Are perfectionism cognitions and cognitive emotion regulation strategies mediators between perfectionism and psychological distress?

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ABSTRACT

Recent studies proposed that maladaptive cognitive emotion regulation (CER) is associated with negative dimensions of perfectionism and mediates the relationship between this trait and negative affect dimensions. In the present longitudinal study, our aim was to examine whether and which perfectionism cognitions and CER strategies would mediate the relationship between perfectionism traits and psychological distress, controlling for perceived stress, social support and outcome measure at one year before.

At T0 and after approximately one year (T1), 258 college students (79.8% female) filled in the Portuguese validated versions of self-report questionnaires to evaluate perfectionism trait dimensions (perfectionistic concerns and perfectionistic strivings), perfectionism cognitions, CER dimensions, perceived stress, social support and psychological distress (depression, hostility-anxiety, and amiability-vigor).

We found that higher perfectionistic concerns at T0 contribute significantly, after one year, to maladaptive perfectionism cognitions, which in turn are associated with higher levels of catastrophizing and rumination, and altogether will ultimately contribute to greater anxiety/hostility (total indirect effect: 0.03; 95% CI: 0.01 to 0.07) and depression (total indirect effect: 0.06; 95% CI: 0.02 to 0.13).

In this cognitive setting, perfectionist individuals may benefit from psychological interventions to reduce their tendency to use maladaptive CER strategies.

1. Perfectionism

Perfectionism is a trait characterized by a dispositional tendency to strive for flawlessness and the setting of excessively high standards for performance, accompanied by a morbid fear of failure and a tendency to harshly evaluate and criticize one's behavior (Frost, Marten, Lahart, & Rosenblate, 1990). Past research has extensively shown that this multifaceted nature of perfectionism encompasses both positive and negative dimensions, emphasizing that perfectionism is not always maladaptive (Slade & Owens, 1998; Stoeber & Otto, 2006; Terry-Short, Owens, Slade, & Dewey, 1995). Hewitt and Flett (1991) conceptualized perfectionism as consisting of both intrapersonal (i.e., self-oriented perfectionism – SOP) and interpersonal (i.e., other-oriented perfectionism – OOP; socially prescribed perfectionism – SPP) dimensions. Frost et al. (1990) developed a six-factor measure, assessing four intrapersonal dimensions (personal standards, concern over mistakes, doubts about actions, and organization) and two interpersonal, the latter restricted to aspects of parental expectations and criticism.

Factor analytic studies of the subscales from the Hewitt and Flett (1991) Multidimensional Perfectionism Scale (H&F-MPS) and the (Frost et al. (1990) Multidimensional Perfectionism Scale (F-MPS) have consistently yielded two factors (Soares et al., 2014). One of these higher-order perfectionism factors is composed of F-MPS – concern over mistakes, F-MPS – doubts about actions, and H&F-MPS – SPP scales and focuses on perfectionistic concerns, and the other higher-order factor includes H&F-MPS – SOP, and F-MPS – personal standards scales and focuses on perfectionistic strivings. These factors have been interpreted by researchers as representing respectively, maladaptive and adaptive features of perfectionism.

Perfectionistic concerns have been associated with lower levels of subjective well-being and higher levels of psychological maladjustment and emotional disorders (Egan, Wade, & Shafran, 2011). More specifically, most of the literature concurs on the fact that maladjustment facets of perfectionism are consistently associated with psychological distress in the form of a broad range of psychopathological conditions such as depression (e.g. Maia et al., 2012), obsessive-compulsive

disorder (e.g. Maia et al., 2009), anxiety (e.g. Soares et al., 2014), eating disordered behavior (e.g. Macedo et al., 2007; Soares et al., 2009), suicidal behavior (e.g. O'Connor, 2007) and other health problems such as sleep disturbances (Azevedo et al., 2010). Furthermore, several studies in non-Western cultures showed that maladaptive perfectionism predicted eating disorder symptoms (Chan, Ku, & Owens, 2010; Chan & Owens, 2007; Choo & Chan, 2013), and adaptive perfectionism predicted greater vigor (Kung & Chan, 2014). Contrarily, perfectionistic strivings have demonstrated associations with psychological adjustment (Bieling, Israeli, & Antony, 2004; Stoeber & Otto, 2006), and to a lesser extent with psychological maladjustment (Limburg, Watson, Hagger, & Egan, 2016; Smith, Saklofske, Yan, & Sherry, 2015). Some authors have contended that maladaptive outcomes associated with perfectionistic concerns may be due to their self-critical component (Dunkley, Blankstein, Masheb, & Grilo, 2006).

Perfectionism cognitions capture automatic thoughts related to dispositional perfectionism (Stoeber, Kobori, & Tanno, 2010), that are important to understand how perfectionism is related to psychological distress, especially after individuals experiencing stressful life events (Stoeber, Kobori, & Brown, 2014). How perfectionism cognitions operate to produce distressful outcomes is not entirely clear, however research has shown that high levels of perfectionism cognitions are associated with a ruminative response, depression, and anxiety (Flett, Madorsky, Hewitt, & Heisel, 2002).

1.1. Perfectionism, cognition and emotion regulation

Although emotions are biologically based, people are able to regulate their emotions (Gross & Muñoz, 1995). The regulation of emotions by cognitions (Cognitive Emotion Regulation, CER) can be defined as the mental processes responsible for monitoring, evaluating, and modifying emotional reactions. This process helps people to keep control over their emotions during or after the experience of threatening or stressful events (Garnefski, Kraaij, & Spinhoven, 2001). Garnefski and Kraaij (2007) conceptualization of CER includes nine cognitive coping strategies that are typically used in response to stressful events. Four of them are considered maladaptive and have been positively associated with both anxiety and depression: self-blame, blaming others, rumination and catastrophizing. The other five dimensions are related to adaptive coping responses: acceptance, refocus on planning, positive refocusing, positive reappraisal and putting into perspective.

Research has shown that both maladaptive and adaptive perfectionism are associated with negative CER dimensions, the latter to a lesser extent. Thus, SOP, personal standards, concern over mistakes, and SPP are related with self-blame (Hewitt & Flett, 1991; Ogai, 2004) and personal standards and SPP with rumination (Flett et al., 2002; Ogai, 2004). SPP is associated with self-blame, rumination and catastrophizing and to lower levels of positive re-evaluation and putting into perspective (Rudolph, Flett, & Hewitt, 2007).

In line with these associations, we have found, in a previous cross-sectional study, that maladaptive perfectionism dimensions were associated with high levels of maladaptive and low levels of adaptive CER strategies (Castro, Soares, Pereira, & Macedo, 2016). Concerning the adaptive perfectionism dimensions, unexpectedly we have found significant positive correlations with several maladaptive CER strategies (consistently with self-blaming), as well as significant associations with adaptive CER. The association with self-blaming is not so surprising taking in consideration the tendency for self-critical evaluations, even in "positive" perfectionists, corroborating previous findings showing that personal standards and SOP are not completely adaptive (DiBartolo, Li, & Frost, 2008; Frost et al., 1990) and may be involved in both positive and negative outcomes, processes and mechanisms (Stoeber & Otto, 2006). To explain this differential function it has been proposed that their role on psychological distress may be a function of specific mediators (Macedo et al., 2015; O'Connor, O'Connor, & Marshall, 2007).

We have also highlighted that CER strategies mediate the associations between perfectionism and negative/positive affect. Specifically, maladaptive CER strategies (rumination, self-blaming, blaming-others, catastrophizing) and low levels of adaptive CER strategies (positive reappraisal and planning, positive refocusing, putting into perspective) mediated the association between doubts about actions, concern over mistakes, PSP, perfectionistic concerns, and perfectionistic strivings and negative affect. The maladaptive CER dimensions were not significantly correlated with positive affect, but high levels of adaptive dimensions (positive reappraisal and planning, positive refocusing, putting into perspective and acceptance) were associated with low levels of concern over mistakes and perfectionistic concerns and mediated their association with positive affect (Castro et al., 2016).

If it could be demonstrated that the effects of perfectionism on psychological distress are a function of specific mediators, this may contribute to better understand the nature of perfectionism components and to refine the focus of intervention trials. Thus, it is important to know which cognitive processes may be at work and linked with perfectionism, and consequently with the development of negative affect.

In the present longitudinal study, our aim was to ascertain whether and which perfectionism cognitions and CER strategies would mediate the relationship between perfectionism traits and psychological distress measured with a one-year interval. Social support and perceived stress need to be controlled in the mediation models to be tested, because these variables were associated in previous studies with both perfectionism and distress (Castro et al., 2016; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000). This strategy takes into consideration the diathesis-stress model, which holds that perfectionism relates more strongly to psychological distress under higher levels of stress (e.g. Hewitt, Flett, & Ediger, 1996) and lower levels of social support (Sherry, Law, Hewitt, Flett, & Besser, 2008).

Our hypotheses are that maladaptive perfectionism cognitions and maladaptive CER strategies will mediate the relationships between perfectionistic concerns and psychological distress (depression and anxiety/hostility). Regarding amiability/vigor outcome, we hypothesized that the mediational model would not be verified.

2. Method

This study was approved by the Ethic Committee of the XXXXXXXX [removed for the manuscript without author identities].

2.1. Participants and procedure

The data were collected outside examination periods. The study aims were explained to the students and the confidentiality was ensured. Participants were 258 college students, enrolled in the first three years of various courses (Medicine, Dentistry, Psychology, Social Service and Health Technologies) (attrition rate = 30.26%). Their mean age was 19.26 ($\pm$1.99), 79.8% were girls and there was no significant gender difference in age [female = 19.20 $\pm$ 2.06 vs. male = 19.52 $\pm$ 1.66, $t(252) = -1.04$]. They filled the Portuguese validated versions of a set of self-reported questionnaires in two time periods: T0 (September 2012) and T1 (September 2013; mean months = 12.72 $\pm$ 1.08). The perfectionism trait questionnaires were only administered at T0.

2.2. Instruments

All the questionnaires used in the present study revealed good reliability and validity (construct and concurrent) in Portuguese samples. The internal consistency coefficients (Cronbach's alpha) obtained with the sample of this study are presented in Table 1.

2.2.1. Perfectionism
The Portuguese versions of the Multidimensional Perfectionism Scale (MPS) developed by Hewitt and Flett (1991) (Macedo et al.,