate position on 100 mm lines (endpoints anchored from 'not at all' to 'extremely') presented together with the following adjectives: cheerful/happy; depressed/unhappy; tense/nervous; sociable; safe/secure; irritable. In line with the view that positive and negative affect are qualitatively distinct phenomena (Taylor, 1991), the responses to the three positive and the three negative adjectives were averaged to derive indices of positive and negative affect, respectively. There was a strong negative correlation between baseline ratings of positive and negative mood;  $r(43) = -.64, p < .001$ .

Participants were randomly assigned to either the positive or the negative condition and informed that they would be taking part in an experiment on social and non-social decision making. Consistent with the instructions used by Chartrand et al. (2006), participants were told that during the task they had to respond quickly and accurately to brief, flashing visual stimuli appearing at unpredictable places and times by indicating via button press whether they appeared on the right or left side of the screen.

Participants were exposed 96 times to four (2 male, 2 female) emotional facial displays from the Facial Expressions of Emotion: Stimuli and Tests (FEEST; Young, Perrett, Calder, Sprengelmeyer, & Ekman, 2002) that were either positive (happy) or negative (anger, disgusted). Anger and disgust expressions were chosen as social threat stimuli because they signal a readiness for physical or symbolic attack in the case of anger and rejection, revulsion and likely withdrawal from the observer in the case of disgust (i.e. social devaluation). The pictures ( $12.5 \times 9.5$  cm) were placed 7.5 cm (at angles of 45°, 135°, 225° and 315°) from the central fixation point, which participants had to fixate continuously. To preclude conscious awareness of the emotional expressions, the stimuli were presented very briefly (60 ms) and parafoveally (observer-monitor-distance <99 cm), and were immediately followed by a 60 ms mask (i.e. neutral face of the same individual). The inter-trial interval varied randomly between 2 and 7 s. The presentation of stimuli was randomised for each participant.

After the experiment, participants received a verbal debriefing. They were asked if any aspect of the study seemed strange or suspicious to them and whether they could recall the emotions displayed ("What emotions did the faces exhibit?"). None of the participants indicated that they had any doubts regarding the cover story (i.e. taking part in a decision making task). 12 participants reported the correct valence of the emotional expressions and were excluded from the main analyses.

## 3. Results

### 3.1. Preliminary analyses

The participants in the two exposure conditions did not differ significantly in sex ratio, age, self-esteem, depression, trait anxiety or baseline positive and negative mood, all  $ps > .05$ . Self-esteem ( $M = 19.30, SD = 3.96$ , Cronbach's  $\alpha = .85$ ) correlated significantly with baseline positive mood ( $M = 69.46; SD = 15.14; \alpha = .81; r = -.44, p = .003$ ), depression ( $M = 8.60; SD = 6.58; \alpha = .88; r = -.60, p < .001$ ) and anxiety ( $M = 40.26; SD = 8.09; \alpha = .85; r = -.69, p < .001$ ). There was a statistical trend for a negative correlation between self-esteem and baseline negative mood ( $M = 20.64; SD = 16.77; \alpha = .64; r = -.27, p = .08$ ). On average, positive mood decreased by 3.93 ( $SD = 8.91$ ) and negative mood increased by 2.37 ( $SD = 11.84$ ) following exposure to positive faces. In the negative condition, positive mood decreased by 8.01 ( $SD = 12.19$ ) and negative mood increased by 14.14 ( $SD = 18.97$ ) on average. The Cronbach's alphas for post-exposure positive and negative mood were .76 and .73, respectively.

### 3.2. Main analyses

To test the relationship between self-esteem and post-exposure mood for the positive versus negative condition while controlling for baseline mood, two hierarchical regression analyses were carried out entering baseline positive and negative mood, condition (dummy-coded 0 for negative condition), self-esteem (i.e. mean centred) and the condition  $\times$  self-esteem interaction term as predictors for post-exposure positive and negative mood, respectively.<sup>2</sup>

#### 3.2.1. Positive mood

As can be seen in Table 1, the only significant predictor of post-exposure positive mood was baseline positive mood, which explained around 55% of the variance. Neither condition or self-esteem

<sup>2</sup> The use of baseline mood as simple control variable was justified, as preliminary regressions revealed no significant interactions involving the predictors and baseline mood.

Download English Version:

<https://daneshyari.com/en/article/951577>

Download Persian Version:

<https://daneshyari.com/article/951577>

[Daneshyari.com](https://daneshyari.com)