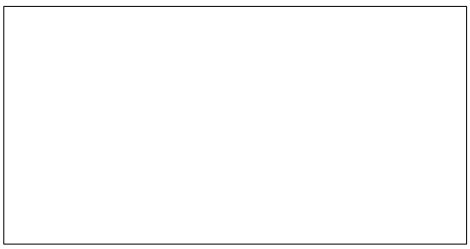

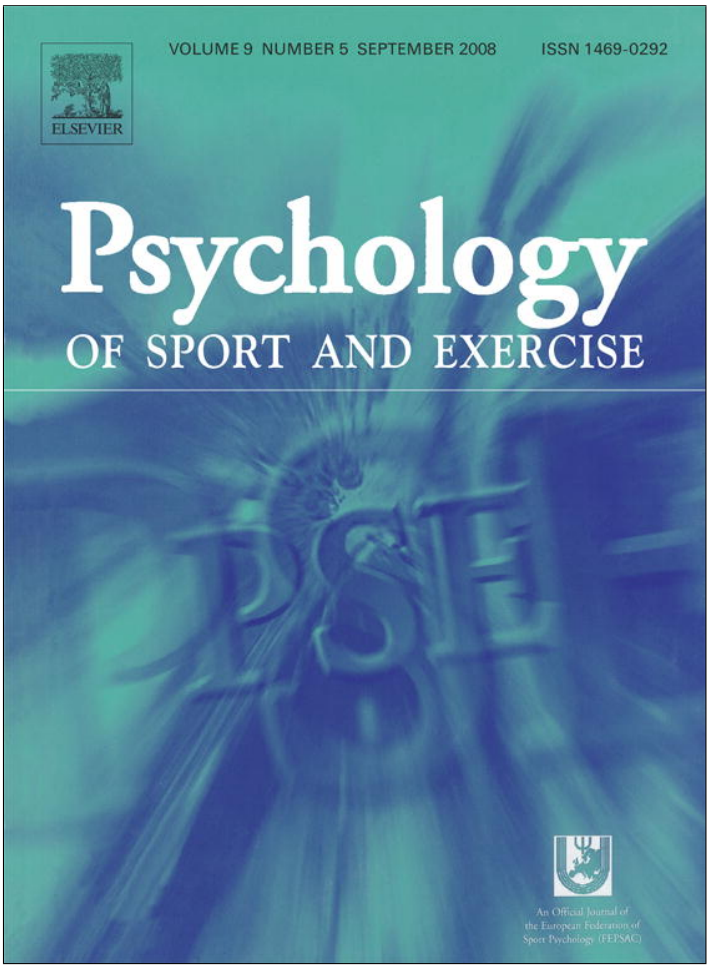

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Perfectionism and burnout in junior elite soccer players: The mediating influence of unconditional self-acceptance

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Abstract

Objectives: It has been argued that elite junior athletes may be especially vulnerable to the development of burnout [Coakley, D. (1992). Burnout among adolescent athletes: A personal failure or social problem. *Sociology*, *9*, 271–285; Feigley, D. A. (1984). Psychological burnout in high-level athletes. *The Physician and Sports Medicine*, *12*, 108–119; Raedeke, T. D. (1997). Is athlete burnout more than just stress? A sport commitment perspective. *Journal of Sport and Exercise Psychology*, *19*, 396–418]. Few studies to date have examined the psychological mechanisms that may underpin this vulnerability. One exception was a study by Gould, Tuffrey, Udry, and Loehr [(1996). Burnout in competitive junior tennis players: I. A quantitative psychological assessment. *The Sport Psychologist*, *10*, 332–340], which found that a form of perfectionism reflecting a preoccupation with avoiding mistakes differentiated between burnout and non-burnout tennis players. The first purpose of the present investigation was to extend this research and examine the influence of self-oriented and socially prescribed perfectionism on burnout in elite junior soccer players. A second purpose was to examine whether the association between perfectionism and burnout was mediated by unconditional self-acceptance.
Design: A correlational design was employed.
Method: One hundred and fifty-one soccer players (M age = 14.4 years, SD = 2.4 years) completed an inventory that included Flett and Hewitt's (1991) Multidimensional Perfectionism Scale, Chamberlain and Haaga's (2003) Unconditional Self-acceptance Scale, and Raedeke and Smith's [(2001). Development and preliminary validation of an athlete burnout measure. *Journal of Sport and Exercise Psychology*, *23*, 281–306] Athlete Burnout Questionnaire (ABQ).
Results: Structural equation modeling indicated that unconditional self-acceptance partially mediated the relationship between the two dimensions of perfectionism and athlete burnout. Contrary to the hypotheses, self-oriented perfectionism demonstrated both a positive indirect association with symptoms of burnout, as well as a direct inverse relationship.
Conclusion: The findings provide support for the contention that a contingent sense of self-worth is central to both socially prescribed and self-oriented perfectionism [Flett, Besser, Davis, & Hewitt (2003). Dimensions of perfectionism, unconditional self-acceptance, and depression. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *21*, 119–138; Flett, Hewitt, Oliver, & MacDonald (2002). Perfectionism in children and their parents: A developmental analysis. In G. L. Flett & P. Hewitt (Eds.), *Perfectionism: Theory, research and treatment* (pp. 89–132). Washington, DC: American Psychological Association], and that this association may underpin maladaptive achievement striving and increase vulnerability to athlete burnout.

Keywords: Maladaptive motivation; Achievement striving

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Introduction

With increasing funding from television revenue and the Football Association's commitment to talent development, soccer academies have proliferated in the UK. The principal aim of these establishments is the development of professional players from cohorts of young athletes recruited on the basis of early promise. However, because few ever obtain professional status, and those who fall short are systematically moved on, academy athletes are under substantial pressure to achieve. Rather than creating an environment in which athletic development is nurtured, it is likely that achievement striving in such pressured conditions contributes to the development of burnout in some athletes (see Jackson, 2007; Roderick, 2006). Examination of burnout in this context is warranted not only because of the financial costs associated with sporting attrition, but also because burnout has important consequences for athletes' psychological well-being (Raedeke, 1997; Smith, 1986). Although it has been argued that young athletes who are striving to achieve at an elite level may be particularly susceptible to the physical and psychological consequences of burnout (Coakley, 1992; Feigley, 1984; Gould, Tuffey, Udry, & Loehr, 1996; Raedeke, 1997), to date there has been little empirical research to test this contention (Cresswell & Eklund, 2006a, b).

The paucity of research on burnout within sport settings has been the result of early conceptual and psychometric shortcomings (Cresswell & Erklund, 2006a, b). However, recent work by Raedeke and Smith (2001) has not only resolved the definitional problems which impeded research progress, but it has also provided researchers with an established instrument that can be employed to advance our understanding of the burnout process. Based on the work of Maslach and Jackson (1981), Raedeke (1997) proposed that burnout should be considered a syndrome of physical and emotional exhaustion, reduced sense of athletic accomplishment and sport devaluation. Utilising a valid and reliable measure of these symptoms, and informed by contemporary psychological theory (e.g. Coakley, 1992; Cresswell & Eklund, 2006a, b; Gould, 1996; Raedeke, 1997; Raedeke & Smith, 2004; Smith, 1986), research has begun to identify some of the critical antecedents of the syndrome. Much of this work has been guided by Smith's (1986) cognitive–affective model, which has received considerable empirical support in the context of sport (e.g. Gould, 1996; Kelley, Erklund, & Ritter-Taylor, 1999; Raedeke & Smith, 2004; Vealey, Armstrong, Comar, & Greenleaf, 1998).

According to Smith (1986), athlete burnout develops as a result of chronic stress brought about by regularly appraising ones resources as insufficient to meet achievement demands. Within elite sport contexts, the process of striving to achieve ever increasing demands may become a contributory mechanism in the development of burnout when athletes perceive that performance is consistently falling short of acceptable standards (Cresswell & Eklund, 2006a, b). Under these circumstances the demands of the sporting context may pose more than a challenge, and thus, individuals begin to appraise achievement striving as a threat to self-worth. This process leads to considerable disaffection as investment in both practice and competition becomes psychologically aversive (Smith, 1986). If this process goes unabated, it precipitates a gradual shift from an intense desire to succeed, and a behavioural commitment to sporting excellence, to a pattern of physical, cognitive and emotional disengagement reflective of burnout (Cresswell & Eklund, 2006a, b).

Perfectionism as an antecedent of athlete burnout

Research based on Smith's (1986) model has emphasised the importance of personality factors that impact central appraisal processes and render individuals vulnerable to the experience of threat and anxiety (e.g. Kelley, 1994; Kelley & Gill, 1993; Kelley et al., 1999). One personality factor found to impact the appraisal process (Hall, Kerr, & Matthews, 1998), and implicated in the development of burnout, is perfectionism (Flett & Hewitt, 2005; Gould et al., 1996; Hall, 2006; Lemyre, Hall, & Roberts, 2007). While there is no agreed definition of perfectionism, it is broadly considered to be an achievement related personality characteristic that reflects the compulsive pursuit of excessively high standards and a tendency to engage in harsh, overly critical self-evaluation (Burns, 1980; Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Pacht, 1984).

Although some researchers argue that perfectionism is ultimately a debilitating characteristic (Flett and Hewitt, 2002; Greenspon, 2000), others contend that in the absence of negative criticism, perfectionism has beneficial motivational qualities that give rise to adaptive achievement striving and a healthy pursuit of excellence (Haase & Prapavessis, 2004; Stoeber & Otto, 2006; Terry-Short, Owens, Slade, & Dewey, 1995).

For example, Stoeber and colleagues (Stoeber & Becker, in press; Stoeber, & Kersting, 2007; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007; Stoeber, Stoll, Pescheck, & Otto, in press) have found that striving for perfection in the absence of negative performance appraisal, leads to adaptive patterns of achievement cognition, affect and behaviour. While this, and other evidence, suggests that both adaptive and maladaptive forms of perfectionism may serve to energise achievement striving in athletes (Flett & Hewitt, 2002; Frost et al., 1990; Hamachek, 1978; Slaney, Ashby, & Trippi, 1995; Stoeber & Otto, 2006), the prevailing view is that the act of striving for perfection does not, in itself, lead to debilitation (Flett & Hewitt, 2002; Hall, 2006; Stoeber & Otto, 2006). Rather, it is when perfectionism evokes harsh self-criticism, a ruminative response style and a focus upon personal and interpersonal inadequacies that motivational debilitation is engendered (Flett & Hewitt, 2006; Flett, Madorsky, Hewitt, & Heisel, 2002; Thompson & Zuroff, 2004). Moreover, when these processes are employed consistently in the evaluation of achievement outcomes, athletes may become vulnerable to burnout.

Instead of facilitating athletic development and elite performance (Anshel & Eom, 2002; Gould, Dieffenbach, & Moffett, 2002), these processes underpin self-defeating and debilitating patterns of cognition and emotion and may undermine performance and diminish psychological well-being (see Hall, 2006, for a review). For example, research indicates that when perfectionistic striving is accompanied by negative evaluative concerns and self-criticism it is a significant predictor of elevated levels of negative affect in the form of social physique anxiety (Hall, Kerr, & Wigmore, 1999), anger (Dunn, Gotwals, Causgrove Dunn, & Syrotuik, 2006), pre-competitive anxiety (Frost & Henderson, 1991; Hall et al., 1998; Koivula, Hassmen, & Fallby, 2002), and debilitating performance anxiety (Mor, Day, Flett, & Hewitt, 1995; Stoeber et al., 2007).

While there has been little empirical examination of the relationship between perfectionism and athlete burnout, current findings suggest that specific maladaptive dimensions of perfectionism appear to be the critical antecedents of the syndrome (Gould et al., 1996; Lemyre et al., 2007). However, this research has relied exclusively on a measure of perfectionism developed by Frost and colleagues (FMPS; Frost et al., 1990). This instrument has attracted recent criticism for containing both antecedents and consequences of the disposition making interpretation of the scale difficult (Rheaume et al., 2000). Furthermore, the scale has prompted the use of single scale scores as evidence for perfectionism often in the absence of concern about mistakes, which is considered to be a fundamental component of the construct (e.g. Chang, Watkins, & Banks, 2004). To overcome these criticisms, recent sport related research has begun to utilise an instrument devised by Hewitt and Flett (1991) which assesses three maladaptive forms of perfectionism; socially prescribed perfectionism, self-oriented perfectionism, and other oriented perfectionism (e.g. Hall et al., 1999; Mor et al., 1995). This scale has the advantage of incorporating into the measurement of the construct the motivation that underpins perfectionistic striving, as well as an individual's personal or interpersonal focus (Hewitt & Flett, 1991, 1993). Self-oriented perfectionism, for example, is characterised by the pursuit of excessively high standards, accompanied by harsh, and potentially debilitating, self-criticism. Socially prescribed perfectionism, in contrast, involves the perception that significant others impose unrealistic standards on the self, that attempts at goal attainment are evaluated stringently, and that by meeting these standards the approval of significant others can be obtained. Finally, other oriented perfectionism is characterised by the tendency to impose unrealistic expectations on others (Hewitt & Flett, 1991).

All three types of perfectionism are associated with distinct patterns of debilitating, and at times pathological, personal and interpersonal focused cognitions, emotions and behaviours (see Flett & Hewitt, 2002, 2006; Flett, Hewitt, & Blankstein, 1991). It might be argued, however, that the two dimensions associated with self-focused cognitions would contribute most to the prediction of athlete burnout; self-oriented and socially prescribed perfectionism. While these dimensions have received little attention in sport and exercise settings, empirical examination of their consequences in other achievement contexts has been relatively consistent. Socially prescribed perfectionism is regarded as a uniformly debilitating disposition, associated with fear of negative evaluation, self-criticism, self-blame, anxiety, and over-generalisation of failure (Flett et al., 1991). Self-oriented perfectionism, on the other hand, is considered to be a vulnerability factor that predisposes individuals to the experience of depression, anxiety and neuroticism through its interaction with third order variables. For example, the experience of stressors (Hewitt & Flett, 1993), perceptions of failure (Flett, Besser, Davis, & Hewitt, 2003; Flett, Hewitt, Oliver, & Macdonald, 2002) and negative feedback (Besser, Hewitt, & Flett, 2004) have been found to moderate the effects of the disposition.

It is important to note, however, that in the absence of perceived achievement difficulties, there is also evidence that self-oriented perfectionism has the potential to lead to positive motivational consequences. For example, within student samples, self-oriented perfectionism is associated with resourcefulness (Flett, Hewitt, Blankstein, & O'Brien, 1991), intrinsic motivation and achievement striving (Mills & Blankstein, 2000).

Although socially prescribed and self-oriented perfectionism are considered to be underpinned by different motivational processes (Hewitt & Flett, 1991) both forms of the disposition have the potential to render athletes vulnerable to the development of the burnout syndrome. In the case of socially prescribed perfectionists, self-worth is directly contingent on the attainment of external standards perceived to be imposed by significant others. Research conducted by Frost and Henderson (1991), and later by Hall et al. (1998) has demonstrated that a combination of external standards and a preoccupation with self-definition amongst perfectionists underpins the development of maladaptive achievement-related cognitions and elevated levels of cognitive anxiety at various points in the performance process. Therefore, while participation provides an opportunity to validate a sense of self, because these individuals frequently perceive that they fall short of these standards, it is likely to be accompanied by chronic exposure to threat and anxiety. Entrapped by a desire to validate a sense of self, socially prescribed perfectionists are likely to continue to participate long after their experience has become psychologically draining, and it is for this reason that socially prescribed perfectionism will be positively associated with athlete burnout.

The association between self-oriented perfectionism and athlete burnout may be considered less perspicuous. While the standards endorsed by self-oriented perfectionists are exceedingly high, they are self-imposed. Consequently, self-oriented perfectionists perceive a greater degree of control over attainment and, as a result, are less likely to appraise standards as overwhelming. This means that in the absence of self-critical and self-evaluative concerns self-oriented perfectionism may be associated with adaptive achievement striving (see Dunkley & Blankstein, 2000; Dunkley, Zuroff, & Blankstein, 2003). However, Flett and Hewitt (2006) have argued that the stringent evaluation of achievement striving which is exhibited by self-oriented perfectionists often undermines perceptions of success. Further, it is in response to perceived failures to meet excessively high self-set standards that these athletes begin to engage in harsh self-criticism. In this instance, this is likely to intensify the threat associated with future failure and make achievement contexts more aversive. If this pattern of self-blame and self-criticism continues, the experience of existential threat and anxiety are likely to develop into chronic levels and may potentially lead to the development of burnout. Based upon this conceptual argument, the first purpose of the current study was to test the assertion that both socially prescribed and self-oriented perfectionism would have a positive association with the three dimensions of athlete burnout. However, as any debilitating impact of self-oriented perfectionism may be contingent on the perceived achievement of the athletes, perceived satisfaction towards goal progress was assessed.

The mediating influence of unconditional self-acceptance

While the preceding theoretical argument indicates that maladaptive dimensions of perfectionism may render athletes vulnerable to experiencing burnout, a number of researchers have argued that third-order variables that influence the overall appraisal of the sporting environment are likely to be important in determining the effects of perfectionism (Flett & Hewitt, 2005; Hall, 2006). One particular variable that may be especially influential is unconditional self-acceptance. This is an adaptive acceptance of one's self regardless of the approval, respect or love received from other people (Lundh, 2004). Greenspon (2000) has argued that feelings of conditional self-acceptance are central to both the etiology and maintenance of dispositional perfectionism. Campbell and DiPaula (2002) have further suggested that a sense of conditional acceptance may be almost exclusively responsible for the deleterious consequences of perfectionism. Support for this assertion has been provided by DiBartolo, Frost, Chang, LaSota, and Grills (2004) who found that the pursuit of perfectionistic personal standards only leads to distress when their attainment is required in order to experience feelings of self-worth. Further research examining the relationship between self-acceptance and self-oriented and socially prescribed dimensions of perfectionism has also indicated that both perfectionism dimensions are inversely related to feelings of self-acceptance (Flett, Russo, & Hewitt, 1994), and that unconditional self-acceptance mediates between perfectionism and depression (Flett et al., 2003).

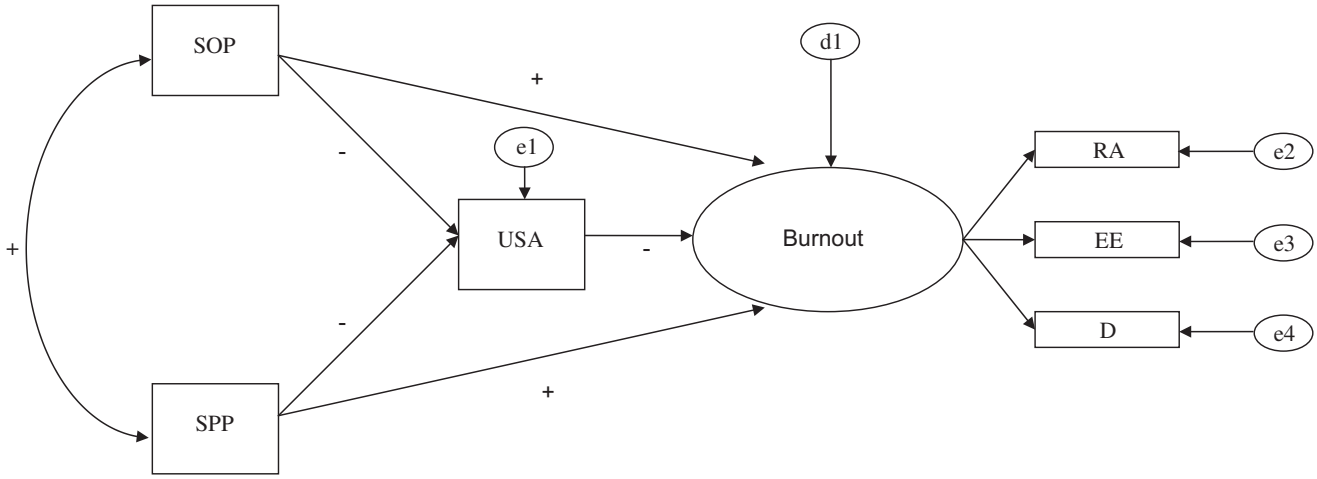

Fig. 1. Proposed structural equation model: The mediating influence of unconditional self-acceptance on the relationship between perfectionism and athlete burnout. *Note*: SOP, self-oriented perfectionism; SPP, socially prescribed perfectionism; USA, unconditional self-acceptance; RA, reduced accomplishment; EE, emotional and physical exhaustion; D, sport devaluation. The direction of the hypothesised relationship is indicated by + or −.

Consequently, it may be the pursuit of *conditional* self-acceptance that predisposes both self-oriented and socially prescribed perfectionists to the experience of athlete burnout. This is because self-worth is rendered vulnerable when negative patterns of cognition and affect result from perceived failure to meet excessively high standards (see Frost & Henderson, 1991; Hall et al., 1998). When self-worth is based on attainment, failure to achieve personally meaningful standards undermines an athlete's sense of self (Hall, 2006). This heightens burnout symptoms in self-oriented and socially prescribed perfectionists because the protection of self-worth through withdrawal from sport is not an option. Specifically, both Coakley (1992) and Raedeke and Smith (2001) have argued that when self-worth is contingent on achievement, dropping out is unlikely because participation is a significant source of identity and emotional security. According to these authors, it is a sense of entrapment that sustains participation long after it has become a pervasive source of stress. Over time, then, the experience of these debilitating patterns of cognition and emotion are likely to exacerbate symptoms of burnout. Consequently, a second purpose of the present investigation was to investigate the process outlined, and test the contention that unconditional self-acceptance would mediate the relationships between both forms of perfectionism and the three dimensions of athlete burnout (Fig. 1).

In summary, the current investigation set out to examine the degree of association between self-oriented and socially prescribed perfectionism and the symptoms of athlete burnout, and test whether these relationships were mediated by unconditional self-acceptance. Consistent with Flett and Hewitt's (2005, 2006) conceptualisation of perfectionism, and the theoretical argument positing self-oriented perfectionism as a vulnerability factor, it was hypothesised that both socially prescribed and self-oriented perfectionism would be positively related to burnout, and that unconditional self-acceptance would mediate the relationship between both self-oriented and socially prescribed perfectionism and burnout.

Method

Participants

Participants were 151 male youth soccer players recruited from UK centres of excellence in the East Anglian region of the UK (M age = 14.4 years, SD = 2.4 years, range = 10–18 years). Informed consent was gained from each participant or parent/guardian when appropriate. Prior to an academy training session the participants completed a multi-sectional questionnaire entitled 'Athletes thoughts and feeling about achievement in soccer'.

Instruments

Athlete burnout. Athlete burnout was measured using Raedeke and Smith's (2001) Athlete Burnout Questionnaire (ABQ). The ABQ is a 15-item inventory scored on a five-point Likert scale (1 = *almost never* to 5 = *almost always*). It contains three five-item subscales that reflect the multi-dimensional nature of athlete burnout. The first sub-scale assesses the degree to which athletes experience a reduced sense of accomplishment (RA) with regard to their participation in sport (e.g. "I feel successful."). The second subscale reflects perceived emotional and physical exhaustion (EE) associated with sports participation (e.g. "I am exhausted by the mental and physical demands."). The final subscale measures the extent to which athletes devalue the activity (*D*) (e.g. "I feel less concerned about being successful than I used to."). Each scale has demonstrated good internal consistency (α = RA 0.84, EE 0.89 and *D* 0.89) and test–retest reliability (α = RA 0.86, EE 0.92 and *D* 0.92) (Raedeke & Smith, 2001).

Multidimensional perfectionism. Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (MPS) was used to assess self-oriented (SOP) and socially prescribed perfectionism (SPP). The stem of the instrument was adapted to ensure that the athletes focused on soccer specific cognitions and beliefs. For example, the original stem of the MPS ("Listed below are a number of statements concerning personal characteristics and traits.") was altered to read "The following items ask you to think about when you are practicing or playing soccer. Listed below are a number of statements concerning the way some people feel about their participation when they are practicing or playing."

Each subscale of the MPS contains 15-items, and each item was measured on a seven-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Self-oriented perfectionism reflects the pursuit of exceedingly high personal standards from the self-accompanied by harsh self-criticism (e.g. "One of my goals is to be perfect in everything I do." "It is very important than I am perfect in everything I attempt."). Socially prescribed perfectionism reflects the pursuit of extremely high standards that individuals perceive significant others impose on them (e.g. "The people around me expect me to succeed at everything I do." "People expect more from me than I am capable of giving."). Each scale has demonstrated good internal consistency (α = SOP 0.89 and SPP 0.86) and test–retest reliability (α = SOP 0.88 and SPP 0.75) (Hewitt & Flett, 1991).

Unconditional self-acceptance. Self-acceptance was measured using Chamberlain and Haaga's (2001) Unconditional Self-acceptance Questionnaire (USAQ). It is a 20-item instrument that reflects various aspects of an unconditional self-acceptance philosophy developed in rational-emotive behaviour therapy (Chamberlain & Haaga, 2001) (e.g. "I feel I am a valuable person even when other people disapprove of me." "I don't think it's a good idea to judge my self worth as a person."). Individuals respond on a seven-point Likert style scale (1 = *not at all true for me* to 7 = *almost always true for me*). The instrument has demonstrated good internal consistency ($\alpha = 0.72$) (Chamberlain & Haaga, 2001), although D.A.F. Haaga (2007, personal communication) reported that there is currently no information on the test–retest reliability of the measure.

Satisfaction and perceived coach satisfaction. Consistent with Flett and Hewitt's (2006) suggestion that the consequences of perfectionism should only be considered when taking into account the immediate outcomes the perfectionist is experiencing, perceptions of satisfaction associated with goal progress were assessed. Participants satisfaction and perceived coach satisfaction towards personal goals were measured by first asking the athletes to state the personal goals that they were striving to achieve in the current season. Athletes were then asked to respond to two single-item measures ("How satisfied are you with the progress you have made towards the goals you have described above?" "How satisfied do you think your coaches are with the progress you are making this season?").

Preliminary analysis

In addition to internal reliability analyses on each scale (Cronbach's α), maximum likelihood confirmatory factor analysis was used to evaluate the fit between the hypothesised structure of the instrument posited by the authors of the scales and the sample data. These analyses, along with the later structural equation model, were conducted using version 5.0 of the AMOS statistical software package (AMOS 5.0.1 Arbuckle & Wothke, 2003). Unless stated, these analyses successfully replicated the expected structure of the scales.

Based on recommendations made by Hu and Bentler (1999) and Hoyle and Panter (1995), indices were used to assess incremental and absolute fit of the structure of each scale, and the hypothesised model, that typically perform well at smaller sample sizes. For example, the standardised root mean squared residual (SRMR) was used in preference to the RMSEA because this index has a tendency to reject true population models at smaller sample sizes (Hu & Bentler, 1999). To evaluate incremental fit the comparative fit index (CFI) and the incremental fit index (IFI) were utilised. The CFI takes the sample size into account and is, therefore, considered to reflect fit relatively well at all sample sizes (Bentler, 1995). Similarly, the IFI was developed to address the issues of parsimony and sample size, and is considered the most suitable index for use with relatively small samples (Hoyle & Panter, 1995).

Athlete burnout. Initial reliability analyses performed on the subscales of Raedeke and Smith's (2001) ABQ revealed that each dimension of the scale demonstrated sufficient internal consistency (α = RA 0.68, EE 0.85 and *D* 0.87). While the α level for the RA subscale was slightly below that recommended (e.g. >0.70), given the number of the items in the scale this was considered acceptable (see Loewenthal, 1996).

Multidimensional perfectionism (*MPS*). Similarly, analyses on the self-oriented perfectionism and socially prescribed perfectionism subscales of the MPS indicated that, while the self-oriented subscale demonstrated good internal consistency (SOP $\alpha = 0.83$), the socially prescribed perfectionism subscale displayed insufficient internal consistency (SPP $\alpha = 0.65$). Based on the factor loadings and inter-item correlations, items 6 (''The better I do, the better I am expected to do.'') and item 25 (''My parents rarely expect me to excel in all aspects of my life.'') were removed from the SPP scale ($\alpha = 0.74$).

Unconditional self-acceptance. Initial reliability analyses performed on the USAQ indicated that the scale displayed poor internal consistency ($\alpha = 0.61$). The CFA revealed that the proposed 20-item unidimensional structure of the USA scale was a poor fit with sample data ($\chi^2 = (170\,\text{df},\ N = 151)\ 559.44$ ($p<0.01$) $\chi^2/\text{df} = 3.29$; SRMR = 0.14; IFI = 0.40; CFI = 0.38). Based on subsequent exploratory factor analysis a revised 10-item unidimensional scale was constructed (the retained items are included in Appendix A). Additional CFA, revealed a significantly improved fit ($\chi^2 = (5\,\text{df},\ N = 151)\ 36.63$ ($p<0.01$) $\chi^2/\text{df} = 7.33$; SRMR = 0.07; IFI = 0.93; CFI = 0.92). The new scale demonstrated sufficient internal consistency ($\alpha = 0.69$).

Results

Descriptive analyses

The descriptive statistics displayed in Table 1 indicate that the sample reported moderate levels of socially prescribed perfectionism and high levels of self-oriented perfectionism (seven-point Likert scale). The sample also reported moderate to high levels of personal satisfaction and perceived coach satisfaction with current goal progress, and moderate to low levels of burnout across all dimensions of the ABQ. While these scores are moderate to low (five-point Likert scale), the corresponding standard deviations of the ABQ scores suggest that a small percentage of the sample may be exhibiting more extreme thoughts and feelings indicative of

Table 1
Descriptive statistics and correlation coefficients between psychological predictors and measures of athlete burnout

	SPP	SOP	USA	RA	EE	*D*	PS	PCS	*M*	SD	α
Age									14.53	2.29	–
Socially prescribed perfectionism (SPP)	–								3.41	0.74	0.74
Self-oriented perfectionism (SOP)	−0.16*	–							5.00	0.79	0.83
Unconditional self-acceptance (USA)	−0.38**	−0.17**	–						4.06	0.86	0.69
Burnout: reduced sense of accomplishment (RA)	0.46**	−0.39**	−0.19*	–					2.35	0.69	0.68
Burnout: emotional and physical exhaustion (EE)	0.41**	−0.25**	−0.31**	0.58**	–				2.28	0.81	0.85
Burnout: devaluation (D)	0.40**	−0.42**	−0.15	0.66**	0.63**	–			1.86	0.92	0.87
Perceived satisfaction of progress towards goals (PS)	−0.23**	0.33**	−0.01	−0.47**	−0.29**	−0.43**	–		5.15	1.53	–
Perceived coaches satisfaction of progress (PCS)	−0.30**	0.34**	−0.06	−0.47**	−0.31**	−0.48**	0.81**	–	5.15	1.30	–

*$p<0.05$.
**$p<0.01$.

burnout. In addition, the burnout scores are consistent with those reported in other studies examining burnout in youth sports. For example, Raedeke and Smith (2001) reported mean scores of RA 2.30, EE 3.06 and *D* 2.19, and RA 2.32, EE 2.47, *D* 2.02 in young swimmers, aged 14–19 and 13–18, respectively.

Bivariate correlations between burnout, perfectionism, and unconditional self-acceptance

The findings in Table 1 display the degree of association between the dimensions of perfectionism, unconditional self-acceptance, dimensions of athlete burnout and perceived satisfaction and coach satisfaction towards personal goals. As predicted, socially prescribed perfectionism displayed a moderate significant positive relationship with all dimensions of burnout (reduced sense of accomplishment, emotional/physical exhaustion and devaluation). However, while self-oriented perfectionism displayed a pattern of association of a similar magnitude, it was a significant inverse relationship. Correlational analyses also indicated that, as anticipated, both dimensions of perfectionism were negatively related to unconditional self-acceptance. Further examination of the bivariate correlations reveals that unconditional self-acceptance displayed a small, but significant, association with the reduced sense of accomplishment and emotional and physical exhaustion dimensions of burnout. Its association with the devaluation dimension, however, fell just outside of conventional significance ($p<0.07$).

Hypothesised model fit and additional partial mediation model fit

The model tested using SEM is displayed in Fig. 1. It was hypothesised that the relationship between dimensions of perfectionism and dimensions of burnout would be mediated by unconditional self-acceptance. Dimensions of perfectionism and unconditional self-acceptance were represented as measured variables, while burnout was represented as a latent variable based on scores of the dimensions of the ABQ. The model demonstrated a good fit with the sample data ($\chi^2 = (8\,\text{df}, N = 151)$ 11.68 ($p>0.05$) $\chi^2/\text{df} = 1.95$; SRMR = 0.04; IFI = 0.98; CFI = 0.98).

The standardised path coefficients reported in Fig. 2 indicate a significant direct positive path from socially prescribed perfectionism to burnout. The model also revealed a significant indirect path from socially prescribed perfectionism to burnout via a negative association with unconditional self-acceptance, indicating partial mediation. As suggested in the bivariate analyses, a significant negative direct path from self-oriented perfectionism and burnout was observed. However, a significant negative path from self-oriented perfectionism to unconditional self-acceptance, and a significant negative path from unconditional self-acceptance to burnout, indicates that there is a indirect relationship between self-oriented perfectionism and burnout. Therefore, the relationship between self-oriented perfectionism and burnout is also partially

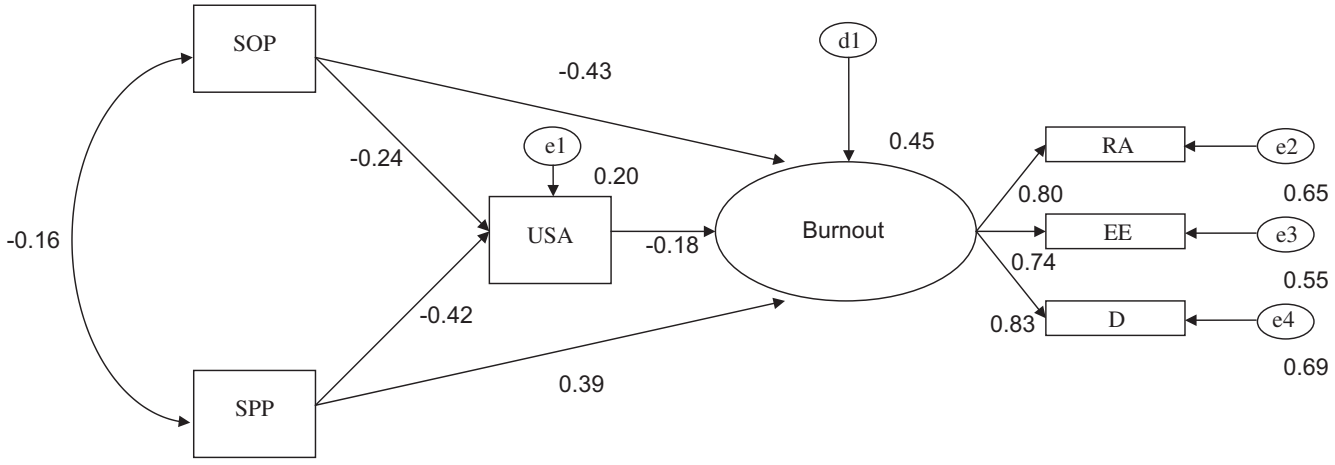

Fig. 2. Structural equation model: The mediating influence of unconditional self-acceptance on the relationship between perfectionism and athlete burnout. *Note*: SOP, self-oriented perfectionism; SPP, socially prescribed perfectionism; USA, unconditional self-acceptance; RA, reduced accomplishment; EE, emotional and physical exhaustion; *D*, sport devaluation.

mediated by unconditional self-acceptance. Examination of the residual error variance indicated that dimensions of perfectionism accounted for 20% of behavioural variance in unconditional self-acceptance, with SPP making the largest contribution. Furthermore, dimensions of perfectionism and unconditional self-acceptance accounted for 45% of behavioural variance in athlete burnout. Path coefficients indicated that SOP made the largest contribution followed closely by SPP.

Discussion

Empirical evidence suggests that negative dimensions of perfectionism may be critical antecedents of burnout in young athletes (Gould et al., 1996; Lemyre et al., 2007). However, because few studies have systematically examined the nature of the relationship between perfectionism and burnout in elite youth sport, the present investigation sought to extend research in this area by examining potential psychological mechanisms that would help explain why perfectionistic athletes may be vulnerable to the experience of this syndrome.

The first purpose of the current investigation was to examine the degree to which self-oriented and socially prescribed perfectionism were associated with symptoms of burnout in junior elite athletes attending UK soccer academies. It was hypothesised that both socially prescribed and self-oriented perfectionism would be positively related to symptoms of burnout. An examination of the bivariate correlations provided partial support for this proposition. As anticipated, socially prescribed perfectionism demonstrated a positive relationship with physical and emotional exhaustion, reduced accomplishment and sport devaluation. However, contrary to the hypotheses, an inverse relationship was observed between self-oriented perfectionism and the three dimensions of burnout.

These findings provide mixed support for previous research that has found maladaptive forms of perfectionism to be a personality disposition that renders athletes vulnerable to the development of burnout (Gould et al., 1996; Lemyre et al., 2007). Moreover, within the current sample, different patterns of burnout were exhibited by athletes as a function of the type of dispositional perfectionism exhibited. The findings therefore provide support for a multidimensional conceptualisation of perfectionism, and highlight the importance of differentiating between the specific dimensions of perfectionism when considering the processes by which debilitating outcomes might occur (Hewitt & Flett, 1991).

The finding that socially prescribed perfectionism was positively related to all three dimensions of athlete burnout can be explained by reference to the motivational processes that this form of perfectionism elicits. Socially prescribed perfectionism is underpinned by a sense of contingent self-worth, which is based on the attainment of exceedingly high standards that are perceived to be externally imposed. The desire to validate a sense of self-worth may compel individuals high in socially prescribed perfectionism to engage in intense achievement striving (Campbell & DiPaula, 2002; Dykman, 1998). However, because the standards they seek to attain are excessive, and socially prescribed perfectionists lack any sense of personal control over goal attainment, engagement in achievement striving is constantly appraised as threatening, leading to chronic anxiety, and eventually to the exhibition of burnout symptoms. The finding that socially prescribed perfectionism was positively associated with all three dimensions of athlete burnout contributes to a growing body of evidence which suggests that this form of perfectionism may lead to psychological impairment and considerable distress in athletes when self-validation is contingent on achievement (Flett & Hewitt, 2005; Frost & Henderson, 1991; Hall, 2006; Hall et al., 1998).

It was hypothesised that self-oriented perfectionism would be positively associated with burnout because those high in the disposition also exhibit a tendency to equate performance with self-worth (Hewitt & Flett, 1991). In addition, it was expected that the harsh self-criticism associated with this dimension of perfectionism would further contribute to the development of burnout (Flett & Hewitt, 2002; Hall, 2006; Thompson & Zuroff, 2004). For athletes exhibiting high levels of self-oriented perfectionism, successful achievement striving may be undermined by the pursuit of excessive standards and the employment of stringent self-evaluation (Flett & Hewitt, 2006). When these individuals perceive that they are not meeting their own high standards, harsh self-punitive tendencies undermine self-worth and elicit strong negative affect. The consequence of this critical evaluation process is that the importance of achievement intensifies and the experience of threat associated with the possibility of failing to meet high standards increases still further. Thus, in the absence of

perceived goal attainment, it was expected that the act of achievement striving would become a source of intense distress that would be reflected in elevated burnout scores.

The results of the present investigation provided some support for these assertions. However, the observed inverse relationship between self-oriented perfectionism and burnout was not predicted. There are a number of possible explanations for this finding. Firstly, it is possible that in some circumstances self-oriented perfectionism may be adaptive (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993) and even act as a resiliency factor for the experience of distress (Enns, Cox, & Clara, 2005). Alternatively, as research has indicated that the consequences of self-oriented perfectionism are dependent on the experience of positive or negative life events indicative of success or failure (Besser et al., 2004; Hewitt et al., 2002; Flett et al., 2003), this finding may reflect the absence of any current achievement difficulties. In support of this explanation, the relatively high-perceived satisfaction with goal attainment reported by the athletes indicate that, generally, this sample appears to be content with current performance. In addition, the positive relationship between self-oriented perfectionism and feelings of satisfaction, coupled with the negative association between measures of satisfaction and dimensions of burnout, further indicate that symptoms of burnout are unlikely for self-oriented perfectionists when perceiving satisfaction with achievement.

A second purpose of the present investigation was to test the hypothesis that the relationship between the two forms of perfectionism and athlete burnout would be mediated by unconditional self-acceptance (Fig. 1). The direction and magnitude of the bivariate correlations between the dimensions of perfectionism and unconditional self-acceptance were consistent with those reported elsewhere (Flett et al., 2003). In addition, because there was a significant relationship between unconditional self-acceptance and burnout, there was the possibility of a mediation effect. Structural equation modeling revealed that the hypothesised model provided a good fit for the sample data. The model predicted 20% behavioural variance in unconditional self-acceptance and 45% behavioural variance in burnout. Therefore, the analysis provided strong support for the role of unconditional self-acceptance as a partial mediator of the relationship between dimensions of perfectionism and burnout.

The model also provides some important insights into the motivational processes that may underpin these associations. The positive direct and indirect relationships between socially prescribed perfectionism and burnout are consistent with previous research. Specifically, while socially prescribed perfectionism may render athletes vulnerable to the development of burnout regardless of its association with unconditional self-acceptance, the indirect pathway via a contingent sense of self-worth provides an important explanation for its debilitating consequences (Campbell & DiPaula, 2002; Flett, Hewitt, et al., 2002; Flett, Madorsky, et al., 2002). Within the current model, its direct association may be attributed to other processes that render the athletes vulnerable to the experience of anxiety. For example, Hall et al. (1998) have argued that the inflexible evaluation criteria, overly critical perspective, fear of failure, and sensitivity to mistakes associated with maladaptive dimensions of perfectionism all facilitate the appraisal of threat and render athletes vulnerable to the experience of achievement related anxiety. If these factors lead to chronic disaffection burnout is likely (Smith, 1986). In addition, socially prescribed perfectionism's association with debilitating outcomes such as interpersonal and achievement hassles (Hewitt & Flett, 1993; Hewitt, Flett, & Ediger, 1996; Joiner & Schmidt, 1995), self-criticism and self-blame, as well as a tendency to overgeneralise failure (Hewitt and Flett, 1991), all demonstrate the disposition's propensity to generate and intensify the experience of stress (Dunkley & Blankstein, 2000; Hewitt & Flett, 1993, 2002; Flett, Hewitt, Blankstein, & Pickering, 1998; Hewitt et al., 1996). In the present study, the same processes thought to underpin stress in socially prescribed perfectionists were thought to contribute to the development of athlete burnout.

Perhaps the most intriguing finding was that while self-oriented perfectionism demonstrated a negative direct path to burnout, it also displayed a positive relationship with burnout via unconditional self-acceptance. This finding supports suggestions made by Flett, Hewitt and colleagues (Flett et al., 2003; Flett, Hewitt, et al., 2002; Flett, Madorsky, et al., 2002) that a contingent-sense of self worth may also underpin self-oriented perfectionism. This finding is particularly noteworthy because some researchers have recently suggested that self-oriented perfectionism may be a component of adaptive achievement striving (Cox, Enns, & Clara, 2002; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Enns et al., 2005; Frost et al., 1993; Hill, Zrull, & Turlington, 1997). However, given the detrimental consequences of tying one's sense of self-worth to attainment (Dykman, 1998; Kamins & Dweck, 1999), it would be difficult to consider self-oriented

perfectionism adaptive if, as these findings suggest, it is underpinned by a contingent sense of self-worth. Moreover, its relationship to athlete burnout through unconditional self-acceptance would suggest that its debilitating consequences may be indirect rather than direct.

An explanation for the apparent duality of self-oriented perfectionism may be provided by recent suggestions made by Flett and Hewitt (2005). They argued that other personality variables may mitigate the negative impact of perfectionism in a sport and exercise context. In particular, they suggested a degree of resiliency may be afforded to perfectionistic athletes when they utilise adaptive strategies for dealing with excessive demands and setbacks, experience heightened control beliefs, or when the disposition is accompanied by positive perceptions of meeting standards and success (see also Gotwals, Dunn, & Wayment, 2003). As indicated earlier, within the current study the experience of personal satisfaction with goal progress reported by self-oriented perfectionists may be particularly enlightening when attempting to explain its inverse direct relationship with burnout.

Although research has indicated that self-oriented perfectionists seldom report high levels of satisfaction (e.g. Mor et al., 1995), in the current sample self-oriented perfectionism was associated with higher levels of satisfaction with goal progress. This is despite the proposed extreme sensitivity of these individuals to discrepancies between performance and the standards they were trying to achieve (Besser et al., 2004). In this instance, athletes own perceptions of success seem to be reinforced by cues picked up from the immediate environment, in the form of perceptions of coach satisfaction. Such social reinforcement may appease personal fears associated with a lack of self-acceptance and lead to feelings of personal satisfaction with self. Another possibility is that, given that the current sample comprised highly able athletes, who may well have a personal history of success, the positive effects resulting from this achievement pattern may have moderated any potentially debilitating consequences of the disposition (Blankstein & Winkworth, 2004).

If self-oriented perfectionism is maladaptive for athletes (Flett & Hewitt, 2005), the possibility that negative aspects of self-oriented perfectionism may be offset by more adaptive cognitions and behaviours is the most likely explanation for the findings of the current study (Dunkley et al., 2000). In particular, self-oriented perfectionism's association with adaptive aspects of coping (e.g. Flett et al., 1991; Flett, Hewitt, Blankstein, Solnik, & Van Brunschot, 1996, study one) may be especially important as effective psychological coping skills may have the potential to modify the appraisal processes responsible for the experience of anxiety (see Lazarus, 1999; Lazarus & Folkman, 1984; Lemyre et al., 2007). Although the robust nature of these potential resiliency factors has yet to be determined, one might speculate that self-oriented perfectionists may be ill equipped to deal with continuing achievement difficulties as investing a sense of self-worth in achievement striving is likely to lead to excessive strain on personal resources. Equating performance with self-worth thus provides the basis for impending psychological difficulties. Indeed, the findings of the current study possibly indicate that even though the self-critical processes posited to be responsible for some of the negative outcomes of self-oriented perfectionism can be mitigated by other variables, the need to validate a sense of self-worth appears to be an important active vulnerability factor central to the construct and its association with maladaptive outcomes.

Limitations

These findings must be considered in context of the studies limitations. The current cross-sectional nature of the study means that our ability to establish the causal roles of the assessed antecedents of burnout is limited. Although longitudinal studies have begun to emerge (e.g. Cresswell & Eklund, 2006a, b; Lemyre et al., 2007), as these are the most appropriate designs for capturing the psychological processes purported to underpin the development of burnout, more studies utilising this approach are required. The context and sample employed in the current study is also very specific. Consequently, examining the degree to which the final model generalises beyond the current context (soccer academies) and sample (male junior elite soccer players) is also warranted. Also, while the current sample (age range 10–18) allows a representative cross sectional sample in this context, it may be that the psychological processes involved in the development of burnout may be dependent on the position of the athlete relative to key stages of the selection process (ages 16 and 18). Consequently, symptoms of burnout may not be evident in the youngest athletes in the current sample. This is a further consideration for future research.

Finally, we have also utilised a measure of perfectionism that to date has not been used in a sport context. While this measure is considered to have a number of advantages over the mostly widely used measure to date (Frost et al., 1990), further examination of its utility in this setting is required. It is our feeling that this measure may provide a greater opportunity to understand the psychological processes that underpin the consequences of perfectionism in athletes than previously utilised measures. The instrument used to assess unconditional self-acceptance has also not been utilised in a sport context previously and was adjusted to enhance the reliability of the measure, as was the socially prescribed perfectionism scale. The utility of these measures, and the impact of these adjustments, requires further examination.

Conclusions

These limitations aside, the findings of the present study clearly add to the body of knowledge examining burnout and dimensions of perfectionism in a sport setting. In particular, the current findings provide support for suggestions that negative dimensions of perfectionism may be critical antecedents of athlete burnout (Gould et al., 1996), and that both self-oriented and socially prescribed forms of perfectionism have the potential to render young athletes vulnerable to its development (Flett & Hewitt, 2005). It also poses some interesting questions regarding the nature of self-oriented perfectionism and its relationship with burnout that warrant further examination in a sport context. The current study has attempted to build on previous research and begin to examine some of the key psychological processes that may explain the relationship between dimensions of perfectionism and burnout. While the results indicated that socially prescribed perfectionism had a direct positive association and self-oriented perfectionism a direct negative association with burnout, a conditional sense of self-acceptance emerged as a partial mediator of the perfectionism–burnout relationship. This suggests that the pursuit of conditional self-acceptance may be a critical psychological process that leads to the development of symptoms of burnout in athletes when they exhibit either socially prescribed or self-oriented perfectionism.

Appendix A. Items of the revised USAQ

1. Making a big mistake may be disappointing, but it does not change how I feel about myself overall.
2. Sometimes I find myself thinking about whether I am a good person or bad person.
3. To feel like a worth-while person, I must be loved by the people who are important to me.
4. I set goals for myself with the hope that they will make me happy or happier.
5. I think that being good at many things makes someone a good person overall.
6. My sense of self worth depends a lot on how I compare with other people.
7. I set goals for myself that I hope will prove my worth.
8. Being bad at certain things makes me value myself less.
9. I think that people who are successful in what they do are especially worthwhile people.
10. When I am criticised or when I fail at something I feel worse about myself as a person.

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