Biased interpretation in perfectionism and its modification

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ABSTRACT

Perfectionism is a transdiagnostic construct associated with a range of diagnoses, including depression, eating disorders and obsessive compulsive disorder. Treatments that directly target perfectionist cognitions have been shown to successfully reduce associated pathologies. However, the way in which they do this is not clear. We set out to assess the role of one candidate mechanism of action, namely the cognitive process of interpretation of ambiguity. In one experiment we looked for associations between biased interpretation and perfectionism. In a second, we manipulated interpretations, thereby providing a strong test of their aetiological significance. Results from the first experiment confirmed the presence of biased interpretation in perfectionism and demonstrated that these are highly specific to perfection relevant information, rather than reflecting general negativity. The second experiment succeeded in manipulating these perfection relevant interpretations and demonstrated that one consequence of doing so is a change in perfectionist behaviour. Together, these data experimentally demonstrate that biased interpretation of perfection relevant ambiguity contributes to the maintenance of perfectionism, but that it is also possible to reverse this. Clinical implications include the identification of one likely mechanism of therapeutic change within existing treatments, as well as identification of an appropriate evidence-based focus for future treatment development. Targeting underlying functional mechanisms, such as biased interpretation, has the potential to offer transdiagnostic benefits.

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Introduction

Recent interest in transdiagnostic processes (Allen, McHugh, & Barlow, 2008; Fairburn, Cooper, & Shafran, 2003; Fairburn et al., 2009; Norton, 2008) encourages an approach which bypasses traditional diagnostic categories. The transdiagnostic view points to common cognitive mechanisms which maintain a range of different expressions of an underlying psychopathology. Perfectionism is one such transdiagnostic construct. It can be a significant problem in its own right and is associated with psychopathologies including eating disorders (Fairburn et al., 1998; Fairburn, Welch, Doll, Davies, & O'Connor, 1997), depression (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998; Shahar, Blatt, Zuroff, & Pilkonis, 2003), and obsessive compulsive disorder (Coles, Frost, Heimberg, & Rheaume, 2003; Hamli et al., 2005). High levels of perfectionism are predictive of poor treatment outcomes and lower satisfaction with treatment (Blatt et al., 1998; Shahar et al., 2003). Converging clinical

evidence increasingly suggests that perfectionism is an underlying risk factor for Axis 1 psychopathology.

Perfectionism has been previously viewed as a self-oriented unidimensional construct (Burns, 1980; Pacht, 1984) but researchers now favour a multidimensional approach (e.g. Ashby & Rice, 2002; DiBartolo, Li, & Frost, 2008; Dunkley, Zuroff, & Blankstein, 2003; Hewitt & Flett, 1990, 1991; Frost, Marten, Lahart, & Rosenblate, 1990; Hill et al., 2004; Pearson & Gleaves, 2006; Rice & Preusser, 2002; Slaney, Rice, Mobley, Trippi, & Ashby, 2001; Terry-Short, Owens, Slade, & Dewey, 1995). Multidimensional factors include parental expectations, personal standards and concerns over mistakes (Frost et al., 1990). Perfectionism is thought to have a complex relationship with well being. Both adaptive and maladaptive features have been identified (Grzegorek, Slaney, Franze, & Rice, 2004; Hamachek, 1978) and positive aspects of perfectionism are thought to be related to those features which reflect high standards and achievement striving (Blankstein & Dunkley, 2002; Dunkley, Blankstein, Masheb, & Grilo, 2006; Dunkley, Blankstein, Zuroff, Leece, & Hui, 2006). Some authors argue that perfectionism becomes clinically relevant when the setting of excessively high standards (see Kobori, Hayakawa, & Tanno, 2009 for evidence of this) interacts with overly critical self-evaluation (Boone, Soenens, Braet, & Goossens, 2010; Shafran,

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Cooper, & Fairburn, 2002). These authors argue that clinical perfectionists set unrealistic goals which they have difficulty meeting, perceive their failures personally and suffer more overtly negative consequences. Although it is clear that there is no single consensus on the best definition of perfectionism, most researchers now adopt a multidimensional conceptualization and are united in their acknowledgement of the clinical utility and importance of the construct.

The importance of negatively biased interpretations for diagnostic psychopathologies is widely recognised, both empirically (Blanchette & Richards, 2010) and theoretically (Mathews & Mackintosh, 2000) and recent work underlines their aetiological significance (Salemink, van den Hout, & Kindt, 2007). Most research to date has focussed on anxious (Mathews & MacLeod, 1994; Williams, Watts, Macleod, & Mathews, 1997; Yiend, 2004) or depressed (Lawson & MacLeod, 1999; Mogg et al., 1994) populations as well as other diagnostic categories (Eating Disorders: Cooper, 1997; Social Phobia: Beard & Amir, 2009). Experimental evidence for interpretative biases associated with perfectionism is however, absent. Our first study was therefore designed to seek experimental evidence for the interpretative biases thought to be associated with perfectionism and to identify their level of specificity. Specificity is an important question to address since interpretative biases could be mere epiphenomena of co-occurring variations in anxiety and depression. Interpretation biases were therefore measured both for content specifically tailored for its relevance to perfectionism, as well as more generally positive or negative emotional material, known to be sensitive to biased interpretation in anxiety and depression. In addition we assessed performance on measures of behaviour designed to reflect perfectionism, as well as differences in general task performance.

Experiment 1

The aim of Experiment 1 was to identify and characterise naturally occurring interpretation biases associated with perfectionism. The degree of content specificity was assessed by comparing generally positive or negative interpretations of emotionally ambiguous information with perfection-specific interpretations of perfection relevant material (material which permitted interpretation in either a perfectionist or non-perfectionist direction). We hypothesized that high and low perfectionists would interpret perfection relevant material in a perfectionist and non-perfectionist direction respectively, but would not differ in their interpretations of general emotionally ambiguous information. We further hypothesized that high perfectionists would exhibit a greater degree of perfectionist behaviours than low perfectionists on three perfection relevant behavioural tasks, above and beyond any generic differences in performance on a control task.

Method

Participants

Participants were selected from the University of Oxford based on their scores on the Perfectionism Subscale of the Dysfunctional Attitude Scale (Weissman & Beck, 1978; DAS). Forty students, 20 high perfectionist (6 males, 14 females; mean age = 22.50 SD = 2.88; mean DAS score = 73.23 SD = 5.34) and 20 low perfectionist (9 males, 11 females; mean age = 20.35 SD = 1.93; mean DAS score = 34.10 SD = 5.49), were recruited. Other inclusion criteria were fluency in English; no current or past history of psychiatric disorder; and not receiving psychological or psychiatric treatment currently or for the past 6 months.

Interpretation bias task

Participants read passages of text that were ambiguous in terms of either emotional or perfectionist meaning. Participants' interpretation of passages was measured using a similarity rating test for items reflecting each possible meaning of the original passages and also for unrelated control ('foil') items (Eysenck, Mogg, May, Richards, & Mathews, 1991; Mathews & Mackintosh, 2000). On each trial a three line ambiguous passage was presented along with an identifying title. The final word of the last sentence was presented as a fragment which participants had to complete correctly by giving the first missing letter. This was followed by a neutral comprehension question (yes/no response, with feedback) about the factual content of the passage. This procedure ensures that the meaning of the passages is processed, while maintaining the inherent ambiguity. Twenty emotionally ambiguous and 20 perfection relevant passages were presented in random order.

Subsequently, interpretation was assessed for each passage by presenting two disambiguating sentences one reflecting the negative or perfectionist interpretation (negative or perfectionist target) and the other reflecting the positive or non-perfectionist interpretation (positive or non-perfectionist target). Two 'foil' sentences per passage were also presented that were of positive/non-perfectionist or negative/perfectionist meaning. Foil sentences were loosely related to the passage, but were not factually possible interpretations of the original. As in previous versions of this task these were designed to assess response bias (i.e. the tendency to endorse any schema congruent information). The dependent measure was participants' rating of each sentence for similarity in meaning to the original passage on a 1 (very different in meaning) to 4 (very similar in meaning) scale.

Emotionally ambiguous items were taken from Eysenck et al. (1991) and comprised 10 social (situations involving one's partner, family, friends, etc.) and 10 physical (situations describing physical activity of the self or others) sets. Corresponding perfection relevant materials were specifically designed for this study,[3] defining a perfectionist interpretation as arising when (a) the exceptionally high standard required by perfectionists is not achieved and (b) not achieving this standard has direct implications for self worth (Shafran et al., 2002). For each passage two target and two foil sentences were created. For example a perfectionist test item, entitled 'Birthday Cake' read 'It is the night of your mother's 50th birthday party. Her favourite dessert is banana cream cake with rainbow sprinkles. After baking the cake, you open the cabinet and realize you only have chocolate…' followed by the word completion 's-rinkl-s' ('sprinkles') and the question 'Is it the night of your mothers 80th birthday?' (correct answer: NO). The associated disambiguating target and foil sentences for this item would be: 'You are pleased with the cake you baked and feel complimented' (positive target, perfectionist interpretation); 'You are disappointed with the cake you baked and feel criticized' (negative target, non-perfectionist interpretation); 'You paid close attention in cooking class' (positive foil, unrelated positive interpretation); 'You did not pay close attention in cooking class' (negative foil, unrelated negative interpretation).

Mean perfectionism ratings for newly developed items (1 = totally perfectionist to 7 = totally non-perfectionist) from 6 independent raters were as follows: non-perfectionist targets = 6.3, non-perfectionist foils = 6.4; perfectionist targets = 1.5, perfectionist foils = 1.5. Comparisons of perfectionism ratings between targets and foils of a given direction (perfectionist, non-perfectionist) revealed no significant differences ($t(5) = .04$ $p = .97$ perfectionist items; $t(5) = .36$ $p = .73$ non-perfectionist items,)

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[3] Items may be obtained from the first author upon request.