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Brief research report

Unique associations between young adult men's emotional functioning and their body dissatisfaction and disordered eating

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ABSTRACT

Research on emotional functioning, body dissatisfaction, and disordered eating in males is predominated by studies of negative affect and emotion regulation. Other aspects of emotional functioning, namely emotion recognition and attentional biases toward emotional stimuli, have received little empirical attention. The present study investigated the unique associations between different aspects of men's emotional functioning and their disordered eating attitudes, muscularity dissatisfaction, and body fat dissatisfaction. Results from 132 male undergraduates showed that muscularity dissatisfaction was uniquely associated with both emotion regulation difficulties and an attentional bias toward rejecting faces. Body fat dissatisfaction was not uniquely associated with any aspect of emotional functioning. Disordered eating was uniquely associated with emotion regulation difficulties. Collectively, the results indicate differences in the patterns of associations between men's emotional functioning and their body dissatisfaction and disordered eating.

Introduction

Studies investigating the links between males' emotional functioning and their body dissatisfaction and disordered eating have mostly been limited to two aspects of emotion: negative affect and emotion regulation. Difficulties with emotion regulation are thought to precipitate disordered eating during periods of intense emotional distress and have been consistently associated with disordered eating in North American undergraduate men (Davis-Becker, Peterson, & Fischer, 2013; Lavender & Anderson, 2010; Robinson, Kosmerly, Mansfield-Green, & Lafrance, 2013). Studies have also found positive associations between emotion regulation difficulties and undergraduate men's body dissatisfaction (Lavender & Anderson, 2010), suggesting that emotion regulation is an important factor in men's body image and eating.

Research findings are more equivocal on the links between males' negative affect, body dissatisfaction, and disordered eating. Associations between negative affect and body dissatisfaction were not found in studies of obese men (Womble et al., 2001) and adolescent boys (McCabe, Ricciardelli, & Banfield, 2001). In contrast, Lavender and Anderson (2010) found that higher levels of negative affect significantly predicted body dissatisfaction in college-age men. These inconsistent results may be due to older research using measures of body dissatisfaction that were not designed for males. Moreover, a limitation of the research by Lavender and Anderson is that they did not examine muscularity dissatisfaction and body fat dissatisfaction separately. Research suggests that muscularity dissatisfaction and body fat dissatisfaction are related but distinct components of male body image (Bergeron & Tylka, 2007) that have differential patterns of associations with psychopathology, including disordered eating (Tylka, 2011; Tylka, Bergeron, & Schwartz, 2005). Research is more consistent in showing that negative affect predicts disordered eating in young men (Lavender & Anderson, 2010).

Two aspects of emotional functioning that have received limited empirical attention in men are the ability to recognize emotions in others and attentional biases toward emotional stimuli. Difficulties with emotion recognition may lead a person to misconstrue others' emotions toward them as negative, reinforcing disordered beliefs about eating and body image (Oldershaw, Hambrook, Stahl, Tchanturia, Treasure, & Schmidt, 2011). Emotion recognition difficulties are found in women with non-clinical disordered eating (Ridout, Thom, & Wallis, 2010), women with eating disorders (Harrison, Tchanturia, Naumann, & Treasure, 2011), and men and women with body dysmorphic disorder (Buhlmann, McNally, Etcoff, Tuschen-Caffier, & Wilhelm, 2004). Interestingly, Goddard, Carral-Fernández, Denneny, Campbell, & Treasure (2013) found no significant difference in emotion recognition between men with eating disorders and healthy control men. Collectively, these findings reveal potential sex differences in the link between emotion recognition and disordered eating. No studies of emotion

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recognition and disordered eating or body dissatisfaction have been conducted using non-clinical men.

Attentional biases toward aversive emotional stimuli, such as pictures of faces with judgmental or critical facial expressions, are thought to reinforce disordered beliefs surrounding body image and eating (Fairburn, Cooper, & Shafran, 2003). Attentional biases toward emotional stimuli including angry and rejecting faces have been observed in women with eating disorders (Cardi, Matteo, Corfield, & Treasure, 2013; Goddard et al., 2013). However, research by Goddard et al. (2013) comparing men with eating disorders and healthy control men found no significant differences in attentional biases toward angry faces, suggesting that attentional biases toward angry faces are not associated with men's disordered eating or body dissatisfaction. To date, no studies have investigated the link between these biases and either disordered eating or body dissatisfaction in undergraduate males.

The present study investigated the unique associations between men's emotional functioning and their disordered eating and body dissatisfaction. Four aspects of emotional functioning were assessed: negative affect, emotion regulation, emotion recognition, and attentional biases toward emotional stimuli. Men's muscularity and body fat dissatisfaction were assessed separately. It was hypothesized that higher levels of negative affect and poorer emotion regulation would uniquely predict men's disordered eating, muscularity dissatisfaction, and body fat dissatisfaction. Conflicting or absent evidence precluded the formulation of hypotheses about the links that emotion recognition and attentional biases would have with men's body dissatisfaction and disordered eating.

Method

Participants

One hundred and forty males enrolled in an undergraduate psychology course at the University of Sydney, Australia, participated in the study in return for course credit. Data from eight participants were excluded, five were over 25 years of age, two failed the validity-check ("*For validity purposes, please select "Markedly" as your answer to this question*") and one was unable to complete the computer tasks due to a power outage. The final sample size was 132. Participants' ages ranged from 17 to 25 years ($M = 18.58$, $SD = 1.37$). Participants were predominantly Australian (51.5%), followed by North-East Asian (21.2%) and South-East Asian (11.4%), with 18.9% indicating other nationalities. Eighty-four percent of participants were exclusively heterosexual, 4.5% were exclusively gay, and 11.5% endorsed a degree of bisexuality.

Measures

Muscularity and body fat dissatisfaction. The 10-item Muscularity Dissatisfaction subscale and 8-item Body Fat Dissatisfaction subscale of the Male Body Attitudes Scale (MBAS; Tylka et al., 2005) were used to assess males' dissatisfaction with their muscularity and body fat, respectively. Participants rated the extent to which each statement was true of them using a 6-point scale (1 = *never*, 6 = *always*). Both subscales have demonstrated good test–retest reliability over a 2-week period, excellent internal consistency (αs = .89–.95), and convergent and discriminant validity in undergraduate men (Tylka et al., 2005). In the present study, Cronbach's α for the Muscularity Dissatisfaction and Body Fat Dissatisfaction subscales were .91 and .93, respectively.

Disordered eating. Two subscales of the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994), Dietary Restraint and Eating Concern, were used to assess disordered eating attitudes. The EDE-Q is a 28-item self-report questionnaire which asks participants how frequently various disordered eating attitudes occur during the past 28 days using a 6-point scale (0 = *no days*, 6 = *every day*). Mean scores on the two subscales were averaged to form a global EDE-Q score. The EDE-Q has demonstrated adequate test–retest reliability over a median period of 315 days and both concurrent and criterion validity in non-clinical females (Mond, Hay, Rodgers, Owen, & Beumont, 2004a; Mond, Hay, Rodgers, Owen, & Beumont, 2004b), although internal consistency has tended to be lower for non-clinical males (Reas, Øverås, & Rø, 2012), and test–retest reliability data for males is not yet available. Cronbach's α was .74 in this sample.

Negative affect. The 10-item Negative Affect subscale of the 20-item Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) assessed the extent to which participants generally felt negative affect (e.g., guilt, shame, distress). Participants responded using a 5-point scale (1 = *very slight or not at all*, 5 = *extremely*). The Negative Affect subscale has demonstrated convergent validity and adequate test–retest reliability over a 2-month period (Watson et al., 1988). Cronbach's α in the present study was .86.

Emotion regulation. The 36-item Difficulties with Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) asks participants to rate how frequently various statements apply to them using a 5-point scale (1 = *almost never, 0–10%*; 5 = *almost always, 91–100%*). A sample item is, "When I'm upset, I become out of control." Higher total scores on the DERS indicate greater overall emotion regulation difficulties. DERS total scores have demonstrated adequate test–rest reliability over a period ranging from 4 to 8 weeks and excellent internal consistency in undergraduate males (Gratz & Roemer, 2004). Cronbach's α for the total score was .93.

Emotion recognition. A revised Reading the Mind in the Eyes Task (RMET; Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001) assessed emotion recognition. Participants viewed 36 photos of eyes (19 male, 17 female) and were asked to choose which of four emotions, all of similar valence, was best matched to what the person in the picture was feeling. The number of correct responses was used as a predictor variable in subsequent analyses, with more correct responses indicating superior emotion recognition.

Attentional biases. The dot-probe task developed by Dandeneau, Baldwin, Baccus, and Sakellaropoulo (2007) was used to assess attentional biases toward accepting and rejecting faces. Stimuli were 64 achromatic pictures of male and female faces providing matched neutral, rejecting, and accepting facial expressions. For each trial, a fixation cross appeared for 500 ms, followed by a picture pair for 500 ms, and then the probe (two dots arranged vertically or horizontally) which replaced one of the pictures and remained visible until the participant made a response on the keyboard. The task consisted of 16 practice and 64 experimental trials, including 32 rejecting face trials and 32 accepting face trials, presented in random order.

Procedure

Participants completed the questionnaires in private. Afterwards, a male experimenter administered the RMET and dot probe to each participant individually. Dot-probe data were cleaned and analyzed in accordance with the procedures described by Dandeneau et al. (2007). Trials with errors were discarded, and reaction times <200 ms or >2 *SD* for each participant's overall mean reaction time were discarded as per Dandeneau et al. To calculate the rejection bias score, the mean reaction time for valid trials (probe and rejecting face in same location) was subtracted from invalid trials (probe and rejecting face at different locations). The same procedure was used to calculate acceptance bias scores. Higher positive bias scores indicate an attentional bias toward