Influence of adaptive and maladaptive perfectionism on employee well-being and the mediating role of cognitive coping strategies: A four-week longitudinal study

Adelina Zielinska

City University of London

Dr Paul Flaxman

MSc Organisational Psychology

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ABSTRACT

This multi-wave longitudinal study examined the effect of perfectionism on cognitive coping strategies, which explain its association with diminished workplace well-being (i.e., burnout and negative affect). After completing an initial questionnaire screening for perfectionist traits, a sample of 199 employees of various industry sectors responded to 4 week-level measures of workplace well-being and cognitive coping. The results showed significantly lower workplace well-being in maladaptive perfectionists than in adaptive perfectionists, which was mediated by maladaptive cognitive coping strategies (rumination, self-blame and catastrophizing). Contrary to what has been expected, adaptive perfectionism also appeared as related to maladaptive cognitive coping. Current findings show a clear effect of individual employee differences on workplace well-being which may be applied to various occupational fields.

BACKGROUND

Numerous research investigations and theoretical approaches have examined factors involved in workplace well-being (Bolger & Zuckerman, 1995; Johnson et al., 2005), and they have identified individual employee differences as playing key explanatory roles in this matter (Grant & Langan-Fox, 2007). Specifically, a great deal of attention has been devoted to the contribution of maladaptive personality dimensions (such as maladaptive perfectionism) to psychological difficulties (Dunn, Whelton & Sharpe, 2006; Hewitt & Flett, 2002). Research has previously associated maladaptive perfectionism with psychological difficulties such as depressive symptoms, high levels of daily negative affect and emotional distress (e.g., Dunkley, Zuroff & Blankstein, 2003; Shafran & Mansell, 2001). However, there have been relatively few investigations that focus on the association between maladaptive perfectionism and workplace well-being, and those that have are restricted mostly to academic environments (Dunkley et al., 2003; Dunn, et al., 2006; Flaxman, Menard, Bond & Kinman, 2012;) making it problematic to generalise the findings to the working population as a whole. Bearing this in mind, one of the aims of the current study was to expand the existing literature and investigate the effect of both adaptive and maladaptive perfectionism on workplace well-being across various non-academic samples.

Furthermore, in order to understand how maladaptive perfectionist traits might reflect on individuals' workplace well-being, it is essential to look at how perfectionists respond to stressful or negative work-related events. Prevailing theory and research point to the explanatory role of individual cognitive coping strategies in the relationship between personality traits and well-being outcome (Bolger & Zuckerman, 1995; Connor-Smith & Flachsbart, 2007; Garnefski, Kraaij & Spinhoven, 2001). Indeed, research looking specifically into cognitive coping strategies in individuals presenting dominant maladaptive

perfectionist traits reports that they tend to use maladaptive cognitive coping strategies while dealing with stressors (Flaxman et al., 2012; Dunkley et al., 2003; Dunn et al., 2006). Moreover, employing maladaptive cognitive coping strategies by maladaptive perfectionists to deal with stressful events was found to result in negative affect (Dunkley et al., 2003), high psychological distress (Dunn et al., 2006), fatigue and burnout (Flaxman et al., 2012). These findings also indicate that cognitive coping strategies are a potential mediator playing an important explanatory role in the relationship between perfectionism and workplace well-being. However, the amount of research in this area is still limited and the exact role of cognitive coping in the relationship between perfectionism and well-being outcomes is still disputed. Furthermore, existing research fails to account for the fact that unlike personality traits, considered to be stable characteristics resistant to external influence (McCrae & Costa, 1990), cognitive coping strategies are viewed as more susceptible to change under the influence of situational variables (Folkman & Lazarus, 1980). Despite this, the current literature lacks longitudinal research which would seem an optimal approach for examining the dynamic nature of cognitive coping strategies. With these issues in mind, the second aim of the current study is to examine the effect of cognitive coping strategies on the relationship between perfectionism and workplace well-being in a four-week longitudinal design. It further aims to add to the existing knowledge on this matter by exploring the potential role of cognitive coping as a mediator between perfectionism and workplace well-being.

Perfectionism and workplace well-being

In the past, perfectionism was viewed as a predominantly negative personality feature characterised by individuals setting themselves excessively high performance standards and over-critically evaluating their own behaviour (Terry-Short, Owens, Slade, & Dewey, 1995) Following the work of Hamachek (1978), who was the first to suggest that there is a positive

side to perfectionism, it is still perceived as a multidimensional personality construct by the majority of researchers. There are two key dimensions of perfectionism that have emerged throughout literature and in the current paper they will be referred to as: maladaptive perfectionism and adaptive perfectionism (Rice, Ashby & Slaney, 1998). While, maladaptive perfectionism is popularly associated with negative characteristics such as self-scrutiny and constant dissatisfaction with one's performance (Cox, Enns & Clara, 2002), adaptive perfectionism is characterised as a healthy drive for achieving perfection by setting high standards and goals (Rice, et al. 1998). Although this distinction has been established for decades (Frost, Marten, Lahart, & Rosenblate, 1990), some researchers are strongly opposed to the idea that perfectionism can be positive or adaptive, not to mention healthy (Benson, 2003; Greenspon, 2000; Stoeber & Otto, 2006). The discrepancy prevailing in the literature concerning perfectionism as a multidimensional trait provides a strong rationale for further research that could potentially add to existing knowledge in this area.

Nevertheless, there is strong empirical evidence indicating an association between perfectionism and various psychological well-being outcomes (Stoeber & Otto, 2006). Maladaptive Perfectionism was found consistently linked to the formation and maintenance of various forms of psychopathology such as: depression, anxiety, obsessive-compulsive behaviour and phobias (Shafran & Mansell, 2001). Furthermore, numerous studies have demonstrated that adaptive perfectionism and maladaptive perfectionism are related to distinct well-being outcomes. For example, while maladaptive perfectionism is found to result in high levels of daily negative affect, suicidal ideation and low self-esteem, adaptive perfectionism has been related to higher levels of positive daily affect, satisfaction with life and psychological endurance (Chang et al., 2004; Stumpf & Parker, 2000). Moreover, previously outlined findings have resulted in further investigations of the effect of perfectionism on workplace-specific well-being. For example, Dunn et al. (2006) found a

strong correlation between maladaptive perfectionism and psychological distress among university academics. Similarly, Flaxman et al. (2012) reported maladaptive perfectionism to affect fatigue, burnout and worry or rumination about work during leisure time among university employees. However, the vast majority of studies within this area is limited to clinical and academic populations; thus it is difficult to generalise to the working population as a whole.

There are, however, a small number of studies that focus on the relationship between perfectionism and workplace well-being outside the academic environment. Mitchelson and Burns (1998) report a relationship between perfectionist personality traits and work-related burnout in a sample of working mothers. Furthermore, Magnusson, Nias & White (2006) found a link between individuals' "Doubts about Actions", a component of maladaptive perfectionism in Frost's Multidimensional Perfectionism Scale (Frost et al., 1990), and mental fatigue among nurses. These findings confirm the influence of perfectionism on workplace well-being providing strong grounds for further research and potentially broadening knowledge in this area. Therefore, one of the aims of the current study is to examine the relationship between maladaptive perfectionism and adaptive perfectionism and workplace well-being across various non-academic populations. The study focuses specifically on two core components of maladaptive perfectionism put forward by Frost et al. (1990), namely "Doubts about Actions" and "Concern over Mistakes"; and Frost's personal standards perfectionism as a measure of adaptive perfectionism. Frost et al. (1990) suggest that individuals who are over-concerned with their mistakes tend to interpret even minor mistakes as failures. "Doubts about Actions" component refers to individuals repeatedly checking their actions and tasks in order to avoid any potential mistakes (Frost et al., 1990). These two dimensions of maladaptive perfectionism have been associated with fatigue, psychological strain and negative daily affect (Dunkley et al., 2003; Dunn et al., 2006;

Mangusson et al., 2006). Personal standards perfectionism, on the other hand, involves individuals setting themselves high standards of performance and has been found to be correlated positively with individuals experiencing feelings of efficacy (Frost el al., 1990). Consequently, in the present study employees possessing maladaptive perfectionism traits are expected to present poorer well-being (namely negative affect and work-related burnout) than individuals with adaptive perfectionism traits. These assumptions are tested by comparing adaptive perfectionist and maladaptive perfectionist employees' weekly burnout and negative affect outcomes reported over four consecutive weeks of the study.

Hypothesis 1a: Maladaptive perfectionism is expected to be positively related to employee burnout and negative affect.

Hypothesis 1b: Adaptive perfectionism is expected to be negatively related to burnout and negative affect in employees

Explanatory Role of Cognitive Coping Strategies

Perfectionism and Cognitive Coping: Theoretical and Research

The preceding review of the association between maladaptive personality traits (e.g., maladaptive perfectionism) and negative well-being outcomes poses the question of how possessing certain personality traits can affect individual well-being. Prevailing theory and research suggest that the answer lies in the way individuals with certain personality traits react to stressful or negative work-related and life events, i.e., their cognitive coping strategies (Bolger, 1990). Cognitive coping can be defined as a constantly changing conscious effort to manage specific internal or external stressors (Lazarus & Folkman, 1984). It is the choice of cognitive coping strategies, that one employs in order to deal with stressful

events, that determines whether or not they result in psychological distress (e.g., Carver et al. 1993; Compas, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001). Research identifies various cognitive coping strategies, which can be categorised into two distinct dimensions: adaptive and maladaptive (Connor-Smith & Flachsbart, 2007; Solberg Nes & Segerstrom, 2006). Maladaptive cognitive coping strategies, which include for example, self-blame or avoidance of the stressor, are often unsuccessful in dealing with the stressor and may result in psychological distress (Flett, Hewitt, Blankstein, Solnik & Van Brunschot, 1996). Adaptive cognitive coping strategies (such as seeking to eliminate or alter the source of the stressor), on the other hand, research has found more effective in dealing with stressors and to result in no negative effect on psychological well-being (Dunkley, Blankstein, Halsall, Williams & Winkworth, 2000).

Personality is the key factor that determines what type of cognitive coping strategies individuals use to deal with stressful events (Connor-Smith & Flachsbart, 2007). The theoretical framework of Bolger & Zuckerman (1995) suggests that individuals' personality can influence both their exposure to stressors (i.e., people with certain personality traits are prone to be affected by a greater number of stressors) and their reactivity to stressors (i.e., personality influences how individuals cope with stressors). This theoretical model was paired with empirical research that found a strong relationship between maladaptive personality traits (specifically neuroticism) and maladaptive cognitive coping strategies (e.g., wishful thinking, self-blame and avoidant coping). Non-neurotic individuals, on the other hand, were found to employ more effective cognitive coping strategies when dealing with stressors.

Following the findings of Bolger & Zuckerman (1995) numerous studies have examined the link between personality traits and cognitive coping strategies. Strong empirical

evidence comes from large-scale, meta-analytical studies (Connor-Smith & Flachsbart, 2007; Solberg Nes & Segerstrom, 2006) that reviewed the relationship between personality traits and cognitive coping strategies across the literature. They not only confirmed a clear link between neuroticism and maladaptive cognitive coping strategies, but they also found that individuals with dominant adaptive personality traits (conscientiousness, optimism and agreeableness) presented with adaptive cognitive coping strategies and a lesser tendency to utilise maladaptive cognitive coping strategies.

Finally, there is a portion of research that examines the relationship between perfectionism and cognitive coping strategies. Indeed, individuals with maladaptive perfectionist traits were found to respond to stressful events using maladaptive cognitive coping strategies such as helplessness-orientation (Dewek & Sorich, 1999) and avoidant coping (Dunkley et al., 2000; Dunkley et al., 2003; Dunn et al., 2006) far more frequently than they used adaptive cognitive strategies. Despite the fact that the prevailing literature focuses mostly on the relationship between maladaptive perfectionism and maladaptive cognitive coping, some research investigations provide evidence in support of the association between adaptive perfectionism and adaptive cognitive coping. For example, while Dunkley et al. (2000) found that adaptive perfectionists deal with stressors successfully by engaging in problem-focused coping, O'Connor and O'Connor (2003) reported cognitive reconstruction coping strategies in adaptive perfectionists. Therefore, based on the previously discussed research, there is enough evidence to assume a link between maladaptive personality traits and maladaptive cognitive coping; and adaptive personality traits and adaptive cognitive coping.

However, research investigations that look at the relationship between perfectionism and cognitive coping are currently limited. Furthermore, existing studies have approached coping mostly as situational and dispositional cognitive processes (specifically they used the

COPE Inventory as a measure; Carver, Scheier & Weintraub, 1989), without including the cognitive emotion regulation aspect of coping. Recent studies emphasise the cognitive emotion regulation aspect as it provides a broader set of concepts for coping (Martin & Dahlen, 2005). The Cognitive Emotion Regulation Questionnaire (CERQ) is a relatively new measure of both adaptive and maladaptive cognitive coping strategies that has been found to be valid in predicting individuals' well-being outcomes (Garnefski et al., 2001; Garnefski & Kraaij, 2007). Research that employs the CERQ to investigate the link between perfectionism and cognitive coping strategies is, however, currently very limited. Therefore, in response to the gaps in the prevailing literature, the present study aims to investigate the relationship between adaptive and maladaptive perfectionism; and cognitive coping strategies using the CERQ as a measure of the latter. It is, then, expected that while individuals with maladaptive personality traits will present maladaptive cognitive coping strategies, adaptive perfectionists will show adaptive cognitive coping strategies.

Hypothesis 2a: Maladaptive perfectionism will predict individuals' showing maladaptive cognitive coping strategies.

Hypothesis 2b: Adaptive perfectionism will predict the occurrence of adaptive cognitive coping strategies.

Cognitive Coping Strategies: A Potential Mediator

The previously discussed literature provides consistent evidence of the relationship between cognitive coping strategies and perfectionism. Employing maladaptive cognitive coping strategies in the presence of a stressor was found to result in psychological distress and poorer mental health (Flett, Hewitt, Blankstein, Solnik & Van Brunschot, 1996).

Adaptive cognitive coping strategies, on the other hand, were found to be more effective in dealing with stressors resulting in no negative effect on psychological well-being (Dunkley, et al., 2000). Therefore, since both perfectionism and cognitive coping strategies have been found to affect individuals' psychological well-being (e.g., Dunn et al., 2006; Magnusson et al., 2006), this has lead researchers to suspect that cognitive coping strategies could play a mediatory role in the relationship between perfectionism and well-being (e.g., Dunkley & Blankstein, 2000). A mediation effect can be identified when an observed relationship between two variables occurs via the means of a third explanatory variable, i.e., the mediator (Field, 2013, p. 408). Indeed, this notion finds its support in the previously discussed theoretical model of Bolger & Zuckerman (1995). Not only do they suggest that individuals with maladaptive personality traits are more prone to choose ineffective and inadequate coping strategies in the presence of a stressor than individuals who lack maladaptive personality traits, but also that this consequently affects their psychological health.

Bolger and Zuckerman's (1995) empirical findings confirmed their theory since they found that highly neurotic participants who chose maladaptive coping strategies (i.e., avoidance of the stressor) were ineffective in preventing depression. This essentially means that maladaptive cognitive coping strategies mediated the effect of maladaptive personality traits on depression. Dunkley & Blankstein (2000) incorporated these findings into the study of cognitive coping strategies as one of the mediators in the relationship between multidimensional perfectionist traits and psychological well-being. Their findings show that individuals with maladaptive perfectionist traits tend to use maladaptive cognitive coping strategies when dealing with stress, which results in psychological distress. They also suggest that adaptive perfectionism may result in an individual's intrinsic motivation to engage in more adaptive cognitive coping strategies, which result in lower distress. Furthermore, Dunkley and Blankstein subjected the mediatory role of cognitive coping strategies to further

study in 2003. They found individuals with maladaptive perfectionist traits to engage in several maladaptive cognitive coping strategies as a response to stressful events, which resulted in high levels of daily negative affect and low levels of daily positive affect. However, none of the empirical evidence discussed above, which confirms the mediatory role of cognitive coping strategies in the relationship between perfectionism and cognitive coping strategies, was conducted in a work-related environment. The studies discussed previously did not attempt to measure workplace-specific well-being, nor did they investigate cognitive coping strategies as a response to work-related stressors.

Therefore, further studies emerged that examined the relationship between perfectionism and psychological well-being; and the occurrence of this relationship via cognitive coping strategies as a response to work-related stress. Dunn et al. (2006) examined cognitive coping strategies as one of the potential mediator variables that would account for the association between maladaptive perfectionism and psychological well-being in a sample of university professors. They found a strong association between maladaptive perfectionism and psychological distress that occurred via maladaptive cognitive coping strategies (specifically avoidant coping) as a response to work-related stressors. Furthermore, the study by Flaxman et al. (2012) which, similarly to the previous one, also investigated a sample of academic employees, confirmed the findings discussed above. They, however, looked at workplace-specific measures of well-being (i.e., work-related emotional exhaustion, anxiety and fatigue), and found an association between poor work-related well-being and maladaptive perfectionism. This was mediated by the presence of worry and rumination about work, which can be considered maladaptive cognitive coping strategies (Fresco, Frankel, Mennin, Turk & Heimberg, 2002) in maladaptive perfectionists.

There are, however, several limitations within the existing literature of interest. First of all, even though the findings of Flaxman et al. (2012) and Dunn et al. (2006) were applied

to a workplace environment, they were both conducted within academic environments, thus generalising them to the working population as a whole may be problematic. Second, none of the studies investigating cognitive coping strategies as a response to work-related stress applied the CERQ (Garnefsiki et al., 2001), which is discussed in detail in the subsequent section of the current paper, to the workplace environment. Third, cognitive coping strategies are considered if not dynamic in their nature (Folkman & Lazaurs, 1985) then significantly less stable than personality traits (Costa, Bagby, Herbst & McCrae, 2005). However, despite this knowledge, the current literature lacks long-term, multi-wave research that would be able to accurately capture the dynamic nature of cognitive coping strategies in the relationship between workplace well-being and perfectionism.

In an effort to capture the potentially dynamic nature of cognitive coping strategies, the current study aims to examine their mediatory role in the relationship between perfectionism and workplace well-being in a four-wave, longitudinal study. Employees of various non-academic organisations will be asked to participate in cognitive emotion regulation and workplace well-being measures weekly for four consecutive weeks. The study further aims to apply the CERQ to measure cognitive coping strategies specific to the workplace environment. It is expected that employees possessing maladaptive perfectionist traits will present with poorer workplace well-being outcomes (specifically work-related burnout and negative affect) that will be mediated by them employing maladaptive cognitive coping strategies as a response to workplace related stressors (Hypothesis 3a). Contrary to the hypothesis stated above, adaptive perfectionists are expected to show lower negative affect and work-related burnout, which will be mediated by presenting with adaptive cognitive coping strategies as ways of dealing with work-related stressors (Hypothesis 3b). Figure 1 presents a diagram of the final hypotheses statements of the current study.
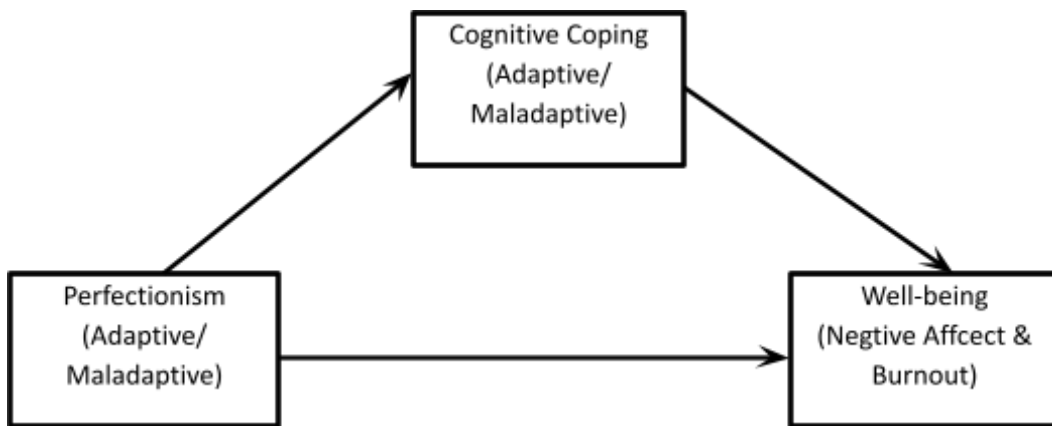
Figure 1. Model illustrating the hypothesised indirect effect of perfectionism on workplace well-being via cognitive coping strategies (Hypothesis 3a & 3b).

Hypothesis 3a: The relation between adaptive perfectionism and burnout/negative affect will be mediated by individuals presenting higher levels of adaptive cognitive coping strategies and lower levels of maladaptive cognitive coping strategies.

Hypothesis 3b: The relation between maladaptive perfectionism and burnout/negative affect will be mediated by individuals presenting higher levels of maladaptive cognitive coping strategies and lower levels of adaptive cognitive coping strategies

METHOD

Design

Data was collected from the participants using an online questionnaire. Two stages of data collection were applied in the current study. The first stage involved a single appliance of the initial survey that screened for adaptive and maladaptive perfectionism (Frost's Multidimensional Perfectionism Scale; Frost et al., 1990). It also included measures of

control variables: The "Big Five" personality traits (McCrae & Costa 1990) and job characteristics (Demands, Support, and Control; Johnson & Hall, 1988). Since individual personality traits, including perfectionism, are considered to be stable in their nature (Cox & Enns, 2003; McCrae & Costa, 1990), a single measure was assumed to be an optimal tool for the acquisition of the data. The second stage of data collection aimed to measure workplace well-being using items from the Maslach Burnout Inventory (Maslach & Jackson, 1981) and from the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988); and cognitive coping strategies using an adapted version of the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, 2007). Despite the fact that previous research has relied primarily on a two-wave, longitudinal design as a measure of the relationship between perfectionism and well-being, recent advances suggest it is inadequate in capturing temporal well-being change (Graham et al., 2010). Therefore, the present study adopted the short-term, four-week, longitudinal design originally developed by Graham et al. in 2010 in which participants were asked to complete four week-level identical online questionnaires. Formerly, an approach of three or more longitudinal waves has also been regarded as advantageous in unfolding mediation (Hypothesis 3a & 3b) as a temporal process (Cole & Maxwell, 2003).

Participants & Procedure

Participants were recruited from a Polish-based organisation operating in the customer service sector. An email containing a research flyer was distributed to 140 employees (fluent in English) out of whom 57 volunteered to take part in the research. This sample was a part of a larger research project conducted by five City University of London students, who collected data across various organisations in the UK. The total number of participants recruited for the

current study was 288, with 24% of them being employed in the professional services sector, 18% in the central government, 13% in education, 8% in research and the remaining 57.5% in other industry sectors. The final sample was predominantly female (59%), average age was 40 (SD = 11. 34) and average tenure was eight years (SD = 9.14).

In order to distribute the research flyer via email, mailing lists were obtained with the approval of company management. Subsequently, an email containing the questionnaire link along with the information sheet and the instructions was sent out to volunteers who enlisted to take part in the research (the research flyer and the information sheet are both included in Appendices A & B of the present paper). The inclusion criteria for the participants were for them to be over 18 years old and to be currently employed. Participants were asked to complete the initial survey and following that the weekly surveys were to be completed for four consecutive weeks. The instructions named Friday as an optimal time to submit the weekly surveys as they asked the participants to reflect upon their past working week. Prior to the date each weekly survey was due, reminder emails were sent out by the researchers. Participants were to return to each weekly survey by following the link enclosed in the initial email. Conclusively, out of the 288 participants 26% (n = 75) withdrew from the study before completing week one survey, 15.6 % (n = 45) completed week one survey only, 13.9% (n = 40) reached week two, 12.5% (n = 36) completed three weeks of the survey and 31.9% (n = 92) carried on to the fourth week of the survey. The final sample consisted of 199 participants. The electronic survey link ensured participants' anonymity; this assurance was guaranteed at every step of the study.

Measures

Perfectionism

Both maladaptive and adaptive perfectionism measures included in the initial questionnaire were adapted from Frost's Multidimensional Perfectionism Scale (FMPS), a well-established measure developed to capture the multidimensional nature of perfectionism (Frost et al., 1990). Although Frost, Heimberg, Holt, Mattia and Neubauer (1993) pinpoint four subscales as a measurement of maladaptive perfectionism, to serve as a measurement of maladaptive perfectionism in the current study; two subscales were selected from FMPS: "Doubts about Actions" and "Concern over Mistakes". This selection was grounded in previous research that found the relationship between these two measures of maladaptive perfectionism and psychological difficulties the most evident (e.g., Cox et al., 2003; Dunn, et al., 2006; Frost et al., 1990). Five items from Frost's "Concern over Mistakes" were used to asses over-concern with mistakes (e.g., "If I do not do as well as other people, it means I'm an inferior human being.") and four items from Frost's "Doubts about Actions" assessed uncertainty regarding actions and beliefs (e.g., "I usually have doubts about the simple everyday things I do."). Cronbach's alpha for the maladaptive perfectionism measure, which included a total of nine items, was .83.

Following previous research that associated the FMPS subscale "Personal Standards" with positive affect and satisfaction in life (Chang, Watking & Banks, 2004; Frost et al., 1993), this was implemented in the current questionnaire as a measure of adaptive perfectionism. Three items from this subscale looked at individuals' strivings to achieve high goals and setting themselves high standards (e.g., "I expect higher performance in my daily tasks than most people."). Cronbach's alpha for the adaptive perfectionism measure was .63.

Respondents rated their agreement with all of the adaptive perfectionism and maladaptive perfectionism statements on a five-point Likert scale ranging from 1 – "strongly disagree" to 5 – "strongly agree".

Burnout

As one of the measures of workplace well-being, the emotional exhaustion (referred to as burnout in the current paper) dimension of the Maslach Burnout Inventory (Maslach, Jackson & Leiter, 1996) was implemented. Participants were asked to reflect upon their feelings of being emotionally drained over the past week (for four consecutive weeks) in relation to their work. Five items from this subscale were included in the current questionnaire (e.g., "I felt burned out from my work") and rated on a six-point scale ranging from 1- "strongly disagree" to 6- "strongly agree". Cronbach's alpha averaged across the four weekly burnout measures was .89.

Negative Affect

A short version of The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), a well-established and valid measure of these two dimensions of individual affect was adapted. Of the ten adjectives included in the original PANAS as a measure of negative affect, five were selected for the purpose of the current study (*distressed, afraid, scared, upset, and nervous*). Participants rated the degree to which they experienced these emotions or feelings on a five-point scale, ranging from 1 ("very slightly" or "not at all"*)* to 5 ("extremely"). They were asked to reflect upon their past working week while rating their affect weekly for four consecutive weeks. Cronbach's alpha averaged across the four weekly negative affect measures was .84.

Cognitive Coping Strategies

The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, 2007) is a psychometric tool measuring specific cognitive coping strategies individuals employ when faced with stressful life situations (Garnefski, Kraaij & van der Veek, 2009). The CERQ consists of 36 items classifying cognitive coping strategies on nine conceptually distinct scales that include four items each. Garnefski & Kraaij (2007) have previously established a good factorial validity of the measure with high reliabilities (Cronbach's alpha ranging from .75 to .87). Since the present study aimed to measure distinct maladaptive and adaptive cognitive coping strategies, items from the CERQ that were highly representative of these constructs and had high factor loadings were selected for the current questionnaire. The maladaptive cognitive coping measure comprised of three items from the rumination subscale (e.g., "I became preoccupied with what I think and feel"), two items from the self-blame subscale (e.g., "I thought that basically the cause must lie within myself") and two items from the catastrophising subscale (e.g., "I continually thought about how horrible the situation has been"). The adaptive cognitive coping measure included two items from the positive reappraisal subscale (e.g., "I thought that I can learn something from the situation") and two items from the positive refocusing subscale (e.g., "I thought of positive things that had nothing to do with it"). As participants were asked to rate how they felt when the most negative, stressful or unpleasant work-related event happened over the past working week, the items were rephrased to be compatible with the weekly administration. Each of the current questionnaire items was paired with a five-point scale ranging from 1 – "Not at All" to 5 – "A Great Deal". Cronbach's alpha averaged across the four weekly measures was .88 for the maladaptive cognitive coping (seven items total) and 0.78 for the adaptive cognitive coping (four items total).

Control Variables

First, age and gender were taken into account as control variables in the current study. The second group of control variables were work characteristics (*demands, support and control*) that participants reported in the initial survey. Job environments characterised by low social support, high work demands and low job control are consistently associated with poor workplace well-being and high work-related stress (De Lange, Taris, Kompier, Houtman & Bonger, 2003; Johnson & Hall, 1988). Thus, by controlling for these variables, the current study aimed to test the extent to which adaptive and maladaptive perfectionism would predict cognitive coping strategies and well-being over and above the influence of job demands, support and control. Third, we controlled for two of the Five Factor Model personality characteristics: emotional stability (also referred to as neuroticism) and conscientiousness (McCrae & Costa 1990), which were also included in the initial survey. As previous research provides extensive evidence of the correlation between emotional stability and maladaptive perfectionism; and conscientiousness and adaptive perfectionism (Enns & Cox, 2002), the current study aims to show whether perfectionism can predict workplace well-being over and above these "Big Five" personality characteristics.

RESULTS

Preliminary Analysis

As the first step of statistical analysis, the average of the outcome variables (maladaptive cognitive coping, adaptive cognitive coping, negative affect and burnout) across four weeks of study was determined in order to provide a comprehensive overview of these

variables. The outcomes of these data transformations were then included in all of the following statistical analyses.

Table 1

Preliminary Analysis: Means, Standard Deviations and Zero-Order Correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	39.64	11.82	−												
2. Gender	1.58	.49	-.04	−											
3. Demands	17.35	3.19	.02	-.11	−										
4. Support	11.26	2.90	-.15	-.04	-.13	−									
5. Control	8.62	2.40	.04	.02	-.26	.23	−								
6. Cons	11.25	2.29	.12	.10	.04	-.08	.01	−							
7. EmSt	9.48	3.03	.19	-.05	-.04	.10	.14	.28	−						
8. AP	8.93	2.60	-.06	.-13	.23	-.01	.02	.08	-.11	−					
9. MP	10.74	3.25	-.20	-.05	.15	.00	-.18	-.24	-.49	.48	−				
10. ACC	5.45	1.65	-.05	.07	-.15	.21	.36	.07	.16	.09	-.11	−			
11. MCC	5.34	1.91	-.14	-.03	.06	-.11	-.15	-.17	-.40	.33	.54	-.04			
12. Burn	16.16	6.17	-.08	-.10	.46	-.37	-.46	.01	-.25	.20	.35	-.38	.45	−	
13. NA	9.05	3.63	-.12	-.02	.08	-.10	-.21	-.18	-.40	.12	.38	-.13	.45	.41	−

Note. N = 199. Cons = Conscientiousness; EmSt = Emotional Stability; AP = Adaptive Perfectionism; MP = Maladaptive Perfectionism; MCC = Maladaptive Cognitive Coping; ACC = Adaptive Cognitive Coping; Burn = work-related burnout; NA = work-related negative affect; Gender: 1 = female, 2 = male. Coefficients ≥ .13 significant at *p* < .05. Coefficients ≥ .18 significant at *p* < 0.01. Coefficients ≥ .23 significant at *p* < 0.001.

Descriptive analysis of the variables along with zero-order correlations can be found in Table 1. The analysis of the pattern of correlations yielded initial support for Hypothesis 1a showing maladaptive perfectionism as significantly correlated with both of the well-being outcomes: burnout and negative affect. Consistent with Hypothesis 2a, the analysis showed a relationship between maladaptive perfectionism and maladaptive cognitive coping. Moreover, the results displayed a higher correlation between maladaptive cognitive coping

and; burnout ($r = .45$) and negative affect ($r = .45$) than between maladaptive perfectionism and burnout ($r = .35$), and negative affect ($r = .38$) providing grounds for further mediation analyses. Contrary to what is stated in Hypothesis 1b, no initial support for adaptive perfectionism being negatively correlated with well-being measures was found. Significant correlations were observed, however, between adaptive perfectionism and burnout ($r = .20$), maladaptive cognitive coping ($r = .33$) and maladaptive perfectionism ($r = .48$), thus creating the need for further regression analyses of these variables. Finally, in accordance with the current research expectations, significant results appeared for the control variables (e.g., a significant negative relationship between emotional stability and: maladaptive perfectionism, maladaptive cognitive coping, burnout and negative affect). The latter has caused for further statistical analyses in order to prove the effect of independent variables over and above the control variables.

Hypothesis 1

The first hypothesis predicted that there will be a positive relationship between maladaptive perfectionism and negative affect and burnout, compared to adaptive perfectionism, which was expected to relate negatively to both employee well-being outcomes. In order to test Hypotheses 1a and 1b, two hierarchical regression analyses were performed to assess each of the well-being outcome variables (burnout and negative affect). The first step of both regression models controlled for age and gender (coded 1 = female, 2 = male). Step 2 controlled for the job characteristics: demands, support and control. In the third step of the regression emotional stability and conscientiousness were entered into the model (a detailed account of the control variables can be found in the Method section). As the fourth and final multiple regression block maladaptive perfectionism and adaptive perfectionism were inserted into the model. The results of the regression analyses are presented in Table 2.

While running the regression analyses, data was also screened for the multiple regression assumptions: multicolinearity, homoscedasticity, independent and normally distributed errors. The burnout outcome variable was found not to be normally distributed (SD = 6.17). However, after transforming the data no observable effect in the regression model was found. It is suggested that with such a sample size (n = 199) the current test is fairly robust to violations, and this is not likely to have affected the results (Field, 2013, p. 221). The rest of the multiple regression assumptions were met.

In accordance with Hypothesis 1a, maladaptive perfectionism was a significant predictor of both employee burnout (β = .21) and negative affect (β = .25). The results indicated that 40% of variance in burnout can be explained by variables entered in Step 2 – demands, support and control. Emotional stability and conscientiousness, entered in Step, 3 explained only 2% of additional variance in burnout. Finally, an additional 4% of variance was attributed to maladaptive perfectionism as a unique predictor of burnout. Looking at negative affect as an outcome variable, 6% of the model variance was attributed to Step 2 variables. Emotional stability alone, entered in Step 3, explained 14% of negative affect variance. Similarly, to the regression outcome of burnout, 4% of variance above the control variables was attributed to maladaptive perfectionism, confirming Hypothesis 1a.

Hypothesis 1b expected adaptive perfectionism to be a significant predictor negatively related to burnout and negative Affect. The results of the regression analyses, however, did not confirm adaptive perfectionism to be a significant predictor for either of the outcome variables of burnout (β = .03) or negative affect (β = -.04). The present results, therefore, did not provide support for adaptive perfectionism being related to workplace well-being.

Hypothesis 2

The second hypothesis stated that maladaptive perfectionism will predict a greater use of maladaptive cognitive coping strategies (Hypothesis 2a), while adaptive perfectionism will predict a greater occurrence of adaptive cognitive coping strategies (Hypothesis 2b). To test Hypotheses 2a and 2b two multiple hierarchical regression analyses were run with maladaptive cognitive coping and adaptive cognitive coping as outcome variables. The regression analyses used identical methods of entry of the independent variables as those described under Hypothesis 1. Similarly, along with the regression analyses all regression assumptions were checked for and met. The results of the analyses can be found in Table 2.

Confirming Hypothesis 2a, maladaptive perfectionism was found to be a significant predictor of maladaptive cognitive coping strategies in employees ($\beta = .35$). Contrary to what was expected, a small yet significant positive relationship between adaptive perfectionism and maladaptive cognitive coping appeared; however, the β value was notably lower than that for maladaptive perfectionism ($\beta = .17$). While emotional stability, entered in Step 3 as one of the control variables, accounted for 13% of variance in maladaptive cognitive coping, perfectionism variables added 16% to the model variance. Taking into account the difference in β values between adaptive perfectionism and maladaptive perfectionism, it can be concluded that maladaptive perfectionism is the predictor variable responsible for explaining the variance in the maladaptive cognitive coping outcome to a higher degree. Additionally, compared with the outcomes of Hypothesis 1 analyses, it appears that maladaptive perfectionism explained more variance in the maladaptive cognitive coping outcome than it did in burnout and negative affect outcomes. This indicates a possible indirect effect of maladaptive perfectionism on well-being outcomes with maladaptive cognitive coping as a mediator of this effect.

Multiple hierarchical regression that included adaptive cognitive coping as an outcome variable resulted in neither adaptive perfectionism ($\beta = .14$) nor maladaptive

perfectionism (β = -.09) presenting as significant predictor variables. Overall, the regression model was not successful in explaining the variance in the adaptive cognitive coping outcome, which failed to provide support for adaptive perfectionism predicting the occurrence of adaptive cognitive coping strategies in employees (Hypothesis 2b).

Table 2

Summary of results of hierarchical regression analyses

	NA		Burnout		MCC		ACC	
Variable	B	ΔR^2	B	ΔR^2	B	ΔR^2	B	ΔR^2
Step 1		.02		.02		.03		.00
Age	-.14*		-.09		-.16*		-.05	
Gender	-.03		-.10		-.04		.05	
Step 2		.06**		.40***		.03		.14***
Demands	.04		.34***		-.04		-.01	
Support	-.09		-.26***		-.11		.13	
Control	-.19*		-.31***		-.10		.32***	
Step 3		.14**		.02*		.13***		.01
Cons	-.08		.06		-.09		.04	
EmSt	-.35***		-.16**		-.33***		.10	
Step 4		.04**		.04**		.16***		.01
AP	-.04		.03		.17*		-.09	
MP	.25**		.21**		.35***		.14	

Note. N = 199. Cons = Conscientiousness; EmSt = Emotional Stability; MP = Maladaptive Perfectionism; AP = Adaptive Perfectionism; NA = work-related negative affect; MCC = Maladaptive Cognitive Coping; ACC = Adaptive Cognitive Coping; Gender: 1 = female, 2 = male.

* p < .05. **p < .01. *** p < .001.

Hypothesis 3

The third and final hypothesis of the current study assumed a mediation effect of cognitive coping strategies to occur between individuals possessing perfectionist personality traits and their workplace well-being outcome. Specifically, while the relation between

maladaptive perfectionism and burnout/negative affect was expected to be mediated by maladaptive cognitive coping strategies (see Figure 1 for Hypothesis 3a), the relation between adaptive perfectionism and burnout/negative affect was expected to be mediated by adaptive cognitive coping strategies (see Figure 1 for Hypothesis 3b). To help reveal the potential mediation effect a series of bootstrapped mediation tests, recommended by Hayes (2012), was performed. The description of the variables included in the mediation analyses is displayed in Table 3. Preacher & Hayes' (2008b) mediation procedure was applied to request 1000 bootstrapped resamples and 95% bias-corrected confidence intervals (BaC CIs) from the data obtained in PROCESS statistical software by Hayes (2012). This modern analytical approach was chosen over more traditional methods such as the Sobel test (Preacher & Hayes, 2004) as it allows the inclusion of control variables into the procedure. A statistically significant influence of the mediator variable was indicated by the BaC CIs, i.e., occurred when zero was not contained between the upper and lower bound BaC CIs.

The results of the four mediation tests are summarised in Table 3. As can be seen by looking at the BaC CIs reported in Table 3, the two analyses examining the mediation effect of maladaptive cognitive coping strategies were found to be statistically significant. This indicates a significant indirect effect of maladaptive perfectionism on both well-being outcomes (burnout and negative affect) via maladaptive cognitive coping strategies, consequently confirming Hypothesis 3a. In accordance with the outcomes of statistical analyses carried out prior to the mediation tests, no significant mediation effect of adaptive cognitive coping strategies in the relation between adaptive perfectionism and either of the well-being variables (burnout and negative affect) was found, subsequently failing to confirm Hypothesis 3b.

The approximated magnitude of the statistically significant indirect effects was then estimated following the guidelines of Preacher & Hayes (2008a) for reporting effect size

measures in mediation analyses. Since in the current analyses numerous variables were entered as covariates (see Table 3 for the list of control variables), not all of the effect size measures were available. In such cases Preacher & Hayes (2008a) suggest using the completely standardised indirect effect measure as a valid indicator of the effect size. The completely standardised indirect effect of maladaptive perfectionism on burnout via maladaptive cognitive coping strategies was associated with a *b* value of .149, 95% BaC CIs [.084, .249]. The completely standardised indirect effect of maladaptive perfectionism on negative affect via maladaptive cognitive coping strategies was associated with a *b* value of .122, 95% BaC CIs [.06, .21]. Following Cohen's (1988) interpretation of the magnitude of effect size values, values of .149 and .122 both indicate a moderate mediation effect.

Table 3

Bootstrapped Mediation Analyses

			Indirect Effect		BaC 95% CI	
IV	Mediator	Outcome	Est.	*SE*	Lower	Upper
MP	MCC	Burnout	.25	.07	.13	.42
MP	MCC	NA	.14	.06	.07	.25
AP	ACC	Burnout	-.04	.03	-.13	.01
AP	ACC	NA	-.003	.01	-.05	.01

Note. N = 199. IV = Independent Variable; Mediator = Mediator Variable; Outcome = Outcome Variable; MP = Maladaptive Perfectionism; AP = Adaptive Perfectionism; MCC = Maladaptive Cognitive Coping; ACC = Adaptive Cognitive Coping; Burnout = work-related burnout; NA = work-related negative affect; Est. = bootstrapped unstandardised *b* estimate; BaC 95% CI = bias-corrected 95% confidence intervals. Age, gender, Demands, Support, Control, Emotional Stability and Conscientiousness were entered as covariates.

DISCUSSION

The current study broadened the existing research by investigating the effects of adaptive and maladaptive perfectionism on workplace well-being; and the mediatory role of cognitive coping strategies in these effects using a longitudinal research approach. The present findings were largely consistent with the hypotheses. Employees' maladaptive perfectionist traits predicted their experience of poorer workplace well-being (i.e., burnout and negative affect) over the four weekly reports. Employees were also found to engage in maladaptive cognitive coping strategies as a response to stressful work events. Finally, maladaptive perfectionist employees were found to exhibit poorer workplace well-being as a result of their engaging in maladaptive cognitive coping strategies. In other words, maladaptive cognitive coping strategies mediated the effect of maladaptive perfectionism on workplace well-being. Employees' adaptive perfectionist traits, however, did not predict them showing significantly superior workplace well-being. The current study found no support for adaptive perfectionists engaging in adaptive cognitive coping strategies, which consequently disproved the hypothesised mediation of adaptive cognitive coping strategies in the effect of adaptive perfectionism on workplace well-being. Surprisingly, a small yet significant relationship between adaptive perfectionism and maladaptive cognitive coping strategies was found. The possible significance of these findings is discussed below.

Effect of Perfectionism on Workplace Well-being

The current results indicated that maladaptive perfectionism in employees is related to them exhibiting work-related burnout and negative affect, which confirms *Hypothesis 1a* of the present study. This pattern of findings appears to be consistent with previous studies that investigated the effect of perfectionism on well-being in the workplace environment and found maladaptive perfectionist individuals to exhibit poorer workplace well-being than

adaptive perfectionist individuals (e.g., Dunkley et al., 2003; Magnusson et al., 2006; Mitchelson & Burns, 1998). What potentially broadens the existing literature is that this pattern of results was observed in employees of various industry sectors, which essentially means that the present findings are likely to be generalizable to the general occupational field. Furthermore, past research papers often question if the negative well-being outcomes of maladaptive perfectionism can be attributed to other maladaptive personality traits (i.e., emotional stability or neuroticism) as they are frequently found to be closely correlated (Enns, Cox, Sareen & Freaaman, 2001). Interestingly, after controlling for individual emotional stability, maladaptive perfectionism still appeared to be significantly related to diminished workplace well-being, which confirmed the effect of maladaptive perfectionism on workplace well-being over and above emotional stability. Finally, an important conclusion can be drawn from the application of a multi-wave longitudinal design (originally developed by Graham et al. (2010)) in the current study, which provides a longitudinal perspective on the relationship between perfectionism and workplace well-being. The average negative workplace well-being outcome of maladaptive perfectionist employees was significant across the four weekly measures. This may not only confirm the well-established notion of perfectionism being a stable personality trait (Hewitt & Flett, 2002), but in line with previous literature that investigated the stability of the influence of maladaptive perfectionism on well-being in clinical populations (Cox & Enns, 2003; Rice & Aldea, 2006), it may suggest that the effect of maladaptive perfectionism on workplace well-being is sustainable to potential change in the environment. These findings, however, will be discussed within the context of the relation of perfectionism to cognitive coping strategies in a subsequent section of the Discussion.

Adaptive perfectionism was originally hypothesised to show a negative relationship with individuals' burnout and negative affect (*Hypothesis 1b)*. In other words, adaptive

perfectionist employees were expected to show significantly superior workplace well-being over maladaptive perfectionist individuals. The current results failed to support this hypothesis as there was no significant negative relationship between adaptive perfectionism and workplace well-being. Although the preliminary analysis yielded an unanticipated positive correlation between adaptive perfectionism and work-related burnout, after thorough regression analysis of these variables, no positive relationship between adaptive perfectionism and workplace well-being was found. This suggests that the observed negative workplace well-being outcome may be attributed primarily to maladaptive perfectionism. A similar pattern of findings was reported previously by, among others, Bieling, Israeli and Anthony (2004); and Lynd-Stevenson and Hearne (1999), who confirmed the relationship between maladaptive perfectionism and poorer mental health, yet found no relation whatsoever between adaptive perfectionism and psychological well-being.

Moreover, in the current results adaptive perfectionism also appeared as moderately correlated with maladaptive perfectionism. It is, however, suggested that such an outcome does not disprove theoretical and empirical concepts of perfectionism as a multidimensional personality trait put forward by Frost et al. (1990) or Rice et al. (1998). The perspective on perfectionism as a multidimensional personality trait that prevails in the current literature is threefold in that an individual can be either a maladaptive perfectionist, an adaptive perfectionist or he/she may not possess perfectionist traits at all (Stoeber & Otto, 2006). It is suggested that this initially adopted framework may be insufficient for explaining the findings of the current study. The 2 x 2 model of perfectionism put forward by Gaudreau and Thompson (2010) assumes that, apart from the three perfectionism personality variations outlined by Stoeber and Otto (2006), there is also a fourth - "mixed" perfectionism personality type, which includes both adaptive and maladaptive perfectionism. Thompson and Gaudreau (2010) paired their theoretical model of perfectionism with empirical research

and confirmed that adaptive and maladaptive perfectionism traits may often appear together in individuals. Therefore, it is suggested that the correlation between maladaptive perfectionism and adaptive perfectionism, as well as the lack of a positive effect of adaptive perfectionism on workplace well-being, that was found in the current study, may be explained by these two personality traits appearing simultaneously in individuals.

Despite the fact that adaptive perfectionism showed no effect on employee well-being, it is still a dissimilar pattern of outcomes to that exhibited by maladaptive perfectionism which negatively impacted employee well-being. Therefore, an alternative account of the current findings proposes that Frost's Positive Strivings perfectionism (Frost et al., 1990), used as a measure of adaptive perfectionism in the current study, rather than being adaptive, may present itself as more of a "neutral" trait (Bieling et al., 2004). That is why it is essential to examine this potentially "neutral" trait within the context of work-related stress and the cognitive coping strategies associated with it since under the influence of these variables it may appear as more of an "adaptive" or "maladaptive" characteristic. The explanatory role of cognitive coping strategies in the relationship between perfectionism and workplace well-being is discussed in the following section of the current paper.

Relationship between Perfectionism and Cognitive Coping

The current results showed a clear association between maladaptive perfectionism and maladaptive cognitive coping strategies in employees, which is consistent with *Hypothesis 2a* outlined previously. This pattern of findings confirms the theoretical assumptions of Bolger and Zuckerman (1995), who proposed that individuals possessing maladaptive personality traits (e.g., neuroticism or maladaptive perfectionism) tend to engage in maladaptive cognitive coping strategies as a response to stressors. The present findings are correspondingly consistent with previous empirical studies that examined the relationship

between perfectionism and cognitive coping strategies and indicate that maladaptive perfectionists use maladaptive cognitive coping strategies to deal with stressful events far more often than adaptive cognitive coping strategies (e.g., Dunkley et al., 2000; Dunkley et al., 2003; Dunn et al., 2006).

Unlike the research discussed previously, the current study adapted the CERQ, a well-established cognitive emotion regulation measure of coping (Garnefski & Kraaij, 2007), to examine both adaptive and maladaptive cognitive coping strategies, and this provided a broader view of these strategies. After tailoring this questionnaire so that it focused on cognitive coping strategies, specifically as a response to work-related stress among employees, it was found that maladaptive perfectionism results in employees exhibiting rumination, catastrophizing and self-blame in the presence of work-related stress. Furthermore, even though a small number of previous studies have set out to examine perfectionism and cognitive coping strategies, and the role of these variables in psychological well-being in the workplace environment context (Dunn et al., 2006; Flaxman et al., 2012), they were conducted within academic environments. The current study not only examined these variables in employees of numerous non-academic organisations, but also, as mentioned before, tailored the measure of cognitive coping strategies to fit the workplace-specific context. Therefore, the present findings may be broadly applicable to potential workplace well-being interventions, which will be discussed in a subsequent section of the current paper.

Finally, the use of the multi-wave longitudinal design (Graham et al., 2010) adapted for the purpose of the current study may also potentially add to the existing literature. Even though cognitive coping strategies are considered less stable than personality traits (Folkman & Lazarus, 1980), maladaptive perfectionists appear to have consistently responded with maladaptive cognitive coping strategies to work-related stress over the four weeks of the

study. This outcome may consequently add a potentially robust predictive value to the current findings confirming the long-term use of maladaptive cognitive coping strategies in maladaptive perfectionists that is sustainable to the varying sources of work-related stress.

The analysis of the relationship between adaptive perfectionism and adaptive cognitive coping, on the other hand, failed to provide outcomes in support of *Hypothesis 2b* of the present study. Adaptive perfectionists did not show positive refocusing or positive reappraisal as cognitive coping mechanisms for dealing with work-related stress. The results, however, did show a positive relationship between adaptive perfectionism and maladaptive cognitive coping, which, taking into account the previously discussed correlation between adaptive and maladaptive perfectionism, was to be expected. To elaborate, the current findings can be placed within the literature as evidence contrasting with a series of studies that have found a relationship between adaptive perfectionism and adaptive cognitive coping strategies (e.g., Burns & Fedewa, 2005; Flett, Russo, Hewitt, 1994). However, the majority of findings reporting a predominantly positive link between adaptive perfectionism and adaptive cognitive coping strategies can be in fact categorised as "mixed" findings, i.e., with adaptive perfectionism being related to both the adaptive and maladaptive aspects of cognitive coping. For example, Dunkley et al. (2000) initially found adaptive perfectionism to be associated with both adaptive and maladaptive cognitive coping strategies, which, as in the current study, was also paired with the occurrence of a positive correlation between adaptive and maladaptive perfectionism. This pattern of findings led Dunkley et al. (2000) to control for maladaptive perfectionism, which only then resulted in adaptive perfectionism predicting solely adaptive cognitive coping strategies. Such an approach may be advised for future research. Furthermore, the present findings are consistent with those of Dunkley et al. (2003), who reported no relationship whatsoever between adaptive perfectionism and adaptive cognitive coping.

Nevertheless, it can be argued that the association between adaptive perfectionism and maladaptive cognitive coping strategies found in the current study may not disprove the view of perfectionism as a multidimensional personality trait (Frost et. al., 1990) and designate it as a purely maladaptive personality trait. Alternatively, it is suggested that the experience of high levels of daily work-related stress in adaptive perfectionists may disable their ability to engage in adaptive cognitive coping strategies (Dunkley et al., 2000) and instead reach for maladaptive cognitive coping strategies. Since setting oneself high personal and occupational goals lies within the core of adaptive perfectionism (Frost et al., 1990), unsurprisingly adaptive perfectionists were found to experience psychological distress in the presence of achievement-related stressors (Hewitt, Flett & Ediger, 1996). Moreover, Dunkley et al. (2000) found that when faced with high levels of daily hassles, adaptive perfectionists tend to experience higher levels of psychological distress that may stem from their inability to engage in adaptive cognitive coping strategies under stressful conditions. Drawing from the previously discussed empirical findings, one could presume that rather than perfectionism itself being a maladaptive personality trait, it may be its interaction with work-related stress that causes perfectionists to employ maladaptive cognitive coping strategies, which in turn results in negative well-being outcomes. This notion will be discussed within the context of Cognitive Coping strategies as a mediator between Perfectionism and workplace well-being in the subsequent section of the current paper.

Mediatory Role of Cognitive Coping Strategies

As predicted, maladaptive cognitive coping strategies mediated the effect of maladaptive perfectionism on workplace well-being (*Hypothesis 3a*). In other words, when faced with work-related stress maladaptive perfectionists were prone to choose maladaptive cognitive coping strategies over adaptive ones, which were apparently ineffective in dealing

with stress and resulted in diminished workplace well-being in these employees. The current findings are consistent with those of Dunkley et al. (2003), Dunn et al. (2006) and Flaxman et al. (2012), who previously reported the mediatory role of cognitive coping strategies in the relationship between perfectionism and psychological well-being. Moreover, outcomes of the present study can be placed within Bolger and Zuckerman's (1995) theoretical framework, which suggests that personality influences or possibly mediates individuals' stress reactivity that consequently accounts for their psychological well-being.

Furthermore, a full mediation of maladaptive cognitive coping was observed in the current study. Essentially, this entails the significant indirect effect of maladaptive perfectionism on workplace well-being that occurred via maladaptive cognitive coping. Maladaptive perfectionism influenced employees' exhibiting maladaptive cognitive coping strategies, which in turn resulted in burnout and negative affect. With full mediation present, the direct effect of maladaptive perfectionism on workplace well-being appeared insignificant. In other words, maladaptive perfectionism itself did not directly influence work-related burnout and negative affect when maladaptive cognitive coping was included as a mediator variable. This full mediation may imply that the perfectionist trait itself does not result in individuals' negative well-being outcomes, but it is how perfectionists respond to stress (by their choice of maladaptive cognitive coping strategies) that results in diminished workplace well-being. Following such an approach may have implications for potential workplace well-being interventions. Specifically, both past research (Moskowitz, Brown & Cote, 1997) and the multi-wave longitudinal approach of the current study confirm that specific cognitive coping strategies may occur across situational contexts. In spite of this, cognitive coping strategies are considered more susceptible to change and external influence than stable personality traits like perfectionism (Lazarus & Folkman, 1980). Thus, interventions focusing on individuals' cognitive coping strategies of dealing with

work-related stress may appear more successful than any attempts at changing the maladaptive perfectionist personality.

Considering the lack of relationship between adaptive perfectionism and workplace well-being found in the current study, unsurprisingly no mediation of adaptive cognitive coping strategies occurred in this hypothesised relationship, which consequently fails to confirm *Hypothesis 3a*. Since the mediation of maladaptive cognitive coping strategies in the effect of adaptive perfectionism on workplace well-being was not originally anticipated in the assumptions of the present research, this was not tested. However, taking into account the appearance of an unanticipated positive relationship between adaptive perfectionism and maladaptive cognitive coping strategies, perhaps examining this relationship for further explanatory variables is worth considering in future research.

A possible explanation of these outcomes may lie within the cognitive theory of stress and coping proposed by Lazarus & Folkman (1984). The theory outlines two processes as mediators: cognitive appraisal and cognitive coping in the relationship between an individual and the environment within the context of stressful events and their outcomes. According to Lazarus & Folkman (1984), firstly, when faced with a stressor, individuals appraise the relevance of the stressor to their well-being as well as evaluate the personal and social resources they can employ in order to deal with this stressor; secondly, they engage in cognitive coping as means of dealing with the stressor. Current findings confirm the second step of this theory in that the individual's personality (i.e., adaptive or maladaptive perfectionism) affects their choice of cognitive coping strategies (i.e., maladaptive cognitive coping), which in turn influences their well-being outcomes (i.e., resulting in negative affect and burnout in maladaptive perfectionists). It is, however, argued that perfectionism (adaptive or maladaptive) may also influence individuals' coping appraisal of the stressors within their workplace. Specifically, both adaptive (Hart, Gilner, Handal, & Gfeller, 1998) and

maladaptive perfectionists (Dunkley et al., 2003) were previously found to present low self-efficacy – a personal resource that refers to one's belief in their ability to exercise control over events that affect them and to cope well with adverse events (Schwarzer & Jerusalem, 1995). Therefore, presumably having low self-efficacy, adaptive and maladaptive perfectionists may appraise their personal resources as insufficient to overcome work-related stress. As a result, rather than engaging in an attempt to overcome stressful events (adaptive cognitive coping), they may occupy themselves with rumination, catastrophising or self-blame (maladaptive cognitive coping), which in turn affects their workplace well-being. However, future research should focus on examining self-efficacy in perfectionists to confirm this possible explanation of the current results.

Limitations and Directions for Further Research

There are some limitations to the current study that need to be addressed, as they may provide direction for further research. First of all, the current findings are based solely on retrospective self-report measures, which are known to rely upon participants' memory and truthfulness; thus, they have their limitations. Future research may consider including alternative measures such as observer ratings or physiological measures of work-related burnout and stress (Cropley, Dijk & Stanley, 2006).

A second limitation is that during the statistical analyses performed for the current study, the observed variables were averaged out to construct higher order "cluster" variables. For example, the maladaptive perfectionism variable consisted of the average of Frost's (1990) "Doubts about Actions" and "Concern over Mistakes" subscale measures; similarly adaptive cognitive coping comprised of positive reappraisal and positive refocusing subscales of the CERQ measure (Garnefski & Kraaij, 2007). In terms of future research it would be interesting to see if one of the subscales in these "cluster" variables contributes more to the

predicted variables. This may apply specifically to the fact that no relationship between adaptive perfectionism and adaptive cognitive coping was found. An alternative statistical approach might have revealed that adaptive perfectionism predicts only one of the adaptive cognitive coping strategies, which appeared as statistically not significant after being examined as a "clustered" average of the two subscales.

A final suggestion for future research is derived from the work of e.g. Dunkley et al. (2000) and Dunkley et al. (2003), who looked at variables that may intensify or lower the tendency to engage in maladaptive cognitive coping strategies in maladaptive perfectionists. They propose that high self-efficacy and social support in maladaptive perfectionists may decrease their tendency to engage in maladaptive cognitive Coping strategies in the context of stressful events. Despite the fact that the current research did not account for these variables, which may be considered a limitation, it did, however, show the clear influence of maladaptive cognitive coping strategies on workplace well-being in maladaptive perfectionists. Therefore, future research focusing on examining perceived social support and self-efficacy among maladaptive perfectionists may have important implications for workplace well-being interventions. Specifically, interventions that would target individuals' perceived self-efficacy and social support may have higher effectiveness than targeting individuals' cognitive coping strategies themselves, as the latter are considered by some to be trait-like stable characteristics (Lazarus & Folkman, 1984).

Implications for Workplace Well-being Interventions

The existing literature points to the fact that work-related burnout is a common workplace well-being setback with implications for employee psychological health (e.g., Leiter, 2008). As the current study shows a clear link between maladaptive perfectionism and work-related burnout, it is suggested that raising awareness about the prevalence and the

symptoms of work-related burnout, especially among employees with maladaptive perfectionist traits, may be an intervention strategy worth considering.

Furthermore, recent research advances have shown that organisational empowerment strategies have beneficial effects on employee well-being (Bartenak & Spreitzer, 2006). Organisational empowerment strategies aim to increase a sense of employee control over their work, consequently leading to improved job satisfaction and perception of social support (Spence, Laschinger, Leiter, Day & Gilin, 2009). Therefore, it is suggested that empowerment intervention may decrease the tendency to engage in maladaptive cognitive coping strategies in maladaptive perfectionists by providing a healthy perspective on dealing with workplace stress.

Finally, perfectionist beliefs are difficult to change. Dunkley & Blankstein (2000) observed that long-term intensive treatment of the self-critical (or maladaptive) aspect of Perfectionism is infrequently successful. Thus, it is suggested that rather than focusing on stable personality traits (like perfectionism), workplace interventions should aid perfectionists' cognitive processes. Cognitive Behaviour Therapy has met with success in enhancing perfectionists' coping resources; i.e., fostering adaptive cognitive skills and reducing maladaptive ones (Dunkley et al., 2000). A more recent advance in Cognitive Behaviour Therapy, Mindfulness training, has shown a particularly positive effect on both perfectionist beliefs and maladaptive cognitive coping strategies (Delgado et al., 2010). Therefore, interventions based on Mindfulness training are recommended as means of improving workplace well-being among maladaptive perfectionists.

Conclusion

Despite the growing interest in the individual factors affecting psychological well-being, observed in the current literature, little attention has been devoted to examining

this issue within organisational environments. The significant influence of individual employee differences on workplace well-being finds its support in the results of the current study. It seems clear that perfectionist employees tend to engage in maladaptive cognitive coping, which consequently has a detrimental effect on workplace well-being resulting in work-related burnout and negative affect. The present study also makes a unique contribution by demonstrating this pattern of findings in employees across various occupational fields. Furthermore, the longitudinal approach of the present study highlights the robustness of the observed relationship between perfectionism and workplace well-being; and the mediatory role of cognitive coping strategies. Thus, it is hoped that the findings of the present study emphasise the significance of the issue in question and encourage further research that will lead to deeper insight and the development of resources needed to improve workplace well-being.

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APPENDIX A
Research Flyer

CITY UNIVERSITY LONDON

Research Flyer PROMOTING THE PSYCHOLOGICAL

WELL-BEING

An opportunity to be involved in staff well-being research

Researchers at City University London are investigating the links between work, leisure time recovery, and well-being among employees.

The aims of the project are to:

1. Measure staff well-being across four consecutive working weeks
2. Understand the non-work (e.g., evening) experiences that help you recover from work demands
3. Provide staff members with information on the latest techniques and recommendations designed to promote well-being, resilience, and leisure time recovery

The project is being led by **Dr. Paul Flaxman and Adelina Kaszubska**, members of the organisational psychology research team at City University London.

What's involved?

If you participate in this well-being project, you will first be invited to complete an initial questionnaire that takes about 15 minutes. This is followed by four brief well-being surveys due to be completed at the end of four consecutive working weeks. The surveys assess your general well-being, and how you have thought and felt about work and your leisure time each week. <u>All of your responses to these surveys will be anonymous and will remain strictly confidential</u>.

What do I get in return for my participation?

In return for your participation, you will be sent a summary report of the results of the research, along with information on evidence-based techniques and recommendations for improving your psychological health and leisure time experiences.

TO REGISTER YOUR INTEREST IN THIS PROJECT (OR SIMPLY TO REQUEST FURTHER INFORMATION) PLEASE SEND AN EMAIL TO: adelina.kaszubska@gmail.com

APPENDIX B
Research Information Sheet

PROMOTING THE PSYCHOLOGICAL
WELL-BEING OF WORKING AGE ADULTS

Many thanks for your interest in this well-being research project. The aims of the project are to:

1. Measure employee well-being across four consecutive working weeks
2. Understand the non-work (e.g., evening) experiences that help people recover from work demands
3. Provide information on the latest techniques and recommendations designed to promote well-being, resilience, and leisure time recovery

When you click forward from this introductory page you will find the following surveys:

AN INITIAL SURVEY

Please complete this first survey <u>just before</u> you complete your week 1 survey. This initial survey asks some general questions about your work and individual characteristics. The initial survey takes around 10 to 15 minute to complete.

Once you have completed this initial survey, when you click the forward button you will come to your week 1 survey.

WEEK 1 SURVEY

Please complete this survey at the end of a working week of your choosing – ideally at the end of the work day on Friday or as soon as possible on the Saturday.

This survey asks you to reflect back on your well-being and experiences for the past working week. The weekly surveys take about 5 to 10 minutes to complete on each occasion.

<u>Important</u> - Please choose a week when you know you are likely to be working for the following few weeks (i.e., when you are working for four weeks consecutively without a week off for holiday). It is not a problem if you are having individual days off during this period – as long as you are mostly working over the four weeks.

WEEK 2 SURVEY

Please complete this survey one week after completing your week 1 survey - ideally at the end of the work day on Friday or as soon as possible on the Saturday.

WEEK 3 SURVEY

Please complete this survey one week after completing your week 2 survey - ideally at the end of the work day on Friday or as soon as possible on the Saturday.

WEEK 4 SURVEY

Please complete this survey one week after completing your week 3 survey - ideally at the end of the work day on Friday or as soon as possible on the Saturday.

At the end of your week 4 survey, you will find some final questions that ask you about your well-being over the past few weeks.

Please click the button below to go forward. On the next page you will find some additional information on confidentially and anonymity.

Please read these points about confidentiality and anonymity before beginning your surveys:

1.   This research is being conducted to help enhance our understanding about employees' well-being. The overall director of this research is Dr. Paul Flaxman, who works in the organisational psychology group at City University London.

2.   Your responses to these surveys will remain strictly confidential and will be anonymised prior to analysis. Thus, no-one will be linking your name to how you responded to these surveys. No-one at your employing organisation will know how you personally responded to these surveys.

3.   When the survey data are being analysed it will be on a completely anonymous basis – your name and email address will not be included alongside your responses to these surveys.

4.   Your participation in this research is entirely voluntary. If you do not want to fill out the surveys you do not have to. You may withdraw from the research at any stage without having to explain why.

5. The research is open to anyone who is currently in employment and aged 18 or over.