

**To Be Or Not To Be Perfect In The Workplace: An Evaluation Of A Work Stress  
Intervention On Perfectionism In A Working Population**

**By  
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To Be Or Not To Be Perfect In The Workplace: An Evaluation Of A Work Stress  
Intervention On Perfectionism In A Working Population

by Nikola Hartling

**Abstract**

This study assessed the efficacy of a 10-week job stress intervention program (Achieving Balance in Life and Employment; ABLE) in reducing perfectionistic concerns, strain, and conflict, and examined the relationships between perfectionistic concerns and perfectionistic strivings with negative workplace outcomes (i.e., psychological strain, work-life conflict, work-spouse conflict, and work-parent conflict). Participants were 152 employees (74 in the intervention group, 78 in the control group) from 10 organizations. Perfectionistic concerns (at Time 1) significantly predicted strain (at Time 2), but did not predict the conflict variables (at Time 2) after controlling for conscientiousness and neuroticism (at Time 1). Perfectionistic concerns were more strongly related to strain and work-spouse conflict than were perfectionistic strivings. Participants in the ABLE program had significantly reductions in their perfectionistic concerns, strain, and the conflict variables compared to participants in the control group. The practical implications of these results and ideas for future research are discussed.

*Keywords:* perfectionism, strain, work-life conflict, intervention

June 13, 2012.

To Be Or Not To Be Perfect In The Workplace: An Evaluation Of A Work Stress  
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Despite the fact that the workplace has been acknowledged as a domain affected by perfectionism (Slaney, Ashby & Trippi, 1995), the majority of perfectionism research has focused on student and clinical populations (e.g., Hewitt & Flett, 1991; Ahsbbaugh et al., 2007). Studies examining perfectionism in working populations have found both positive (e.g., Proost, De Witte, De Witte, & Schreures, 2010; Stoeber & Kersting, 2007) and negative outcomes (e.g., Flett, Hewitt, & Hallett, 1995; Fry, 1994; Hewitt & Flett, 1993; Mitchelson & Burns, 1998), largely depending on how the construct was defined. Moreover, the impact of perfectionism on individual well-being has largely focused on how perfectionism negatively impacts well-being, but not on what individuals can do to minimize this impact.

Therefore, in the current paper, I will test the factor structure of perfectionism, and examine the relationship of these perfectionism factors with strain and work-life conflict. I also will assess perfectionism in the context of a 10-week job stress and conflict intervention program. Specifically, the goals are to determine whether strain and maladaptive cognitions experienced by perfectionists can be reduced through a focus on goal setting, cognitive reframing, and decreasing work-life conflict.

### **The Perfectionism Dilemma**

Over the past two decades, perfectionism research has continued to support the multidimensional nature of the construct (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991; Slaney et al., 1995). However, there remains considerable disagreement on whether there is a functional aspect to perfectionism. Hewitt and Flett

emphasized the negative aspects of the construct and warn against weighing the benefits of perfectionism against any negative outcomes (Flett & Hewitt, 2007). Other researchers have continued to distinguish adaptive and maladaptive dimensions of perfectionism (e.g., Kilbert, Laughinrichsen-Rohling, & Saito, 2005; Stoeber & Rennert, 2008). Much of the disagreement stems from varied definitions of perfectionism, primarily in terms of whether perfectionism is characterized by striving for an *unattainable* level of achievement.

Hewitt and Flett (1991) described three distinct perfectionism constructs: (1) self-oriented perfectionism (i.e., perfectionistic strivings that are self-motivated, such that one expects perfection of oneself); (2) socially prescribed perfectionism (i.e., perceiving perfectionistic demands from others); and (3) other-oriented perfectionism (i.e., having unrealistic standards and expectations for others). Self-oriented perfectionism and socially prescribed perfectionism are both characterized by perfectionistic strivings (a combination of achievement striving and other facets such as high standards; Hill, Huelsman, & Araujo, 2010). Socially prescribed perfectionism is consistently associated with negative outcomes such as negative affect, depression, interpersonal problems, social anxiety, and burnout (Ahsbbaugh et al., 2007; Childs & Stoeber, 2010; Flett et al., 1995). Much of these negative associations are attributed to a fear of failure and concern over mistakes (Conroy, Kaye, & Fifer, 2007; Enns, 1999; Frost, Heimberg, Holt, & Mattia, 1993; Lee, 2008; Saboonchi, & Lundh, 1997).

Research on self-oriented perfectionism has been less consistent. Self-oriented perfectionism relates to negative outcomes, such as somatoform symptoms, alcohol abuse, anorexia, and depression (Flett et al., 2008; Hewitt & Flett, 1991b; Sherry, Hewitt,

Sherry, Flett, & Graham, 2010). Conversely, self-oriented perfectionism also is positively related to outcomes such as self-esteem, positive affect, work engagement, and has a negative association with burnout (Childs & Stoeber, 2010; Frost et al., 1993; Rice, Ashby, & Slaney, 1998). These positive outcomes drive research that is centered on a two-factor model of perfectionism differentiating perfectionistic strivings and perfectionistic concerns.

Researchers initially identified a two-factor model of perfectionism that focused on both the positive and negative dimensions (see for example, Hamachek, 1978). The labels of these two factors have evolved over time, but research is continuing to suggest that there are both functional, and dysfunctional elements of perfectionism. For instance, perfectionistic strivings, defined as having high personal standards and a need for order, but with low perceived discrepancy between actual performance and high standards, has been positively associated with increased work-life balance (Mitchelson, 2009), aspiration levels (Stoeber, Joachim; Hutchfield, & Wood, 2008), and task performance (Stoeber, Chesterman, & Tarn, 2010). However, the research linking perfectionistic strivings with positive outcomes has failed to control for broader personality traits, such as conscientiousness (e.g., Childs & Stoeber, 2010). The question remains whether the research has shown unique relationships between perfectionistic strivings and these positive outcomes, or whether the measurement of perfectionistic strivings is being confounded with high levels of conscientiousness and achievement striving.

Additional evidence for a two-factor model of perfectionism comes from Frost et al. (1993). Frost et al. compared the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), a six-dimension model of perfectionism, and the Hewitt and Flett

(1991) Multidimensional Perfectionism Scale (HFMPs). Results indicated significant overlap between the two scales. A factor analysis of all items from the nine subscales (six from the FMPS and 3 from the HFMPs) resulted in two unambiguous factors, *maladaptive evaluation concerns* (a combination of socially prescribed perfectionism, concern over mistakes, doubts about actions, parental expectations, and parental criticism), and *positive striving* (a combination of self-oriented perfectionism, other-oriented perfectionism, personal standards, and organization). Moreover, only the maladaptive evaluative concern dimension was related to negative outcomes (e.g., depression and negative affect), and only the positive striving dimension was related to positive outcomes (positive affect). This two-dimension structure of perfectionism has been consistently found across multiple constructs and measures of perfectionism (see Blankstein & Dunkley, 2002; Dunkley, Blankstein, Masheb, & Grilo, 2006).

### **The Relationship between Perfectionism, Conscientiousness and Neuroticism**

A major criticism of perfectionism research is that it has failed to control for personality traits that share a significant amount of variance with both perfectionism dimensions (Enns, Cox, & Clara, 2005). In particular, conscientiousness has been found to overlap with perfectionistic strivings, and neuroticism to overlap with perfectionistic concerns (Dunkley, Blankstein, & Berg, 2012; Rice, et al., 2007; Sherry & Hall, 2009). Despite the significant relationship between these variables and perfectionism, both perfectionistic strivings and perfectionistic concerns have been found to predict significant variance in a variety of outcomes beyond these higher order facets (Dunkley et al., 2012; Hewitt & Flett, 1991; Sherry, Sherry, Hewitt, Flett, & Graham, 2010).

Subsequently, using the higher order personality traits of conscientiousness and neuroticism as control variables is both appropriate and necessary.

### **The Relationship between Perfectionism and Strain**

Strain, occurrences of adverse physical and psychological symptoms (e.g., general aches or pains, feeling life is pointless), in the workplace has been linked to many negative organizational outcomes including burnout (Maslach, 1982), decreased productivity (Childs & Stoeber, 2010), and absenteeism (Darr & Johns, 2008).

Understanding what makes employees susceptible to strain is critical. Personality, both lower-order (e.g., perfectionism) and higher-order (e.g., neuroticism) traits are an obvious contributor, yet they are often overlooked in terms of a susceptibility to employee strain.

The literature has typically reported a positive relationship between perfectionistic concerns and stress in both clinical (Hewitt & Flett, 1993) and non-clinical populations (Chang, 2006; Chang, Watkins, & Banks, 2004; Dunkley & Blankstein, 2000).

Moreover, perfectionism has been found to moderate the relationship between stress and depression in non-clinical populations (Flett, Hewitt, Blankstein, & Mosher, 1995; Flett, et al., 1995; Hewitt & Flett, 1993). However, the relationship between perfectionistic strivings and stress is more complex. Individuals who are high in self-oriented perfectionism tend to be more negatively affected by life stressors than individuals low in self-oriented perfectionism (Flett et al., 1995). That is, in relatively low stress situations, self-oriented perfectionists can be adaptive, but when faced with negative life events or stressors where there is little control, their risk for depressive symptoms increases significantly (Flett et al., 1995). Chang et al. (2004) found that in a sample of college

students, adaptive perfectionism, unlike maladaptive perfectionism, was unrelated to perceived stress.

Even though studies demonstrate consistent relationship between perfectionistic concerns and stress outcomes, results pertaining to the relationship between perfectionistic strivings and stress, strain, and burnout are less clear (e.g., Chang et al., 2004; Childs & Stober, 2010; Flett et al., 1995). Childs and Stoeber (2010) found that self-oriented perfectionism was negatively associated with burnout. Hill, Hall, and Appleton (2010) furthered this research by looking at coping strategies as a mediator in the relationship between perfectionism and burnout. Adaptive coping strategies (e.g., problem focused coping) mediated the relationship between self-oriented perfectionism and burnout, where, maladaptive coping (e.g., escape coping) fully mediated the relationship between socially prescribed perfectionism and increased burnout. Understanding individual susceptibility to perceived strain is important as strain is a precursor to burnout (Maslach, 1982), which has significant negative health and work outcomes (e.g., increased absenteeism, decreased performance, depression, cardiovascular disorders).

### **The Relationship between Perfectionism and Work-Life Conflict**

Work-life conflict is defined as conflicting tensions between and work and other roles (Greenhaus & Beutell, 1985), resulting from a perception of incompatible pressures between work and life roles. Although there is limited research on the relationship between perfectionism and work-life conflict (Mitchelson & Burns, 1998; Stoeber & Stoeber, 2009), work-life conflict has been positively associated with other outcomes,

such as burnout (Brauchli, Bauer, & Hämmig, 2011) and work and non-work stress (Burke, 1988).

Mitchelson (2009) found that adaptive perfectionists (defined as having high personal standards but with little discrepancy between standards and perceived performance) had significantly less work-life conflict than maladaptive perfectionists (defined as having high personal standards, but with a large discrepancy between standards and perceived performance) and non-perfectionists. These findings held after controlling for the Big Five, trait affectivity, and achievement striving. Beauregard (2006) found that maladaptive perfectionism (conceptualized as having negative self-evaluations) was predictive of greater work-home interference. In a qualitative study of mothers with small children, Grant-Vallone and Ensher (2011) identified perfectionism as a reason for mothers who “opted in” or “opted out” of the workplace. A significant portion of their sample chose to “opt out” of the workplace after having children because they did not feel like they could be *perfect* in both work and home roles.

These studies suggest that perfectionism impacts work-life conflict and that high levels of perfectionistic concerns and work-life conflict both lead to increased strain. The current study extends this work by examining not only work-life conflict, but also conflict between the more specific roles of being a spouse (i.e., work-spouse conflict; when employee and spouse roles conflict) and parent (i.e., work-parent conflict; when employee and parent roles conflict). Together, these three conflict variables allow for comparisons of how perfectionism impacts these specific roles.

**Can Perfectionism be Reduced?**

The stability of both perfectionistic strivings and perfectionistic concerns over time has been repeatedly demonstrated (see Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991; Rice & Aldea, 2006; Rice, Richardson, & Clark, 2012). However, characteristics of perfectionistic concerns, specifically tendency to engage in maladaptive coping strategies (Dunkley, Zuroff, & Blankstein, 2003) and negative thinking (Kutlesa & Arthur, 2003) can be more transient. Consequently, it is not unrealistic to expect to see changes in perfectionism over the course of a workplace intervention.

Interventions that have demonstrated reductions in perfectionistic concerns have done so as a subsidiary consequence to other treatment focuses (e.g., anxiety, depression, and disordered eating). Regardless, there have been positive impacts on perfectionism with such interventions focusing on cognitive restructuring (Ashbaugh et al., 2007; Pleva & Wade, 2006) and more adaptive coping mechanisms (Kutlesa & Arthur, 2008). Perfectionism also has been shown to impede treatment outcomes in a clinical sample of participants enrolled in the Treatment of Depression Collaborative Research Program over a 16-week period (Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). In this sample, perfectionism had little impact on treatment outcomes at eight-weeks, but a significant negative impact was shown in the latter weeks of treatment. Blatt et al. suggested that the difficulty of perfectionists in developing and maintaining interpersonal relationships could explain the significant impact of perfectionism. This impact was buffered through satisfactory social relationships and an above average therapeutic relationship (Hawley, Ho, Zuroff, and Blatt, 2006; Shahar, Blatt, & Zuroff, 2007). Positive results have been

found with non-clinical populations voluntarily seeking help (e.g., Arpin-Cribbie et al., 2008; Kutlesa & Arthur, 2008; Pleva & Wade, 2006).

Intervention research suggests improvements are possible by focusing on the distressing thoughts experienced by perfectionists (e.g., concern over mistakes, fear of failure, doubts about actions; e.g., Arpin-Cribbie et al., 2006; Kutlesa & Arthur, 2008; Pleva and Wade, 2006). Improvements seem realistic for individuals who are motivated to address their perfectionism, which has not reached a level of clinical severity (Ashbaugh et al., 2007; Kutlesa & Arthur, 2008; Pleva & Wade, 2006).

Ashbaugh et al. (2007) found small but significant decreases in the concern over mistakes and doubts about actions subscales of Frost Multidimensional Perfectionism Scale with an outpatient group intervention for social phobia, focusing on cognitive behaviour therapy. Kutlesa and Arthur (2008) reported a significant decrease in post-treatment levels of both self-oriented and socially prescribed perfectionism compared to two control groups. However, their experimental group had significantly higher mean levels of perfectionism pre-treatment compared to their control groups. Pleva and Wade (2006) showed a significant decrease in distressing perfectionistic thoughts following a guided self-help intervention focused on cognitive reframing. These improvements were largely maintained at a 3-month follow-up. Radhu et al. (2012) in a follow-up study to Arpin-Cribbie et al. (2008) found neuropsychological evidence for the benefits of cognitive behavioural therapy in the treatment of perfectionism in a wait-list control design.

The research addressing such interventions is limited, and the studies that have been conducted have had small sample sizes ( $n = 20$  to  $30$ ) and minimal use of control

groups. Addressing perfectionism in a sub-clinical population, such as a working population, and using an adequate sample size and control group is a critical direction for intervention research on perfectionism.

### **Achieving Balance in Life and Employment (ABLE) and Perfectionism**

The current research builds on these past interventions by integrating perfectionism into a validated intervention program, the ABLE program. ABLE targets a non-clinical working population who have self-identified themselves as needing help with life stress and work-life balance. The ABLE program is a 10-week coaching program, utilizing a phone-based delivery system aimed at reaching a broader audience.

The ABLE program focuses on job and family demands, in terms of job stress and work-life conflict. Qualitative feedback from both coaches and participants identified perfectionism as a common theme that impeded participants' progress through the program (A. Day, L. Francis, & S. Stevens, personal communication, July 2011). Therefore, for the current study, the ABLE program content was expanded to explicitly include more of a focus on perfectionistic concerns and maladaptive perfectionistic cognitions. Emphasizing how perfectionism impacts the problematic behaviours, such as procrastination and maladaptive coping, are focuses of the ABLE program. The ABLE program is tailored to the particular needs of any given participant. Participants work with their coach to set personal goals to help deal with their individual demands and stressors, identify barriers that prohibit them from achieving their goals (e.g., "identify the reasons *you* feel your colleagues will evaluate you negatively, and write down evidence that both supports and does not support your fear"), and learn coping strategies.

### **Summary and Hypotheses**

Perfectionism has been predominately studied as a multidimensional construct over the past two decades (Frost et al., 1990; Hewitt & Flett, 1991; Hewitt, Flett, Besser, Sherry, & McGee, 2003). However, there remains a significant amount of disagreement over whether the personal aspect of perfectionism characterized by high levels of achievement striving, conscientiousness, goal orientation, and performance can be adaptive in the absence of perfectionistic concerns. Research associating perfectionistic strivings with positive outcomes (e.g., work engagement, decreased burnout, positive affect) has often neglected to control for high levels of personality dimensions such as conscientiousness. As a result, the unique contribution of perfectionistic strivings to these positive outcomes remains unclear. Similarly, although there is clear link between perfectionism and stress in the literature (e.g., Chang, 2006; Chang, Watkins, & Banks, 2004; Dunkley & Blankstein, 2000; Hewitt & Flett, 1993), the majority of this research focuses on the relationship between perfectionistic concerns and stress, with limited and mixed relationships with perfectionistic strivings. Moreover, the relationship between perfectionism and work-life conflict remains unclear.

The current research will build on the existing literature by looking at the relationship between perfectionistic strivings, and perfectionistic concerns with strain, work-life conflict, work-spouse conflict, and work-parent conflict, while controlling for conscientiousness and neuroticism. This research will help clarify the construct of perfectionism by examining their unique contributions to outcomes (e.g., strain and work-life conflict). As well as looking at the effectiveness of a 10-week job stress intervention in reducing perfectionistic concerns, strain and work-life conflict variables.

There is evidence of a two factor model of perfectionism. Therefore....

**Hypothesis 1:** Perfectionism items will factor into two factors: perfectionistic strivings and perfectionistic concerns.

Perfectionistic concerns have been consistently associated with negative outcomes, including stress (Flett et al., 1995; Hewitt & Flett, 1993) and work-life conflict (Mitchelson, 2009). Therefore, I hypothesize that:

**Hypothesis 2:** Perfectionistic concerns (Time 1) will be positively associated with (a) perceived strain (Time 2) and (b) work-life conflict variables (i.e., work-life, work-spouse, and work-parent conflict; Time 2), even after controlling for conscientiousness and neuroticism (Time 1).

Because perfectionistic strivings have been related to both positive (e.g., Childs & Stober, 2010; Frost et al., 1993; Mitchelson, 2009) and negative (e.g., Flett et al., 1995; Frost et al., 1993; Sherry et al., 2010) outcomes, it is expected that perfectionistic concerns will relate more strongly to the negative outcomes, strain and conflict, than perfectionistic strivings. Therefore, I hypothesize that:

**Hypothesis 3:** (a) The correlation between perfectionistic concerns (Time 1) and strain (Time 2) will be higher than the correlation between perfectionistic strivings (Time 1) and strain (Time 2); (b) The correlation between perfectionistic concerns (Time 1) and work-life conflict variables (Time 2) will be higher than the correlation between perfectionistic strivings (Time 1) and the work-life conflict variables (Time 2).

Perfectionism has been identified as a trait that can impede treatment outcomes (Blatt et al., 1998). However, research has shown that perfectionism

can be reduced in interventions focusing on cognitive restructuring (Ashbaugh et al., 2007) and adaptive coping strategies (Kutlesa & Arthur, 2008). Therefore, a primary purpose of this research is to see if perfectionistic concerns can be reduced in the context of a 10-week job stress and work-life conflict intervention.

**Hypothesis 4:** Compared to the control group, there will be a significant decrease in perfectionistic concerns in the intervention group between Time 1 and Time 2.

Moreover, although not directly involving perfectionism, it is critical to examine whether ABLE is able to improve other outcomes. Since the program is designed to focus on decreasing job stress and work-life conflict, strain and work-life conflict outcomes were chosen as a test of the efficacy of the ABLE program beyond perfectionistic concerns.

**Hypothesis 5:** Compared to the control group, there will be a significant decrease in (a) perceived strain and (b) work-life conflict variables (i.e., work-life, work-spouse, and work-parent conflict) in the intervention group between Time 1 and Time 2.

## **Method**

### **The Intervention: Achieving Balance in Life and Employment**

The ABLE program involves 10 weeks of phone-based coaching designed to reduce job stress and work-life conflict (see Appendix A for an overview of the topics covered in each session). In the first few weeks of the program, participants identify the stressors and demands that they face at work (e.g., not interacting with colleagues driven

by a fear of negative evaluation) and outside of work. Participants set realistic goals and work with their coach to identify any barriers (e.g., perfectionism) that may inhibit their goal progress. Throughout the course of the 10-weeks, participants are presented with coping strategies (e.g., cognitive reframing, problem focused coping, progressive muscle relaxation) to help more actively deal with their demands and stressors. Participants apply the strategies learned earlier in the program to problem solve what they can do to achieve greater balance between their work and other areas of their lives.

### **Perfectionism and ABLE**

Similar to past interventions studies on perfectionism, the focus of ABLE was not specifically on perfectionism, but rather on reducing stress and improving work-life balance. However, the focus on perfectionism throughout the program was significant. Perfectionism is first presented in Session 2, which focuses on prioritizing and goal setting. Participants are introduced to the concept of perfectionism, they are provided with a definition of perfectionism, and the distinction between perfectionism and high standards is emphasized. This session contains an activity in which participants are asked to evaluate the different areas in their lives (e.g., work, relationships, health) in which they may experience perfectionistic tendencies. Based on four questions (i.e., How high is the standard?; How accurate is your belief that you aren't performing well?; What are the costs and benefits of holding yourself up to this standard?; and How flexible is this standard or belief?), participants evaluate how problematic their perfectionism is in each area. This activity and their evaluations are discussed with their coach. Participants who evaluate themselves as being negatively affected by their perfectionism work with their coach to develop program goals aimed at reducing those beliefs and actions that are

interfering with their functioning. For example, someone who is redoing work reports until they are perfect may have the goal of only making a single revision and taking note of how the work is evaluated. The topic of perfectionism is broached again in Session 3 that focuses on time management. The relationship between procrastination and perfectionism is discussed, and how this relationship can impact work-life balance.

### **Participants**

Participants were 138 employees from 10 organizations across the Halifax Regional Municipality. Participants were informed of the opportunity through their employer, and interested employees contacted the research team directly. Assignment to the first or second intervention groups was done on a first-come first-serve basis, and based on availability. All participants were randomly assigned to one of four coaches. The first intervention group ( $n = 67$ ; 56 women and 11 men) had a mean age of 42.70 ( $SD = 9.48$ ). All participants were employed full-time and worked an average of 40.55 ( $SD = 8.85$ ) hours per week. The control group ( $n=71$ ; 65 women and 6 men) had a mean age of 44.10 ( $SD = 9.23$ ). All participants in the control group were employed full-time and worked an average of 39.59 ( $SD = 7.17$ ) hours per week. The majority of participants in both the ABLE group ( $n = 48$ ) and the wait-list control group ( $n = 55$ ) were in a relationship, had at least one child (ABLE,  $n = 36$ ; control,  $n = 49$ ), and had completed some higher education (i.e., college, university, or graduate degree; ABLE,  $n = 56$ ; control,  $n = 64$ ).

Eight participants withdrew before week five of the program. In order to determine if these participants differed from participants who remained in the program post hoc analyses on key variables were conducted. Results indicated that there were no

significant differences between the participants who withdrew on age, gender, perfectionistic strivings, perfectionistic concerns, work-spouse conflict, or work-parent conflict. However, there were significant differences in strain ( $t(79) = 2.96, p = .03$ ) where the participants who withdrew were experiencing more strain than participants who remained in the program, and work-life conflict ( $t(78) = 2.42, p = .02$ ) where ABLE participants reported more work-life conflict than participants who withdrew.

Participants who scored in the extremely severe range (28 or higher out of a possible total score of a 42) on the depression subscale of the Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995) were screened out of the study. Individuals who scored in this range were contacted by a clinical psychologist for further assessment.

### **Procedure**

Participants completed two surveys: They completed the first survey in January before any coaching sessions had started. They completed the second survey in April after the first session was completed, but before the second session started. Following the completion of Survey 1, the first intervention group began their 10-weeks of individualized coaching on job stress and conflict. The second intervention group began the 10-week intervention after the second survey had been completed.<sup>1</sup> Prior to beginning the intervention, participants in that session were sent a manual containing the topics and information covered in each of the 10-weeks. The control group participants did not receive a manual until just before beginning their 10-week session.

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<sup>1</sup> As part of a larger study, participants will complete a third survey in June, and a final survey in December. However, the current study only involves the first two surveys.

## Measures

**Perfectionistic Strivings.** Perfectionistic strivings was assessed with the 15-item self-oriented perfectionism scale of the Multidimensional Perfectionism Scale (FMPS-SOP; Hewitt & Flett, 1991). Participants indicated the extent to which they agree to the items on the FMPS-SOP (e.g., “I set very high standards for myself”) using a 7-point Likert scale (1; strongly disagree to 7: strongly agree). Cronbach’s alpha in the current study was .89, with all item-total correlations ranging from .36 to .74. Three-month test re-test reliability for the FMPS-SOP was .91.

**Perfectionistic Concerns.** Perfectionistic concerns was assessed with a short form of the 5-item Socially Prescribed Perfectionism subscale of the Multidimensional Perfectionism Scale (FMPS-SPP; Hewitt & Flett, 1991), a 5-item short form of the Self-Criticism subscale of the Reconstructed Depressive Experiences Questionnaire (RDEQ-SC; Blatt, D’Afflitti, & Quinlan, 1976), and the 5-item Concern Over Mistakes and 4-item Doubts About Actions subscales from the Multidimensional Perfectionism Scale (FMPS-COM, FMPS-DAA; Frost et al., 1990). A single perfectionistic concerns variable was used for the analyses by combining the standardized scores for all perfectionistic concerns items.

Participants indicate the extent to which they agree to the items on the FMPS-SPP (e.g., “People expect nothing less than perfection from me”), and the RDEQ-SC (e.g., “I often find that I don’t live up to my own standards or ideals”) using a 7-point likert scale (1: strongly disagree to 7: strongly agree). Cronbach’s alpha in the current study was .85, with all item-total correlations ranging from .35 to .62.

Participants indicate the extent to which they agree to the items on the FMPS-DAA (e.g., “Even if I do something carefully, I often feel that it is not quite right”), and the FMPS-COM (e.g., “If I do not do as well as other people, it means I am an inferior human being”) using a 5-point likert scale (1: strongly disagree to 5: strongly agree). Cronbach’s alpha in the current study was .85, with all item-total correlations ranging from .36 to .67.

Used as a single scale the Cronbach’s alpha for the perfectionistic concerns items was .90 at Time 1, and remained stable at .91 at Time 2 measured three-months later.

**Conscientiousness and Neuroticism.** Conscientiousness and neuroticism were both measured with the Goldberg International Personality Item Pool (Goldberg et al., 2006). Participants indicate the extent to which they agree to the conscientiousness (e.g., “I am always prepared”) and neuroticism items (“I have frequent mood swings”) using a five-point likert scale ranging from 1 (*very inaccurate*) to 5 (*accurate*). Cronbach’s alpha in the current study was .85, with all item-total correlations ranging from .30 to .64 for conscientiousness. For neuroticism, Cronbach’s alpha in the current study was .85, with all item-total correlations ranging from .35 to .73. Three-month test-retest reliabilities for conscientiousness was .86, and for neuroticism was .85.

**Strain.** Psychological (e.g., “feeling life is pointless”), and physiological health symptoms and complaints (e.g., “headaches”) was measured with the 20-item Strain Symptoms Checklist (Bartone, Ursano, Wright, & In-Graham, 1989). Participants indicate the extent to which they agree to the items on the Strain Symptoms Checklist using a six-point likert scale ranging from 0 (never) to 5 (always). Cronbach’s alpha in

the current study was .87, with all item-total correlations ranging from .21 to .60. Three-month test re-test reliabilities for the Strain Symptoms Checklist was .87.

**Work-life, work-spouse, and work-parent conflict.** Work-life conflict variables were each measured with a shortened 3-item General Work-Life Conflict Scale (Day, 1996, and Day & Chamberlain, 2006). Participants indicate the extent to which they agree to the items on the General Work-Life Conflict Scale (e.g., “It is hard to balance my role as an employee with my life outside of work”) using a 5-point likert scale (1: strongly disagree to 5: strongly agree). Work-spouse and parent conflict items were revised to be specific to conflict between work and spouse (i.e., “It is hard to balance my roles as an employee and as a spouse”), and conflict between work and parent roles (i.e., “It is hard to balance my role as an employee and as a parent”). Cronbach’s alpha in the current study ranged from .93 to .90, with all item-total correlations ranging from .81 to .91. Three-month test-retest reliabilities ranged from  $r = .89$  to .94.

## Results

Means, standard deviations, and reliabilities of the study variables for the ABLE and control groups can be found in Table 1. Correlations among the study variables for all participants are presented in Table 2 (see Tables 3 for the correlation matrices for the ABLE group and control group, respectively).

### Exploratory Factor Analysis

In order to test Hypothesis 1 (i.e., perfectionism would factor into two factors representing perfectionistic strivings and perfectionistic concerns), I conducted a

Principal Component Analysis<sup>2</sup> using an oblique rotation of the 34 perfectionism items. There were two components with eigenvalues greater than 1, and an examination of the scree plot also indicated the presence of two components. This two-component solution accounted for 41.56% of the total variance (see Table 4), and represented perfectionistic strivings and concerns. All items loaded on to their theoretically relevant factor, except for one item (i.e., “It makes me uneasy to see an error in my work.”), which loaded onto perfectionistic concerns instead of perfectionistic strivings.

Because the sample size was low, a second PCA was conducted with the Time 2 data. The two-component solution accounted for 44.93% of the total variance (see Table 5). All items loaded on to their theoretically relevant factor, except for one item (i.e., “The better I do, the better I am expected to do.”), which loaded onto perfectionistic strivings instead of perfectionistic concerns.

### **Multiple Regression**

In order to assess Hypotheses 2a (i.e., Time 1 perfectionistic concerns would predict time 2 strain after controlling for Time 1 conscientiousness and neuroticism), I conducted a hierarchical multiple regression. Conscientiousness and neuroticism were entered on the first step and perfectionistic concerns were entered on the second step (see Table 6). Time 1 conscientiousness ( $\beta = .01, p = .92$ ) and neuroticism ( $\beta = .50, p < .001$ ) accounted for 22% ( $p < .001$ ) of the variance in Time 2 strain. When entered in the second step, Time 1 perfectionistic concerns did not account for a significant amount of variance in Time 2 strain, ( $R^2_{\text{change}} = .02, p = .10; \beta = .15, p = .10$ ). Once perfectionistic

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<sup>2</sup> Principal Component Analysis was conducted using a sample size of  $N = 160$  at time 1 and  $N = 138$  at time 2

concerns was controlled for in the second step neuroticism remained significant ( $\beta = .44$ ,  $p < .001$ ), and conscientiousness non-significant.

Additional analysis was conducted entering strain at Time 1 into the first step as control variables, perfectionistic strivings at Time 1 in the second step along with perfectionistic concerns, and the interaction of perfectionistic concerns and perfectionistic strivings into the third step to test for moderating effects of perfectionistic strivings (see Table 7). With the addition of these variables, conscientiousness ( $\beta = .04$ ), neuroticism ( $\beta = .11$ ), and strain ( $\beta = .68$ ) at Time 1 accounted for 56% of the variance in Time 2 strain ( $p < .001$ ). When entered in the second step, neither Time 1 perfectionistic concerns ( $\beta = -.02$ ) nor perfectionistic strivings ( $\beta = .07$ ) predicted a significant amount of variance in Time 2 strain ( $R^2_{\text{change}} = .00$ ,  $p = .52$ ). However, the interaction of Time 1 perfectionistic concerns and perfectionistic strivings ( $\beta = -.12$ ) did predict a small yet significant amount of variance in Time 2 strain ( $R^2_{\text{change}} = .01$ ,  $p = .05$ ). Indicating that perfectionistic strivings moderates the relationship between perfectionistic concerns at Time 1 and strain at Time 2. Only when both perfectionistic concerns and perfectionistic strivings were high was significant amount of variance in Time 2 strain predicted (see Figure 1).

The same analysis was conducted to test Hypothesis 2b (i.e., i.e., Time 1 perfectionistic concerns would predict Time 2 conflict variables after controlling for Time 1 conscientiousness and neuroticism). Perfectionistic concerns at Time 1 did not predict a significant amount of the variance in work-life or work-spouse conflict at Time 2. Conscientiousness significantly predicted work-parent conflict at Time 2 ( $\beta = -.25$ ,  $p = .04$ ). However, once neuroticism was controlled for conscientiousness was no longer a

significant predictor. With the addition of the conflict outcomes and at Time 1 to the first step of the analysis, the only significant predictors of the conflict outcomes at Time 2 were the conflict outcomes at Time 1 (see Table 7). Neither perfectionistic strivings at Time 1 added to the second step of the analysis, nor the interaction of perfectionistic concerns and perfectionistic strivings at Time 1 added in the third step were significant predictors of any of the conflict outcomes at Time 2.

### **Tests of Dependent Correlations**

In order to test Hypothesis 3a (i.e., the correlation between perfectionistic concerns (Time 1) and strain (Time 2) will be higher than the correlation between perfectionistic strivings (Time 1) and strain (Time 2)), and 3b (i.e., The correlation between perfectionistic concerns (Time 1) and work-life conflict variables (Time 2) will be higher than the correlation between perfectionistic strivings (Time 1) and the work-life conflict variables (Time 2) four tests of dependent correlations (Steiger, 1980) were conducted. In the first analysis, the correlation between Time 1 perfectionistic concerns and Time 2 strain ( $r = .34$ ) was significantly higher than the correlation between Time 1 perfectionistic strivings and Time 2 strain ( $r = .15$ ;  $t = 2.25$ ,  $p = .01$ ). The correlation between Time 1 perfectionistic concerns and Time 2 work-spouse conflict ( $r = .25$ ) and Time 1 perfectionistic strivings and Time 2 work-spouse conflict ( $r = .09$ ;  $t = 1.56$ ,  $p = .06$ ) was trending towards significance. However, the correlation between Time 1 perfectionistic concerns and Time 2 work-life conflict ( $r = .03$ ) was not significantly different from the correlation between Time 1 perfectionistic strivings and Time 2 work-life conflict ( $r = -.03$ ;  $t = .67$ ,  $p = .25$ ). Nor was the correlation between Time 1 perfectionistic concerns and Time 2 work-parent conflict ( $r = .15$ ) significantly different

from the correlation between Time 1 perfectionistic strivings and Time 2 work-parent conflict ( $r = .07$ ;  $t = .68$ ,  $p = .25$ ).

### **Multivariate Analysis of Variance**

In order to examine the impact of the ABLE program on perfectionistic concerns (Hypothesis 4), a 2 (group: treatment vs control) x 2 (time 1 vs. time 2) repeated measures MANOVA (see Table 7 for means and standard deviations). There was a significant multivariate effect for the Group x Time interaction ( $F(1, 136)=5.69$ ,  $p = .02$ ,  $\eta^2 = .04$ ). Compared to the control group, the ABLE treatment group experienced significant decreases in perfectionistic concerns from Time 1 to Time 2 (see Figure 2).

Four other 2 x 2 repeated measures MANOVAs were conducted to examine the impact of the ABLE program on strain (Hypothesis 5a), work-life conflict, work-spouse conflict, and work-parent conflict (Hypothesis 5b). There was a significant multivariate effect of the Group x Time interaction for strain ( $F(1, 136) = 12.28$ ,  $p = .001$ ,  $\eta^2 = .08$ ; see Figure 2), work-life conflict ( $F(1, 130) = 5.54$ ,  $p = .02$ ,  $\eta^2 = .04$ ; see Figure 4), and for work-parent conflict ( $F(1, 68) = 7.24$ ,  $p = .01$ ,  $\eta^2 = .10$ ; see Figure 5). However, the multivariate effect of the Group x Time interaction was non-significant for work-spouse conflict ( $F(1, 93) = 2.26$ ,  $p = .14$ ; see Figure 6).

Although not hypothesized and no change was expected, a 2 x 2 repeated measures MANOVA was conducted to examine the impact of the ABLE program on perfectionistic strivings. This analysis also ensures that there was not random factoring influencing all variables. As expected, there was no significant multivariate effect of the Group x Time interaction ( $F(1, 136) = .48$ ,  $p = .49$ ; see Figure 7).

### **Discussion**

The primary aim of this study was to examine the efficacy of reducing perfectionistic concerns in the context of a workplace intervention. To date, research looking at reducing perfectionism has been limited and affected by small sample sizes and limited use of control groups (e.g., Ashbaugh et al., 2007; Kutlesa & Arthur, 2008; Pleva & Wade, 2006). The current research improved on these designs by incorporating a larger sample size and using a control group. As a result, the success of this intervention provides preliminary results for the ability to reduce perfectionistic concerns in a motivated non-clinical population.

#### **Two Factors of Perfectionism**

An Exploratory Factor Analysis supported the distinction of perfectionism into perfectionistic strivings and perfectionistic concerns. Although the sample size was small for such an analysis, it provides preliminary support that the construct can be dichotomized in such a way and analyzing the data using this factor structure was appropriate. All items loaded on their respective factors, with the exception of one item (i.e., "It makes me uneasy to see an error in my work"), which loaded more strongly on the perfectionistic concerns factor than the perfectionistic strivings. Post-hoc analysis on this item indicated that it was significantly correlated with neuroticism at Time 1 ( $r = .20$ ,  $p < .05$ ). Measured as a whole construct, perfectionism strivings did not correlate significantly with neuroticism ( $r = .17$ ,  $p = ns$ ). Given this non-significance, it is possible that participants high in perfectionistic strivings did not relate to this item and for this sample it was more reflective of perfectionistic concerns.

Because of the small sample size, an additional analysis was conducted using the Time 2 Perfectionism data. The factor structure was replicated with two exceptions. The problem item that did not load on its appropriate component from the first sample loaded appropriately on the perfectionistic strivings dimension in the second sample. Moreover, another item (i.e., “The better I do, the better I am expected to do”) loaded more strongly on the perfectionistic strivings dimension instead of the perfectionistic concerns dimension. This distinction between the perfectionistic concerns and strivings may become clearer with a larger sample size. These results support past research (e.g., Blankstein & Dunkley, 2002; Cox et al., 2002; Frost et al., 1993; Suddarth & Slaney, 2001) that found perfectionism components to have a two-dimension structure.

### **Perfectionism and Strain**

The interaction between Time 1 perfectionistic concerns and perfectionistic strivings were related to Time 2 strain, supporting past literature indicating that perfectionism is associated with negative outcomes (e.g., Ashbaugh et al., 2007; Childs & Stoeber, 2010; Flett et al., 1995). Because of the demonstrated relationship of perfectionism and conscientiousness and neuroticism (Dunkley, Blankstein, & Berg, 2012; Rice, et al., 2007; Sherry & Hall, 2009), controlling for conscientiousness and neuroticism is necessary, and a strength of this study. The results of the hierarchical regression demonstrate the importance of this step. Without controlling for these variables, perfectionistic concerns explained substantially more variance than with control variables ( $\beta = .34, p < .001$  vs.  $\beta = .15, p = .10$ ). The regression also allows a comparison of how conscientiousness and neuroticism relate differently with strain. Neuroticism, but not conscientiousness, explained a significant amount of the variance in strain.

Neuroticism has been related to problems in the workplace (Steel, 2007), as well as to decreased goal setting and motivation (Judge & Ilies, 2002), which are all integral parts of the ABLE program.

Perfectionistic strivings and perfectionistic concerns share a significant amount of variance (at Time 1,  $\beta = .46, p < .001$ ; at Time 2,  $\beta = .41, p < .001$ ). Like Time 1 perfectionistic concerns, Time 1 perfectionistic strivings was not a significant predictor of Time 2 strain. Unlike perfectionistic concerns, perfectionistic strivings was not a significant predictor of strain regardless of whether conscientiousness and neuroticism were controlled for. However, the interaction of Time 1 perfectionistic concerns and perfectionistic strivings was predictive of a significant amount of variance in Time 2 strain after controlling for conscientiousness, neuroticism, and strain at Time 2. Closer investigation of the moderation indicated that only when both perfectionistic concerns and perfectionistic strivings were high was a significant level of strain predicted. These results share the focus of many studies that emphasize moderational models of perfectionism and negative outcomes (Enss & Cox, 2005; Graham et al., 2010). This significant interaction suggests that in this sub-clinical population labeling perfectionism as *adaptive* as some researchers have chosen to do (e.g., Mitchelson, 2009; Stoltz & Ashby, 2007) may be premature.

### **Perfectionism and Work-Life Conflict**

Past research has suggested that perfectionistic strivings are related to lower work-life conflict whereas perfectionistic concerns are related to high work-life conflict (Mitchelson, 2009). The current research was unable to replicate these findings: Neither perfectionistic concerns nor perfectionistic strivings at Time 1 were significantly

correlated with work-life conflict, work-spouse conflict, or work-parent conflict at Time

2. The self-report format of the research design could explain these non-significant relationships.

### **The Effect of the ABLE Program**

This study provides encouraging preliminary results on how perfectionistic concerns can be reduced in a non-clinical working population. The analysis indicated that there was a significant decrease in perfectionistic concerns in the ABLE treatment group. Due to the varied topics covered in the program, it is unclear what specific aspects of the program contributed to this decline. It is likely that by identifying the specific areas where participants were prone to a maladaptive perfectionistic style, and implementing more adaptive coping strategies (e.g., cognitive-focused coping instead of rumination), allowed them to address these maladaptive cognitions, but not necessarily change, their perfectionistic beliefs. This focus on coping strategies, and maladaptive cognitions would be consistent with results from (Ashbaugh et al., 2007; Kutlesa & Arthur, 2008; Pleva & Wade, 2006) who found that focusing on maladaptive cognitions of perfectionistic concerns was effective. The ABLE program shares this focus.

As an additional check of the efficacy of the ABLE intervention, the effects of the program on strain and the work-life conflict variables were examined. The ABLE program significantly improved all outcomes, with the exception of work-spouse conflict. ABLE is aimed at decreasing job stress. Therefore, much of the program content targets stress by focusing on time management, prioritizing, coping strategies, and recovery. Again, although it is not possible to determine which specific component(s) of ABLE was

most effective in reducing strain, it illustrates that the ABLE program is effective at reducing more global negative outcomes than simply perfectionistic concerns.

Work-spouse conflict was the only one of the three conflict variables that was not reduced by the ABLE treatment program. Compared to work-life conflict, work-spouse conflict may be more difficult to address in the short term, because it is dependent not only on changes in the participant, but also on changes in the participant's spouse. Moreover, reducing the time- and strain-based conflicts of your spouse is difficult to do. Many participants indicated that they wanted to spend more quality time with their spouse but they were unable to meet this goal because of their spouse's priorities and obligations. However, it is possible that work-spouse conflict may decrease over the long-term, once participants have the opportunity to communicate their needs or share the skills they gained from the program with their spouse. Regardless, decreasing work-spouse conflict requires support from both parties.

#### **Limitations and Future Directions**

Despite the strength of the research design, there are several limitations that future research should consider. First, there was no random assignment of participants into the ABLE treatment condition or the control condition. Consequently, it is possible that there were some inherent differences between the groups. However, post-hoc analyses indicated no differences on age, years in their job, hours worked per week, and Time 1 perfectionistic strivings, perfectionistic concerns, conscientiousness, neuroticism, strain, work-life conflict, and work-parent conflict, but differences in work-spouse conflict ( $t(112) = 2.07, p = .04$ ) where the control group was experiencing greater Time 1 work-spouse conflict than the intervention group. Moreover, because participants were selected

into the ABLE group on a first-come-first serve basis, it is possible that the motivation for change of the first group of participants was higher than that of the second group.

Therefore, the ABLE treatment group participants were those participants who signed up for the program first. Future research should incorporate random assignment into the design, and should continue to examine the impact of the ABLE program using a control group design.

There were eight participants who chose to withdraw from the ABLE treatment program prior to its completion, with the majority withdrawing before week five of the program. Although analyses indicated that participants who withdrew differed significantly from participants who remained in the program in their level of strain (higher) and work-life conflict (lower), other factors should be examined. For example, the level of motivation for change, support from management, colleagues, or significant others, and trust in their coach may be important factors that influence program success.

Individual difference in program commitment and/or individual goals may exist between participants who completed the program resulting in varying amounts of progress. Determining how the level of commitment to the program, as reported by their coach, changes the course of progress is a direction for future work with this program.

One of the advantages of the ABLE program is its flexibility. Although the program follows a standardized process and all participants received identical program materials, it is tailored to the needs of the individual participants. For example, reducing perfectionism would not have been emphasized as a goal throughout the program for those participants who did not self-identify as being perfectionistic and whose coaches did not identify them as having significant perfectionistic behaviours. However, this level

of flexibility also results in a lower level of program standardization than if all participants had to focus on all issues to the same degree. It is difficult to capture these differences among participants' coaching sessions, but future iterations of the ABLE program may examine the degree of focus on each of the topics to control for their effects in the analyses.

The current analyses were able to provide preliminary insight into the effectiveness of the ABLE program in reducing perfectionistic concerns, strain, and work-life conflict. However, it will be critical to see if the reduction that was seen in these variables in the treatment group can be self-maintained, and if similar results are found with the control group once they complete the program.

The decrease in perfectionistic concerns could have been more significant had participants who had high depression scores not been screened out of the program. The measure of perfectionistic concerns that was used was a compilation of items representing concern over mistakes, doubts about actions, socially-prescribed perfectionism, and self-criticism from the DEQ. By screening-out participants high in depression, there was likely a restriction of range for perfectionistic concerns. Future interventions that are equipped to deal with treatment of depression could potentially find a more significant decrease in perfectionistic concerns than what is reported here.

The current research focused primarily on personality and health outcomes. Future research should also look at the relationship between perfectionism and other outcomes such as recovery, procrastination, organizational citizenship behaviours, absenteeism, or job performance. Research on perfectionism in the workplace is still in

its infancy, leaving many of these questions unanswered. Looking at these outcomes in the context of the ABLE program is an important next step.

### **Practical Implications**

With regards to the perfectionism content of the program, many participants were simply glad to see it acknowledged in the manual at all. Such individuals had been struggling in some way with their perfectionistic ideals and were comforted to see their struggles recognized as a common issue. The results of this research validate the inclusion of perfectionism in the program and suggest that the maladaptive cognitions can be managed, and associated negative outcomes (i.e., strain) reduced. The success of this research is encouraging to organizations to help them to engage in more work intervention research with a focus on both personality and outcomes that affect the functioning of employees.

High levels of perfectionistic concerns may impede treatment progress (e.g., Blatt et al., 1996). Consequently, post-hoc analysis on participants who completed the ABLE intervention was conducted to see if there was a significant relationship between perfectionistic concerns and overall program progress as reported by coaches. Time 1 perfectionistic concerns were unrelated to program progress. However, Time 2 perfectionistic concerns were significantly related to overall program progress ( $r = -.37, p = .003$ ). Indicating that at the end of the program, those participants who remained high in perfectionistic concerns did have inhibited program progress. Examining which aspects of perfectionistic concerns that may have impacted progress in the ABLE program will be an important future research step.

Perfectionistic individuals are known to have interpersonal difficulties that can impede their functioning (Mackinnon et al., 2012), including treatment progress (Shahar, Blatt, & Zuroff, 2007). This was a qualitative comment of coaches, and something that participants often failed to recognize in themselves. If the success in reducing perfectionistic concerns is related to narrowing the discrepancy between the believed and actual self, it is likely that participants who were unable to narrow this discrepancy in the 10-weeks were the ones who saw less overall progress. Moreover, designing a version of the ABLE program more directly tailored to such individuals with a larger focus on perfectionistic concerns could be useful.

The adaptability of the ABLE program and its phone-based format allows for it to be delivered to a wide range of employees in both rural and urban locations. In this regard, the program has the potential to benefit any employee regardless of their job position or organization. The success of the phone-based design tends to be a viable way of delivering services to rural locations. This format also provides a significant level of flexibility to participants who could have their sessions in a location and time of their convenience. Management who were supportive of the intervention encouraged their employees to use their work hours for ABLE calls. With such a commitment it would be worthwhile for organizations to examine the efficacy of such intervention programs on organizational outcomes, such as, increased profits, decreased absenteeism, reduced insurance claims, that interventions focusing on employee well-being impact.

### **Concluding Remarks**

This research provides compelling preliminary results of perfectionism in the workplace. Although perfectionism research has been prolific in the clinical field for the

past two decades, it is only an emerging interest in occupational psychology. In the workplace striving for *perfection* is often encouraged. The question is, at what price? Research clarifying this question is critical for management to understand how to foster achievement without developing maladaptive thoughts. The current research begins to shed light on this issue.

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Table 1.

*Means, standard deviations, and reliabilities for ABLE and control participants (N = 138).*

	ABLE treatment group (N = 67)			Control group (N = 71)		
	Mean	SD	$\alpha$	Mean	SD	$\alpha$
Age	42.85	9.48	--	44.30	9.14	--
Years in Job	9.27	9.32	--	11.61	10.41	--
Hours Worked/Day	8.08	1.26	--	8.37	1.32	--
Hours Worked/Week	40.43	8.65	--	39.66	7.20	--
<b>Time 1</b>						
Perfectionistic Strivings	4.44	.83	.87	4.65	.10	.92
Perfectionistic Concerns	-.00	.52	.87	.02	.64	.90
Conscientiousness	3.65	.69	.86	3.66	.70	.84
Neuroticism	2.98	.72	.85	2.92	.75	.84
Strain	1.47	.57	.85	1.49	.63	.87
Work-Life Conflict	3.31	1.18	.89	3.48	1.14	.91
Work-Spouse Conflict	2.88	1.18	.96	3.24	.98	.92
Work-Parent Conflict	3.14	1.26	.90	2.86	1.27	.93
<b>Time 2</b>						
Perfectionistic Strivings	4.36	.95	.90	4.51	1.07	.91
Perfectionistic Concerns	-.10	.55	.90	.10	.69	.93
Conscientiousness	3.73	.74	.89	3.54	.63	.81
Neuroticism	2.53	.67	.83	2.88	.72	.84
Strain	1.18	.54	.83	1.46	.70	.88
Work-Life Conflict	2.73	1.09	.89	3.28	1.16	.88
Work-Spouse Conflict	2.46	.98	.92	2.96	1.14	.95
Work-Parent Conflict	2.39	1.18	.92	2.76	1.34	.95

*Note:* ABLE treatment group N = 67 for all variables except WSC (N = 45-46) and WPC (N = 31-32).

Control group N = 71 for all variables except WSC (N = 52-54) and WPC (N = 45-46).

Table 2

*Correlation matrix, means, standard deviations, and reliabilities for all study variables (Time 1 and Time 2) for all participants*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Age	--																		
2. Gender	.06	--																	
3. Session	-.06	.10	--																
<b>Time 1</b>																			
4. Perfectionistic Strivings	-.09	-.16	-.12	<b>.88</b>															
5. Perfectionistic Concerns	-.00	-.01	.00	.46 <sup>c</sup>	<b>.90</b>														
6. Conscientiousness	.10	-.04	-.02	.13	-.35 <sup>c</sup>	<b>.85</b>													
7. Neuroticism	-.11	-.19 <sup>a</sup>	.06	.08	.49 <sup>c</sup>	-.27 <sup>c</sup>	<b>.85</b>												
8. Strain	-.10	-.17 <sup>a</sup>	.00	.10	.42 <sup>c</sup>	-.21 <sup>a</sup>	.58 <sup>c</sup>	<b>.86</b>											
9. Work-Life Conflict	.10	-.01	-.07	.04	.01	.02	-.06	.07	<b>.90</b>										
10. Work-Spouse Conflict	.08	.04	-.15	-.00	.14	-.09	.09	.16	.53 <sup>c</sup>	<b>.94</b>									
11. Work-Parent Conflict	-.27 <sup>a</sup>	.02	.10	.03	.08	-.17	.01	-.03	.47 <sup>c</sup>	.55 <sup>c</sup>	<b>.92</b>								
<b>Time 2</b>																			
12. Perfectionistic Strivings	-.02	-.13	-.07	.75 <sup>c</sup>	.40 <sup>c</sup>	.07	.07	.19 <sup>a</sup>	.04	.07	.07	<b>.91</b>							
13. Perfectionistic Concerns	-.02	.01	-.17 <sup>a</sup>	.33 <sup>c</sup>	.63 <sup>c</sup>	-.31 <sup>c</sup>	.35 <sup>c</sup>	.41 <sup>c</sup>	.14	.16	.18	.43 <sup>c</sup>	<b>.92</b>						
14. Conscientiousness	.20 <sup>a</sup>	.02	.13	.09	-.32 <sup>c</sup>	.69 <sup>c</sup>	-.33 <sup>c</sup>	-.20 <sup>a</sup>	.00	-.10	-.14	.15	-.38 <sup>c</sup>	<b>.86</b>					
15. Neuroticism	-.21 <sup>b</sup>	-.15	-.23 <sup>b</sup>	.12	.39 <sup>c</sup>	-.20 <sup>a</sup>	.63 <sup>c</sup>	.44 <sup>c</sup>	.04	.08	.04	.09	.48 <sup>c</sup>	-.48 <sup>c</sup>	<b>.85</b>				
16. Strain	-.10	-.08	-.20 <sup>a</sup>	.15	.34 <sup>c</sup>	-.13	.50 <sup>c</sup>	.74 <sup>c</sup>	.10	.28 <sup>b</sup>	.14	.22 <sup>b</sup>	.51 <sup>c</sup>	-.29 <sup>c</sup>	.62 <sup>c</sup>	<b>.87</b>			
17. Work-Life Conflict	.08	-.05	-.24 <sup>b</sup>	-.03	.03	-.09	-.06	.05	.67 <sup>c</sup>	.47 <sup>c</sup>	.39 <sup>c</sup>	.09	.20 <sup>a</sup>	-.07	.08	.13	<b>.89</b>		
18. Work-Spouse Conflict	-.04	-.08	-.23 <sup>a</sup>	.09	.25 <sup>b</sup>	-.22 <sup>a</sup>	.13	.24 <sup>a</sup>	.39 <sup>c</sup>	.61 <sup>c</sup>	.36 <sup>b</sup>	.24 <sup>a</sup>	.39 <sup>c</sup>	-.23 <sup>a</sup>	.32 <sup>c</sup>	.38 <sup>c</sup>	.57 <sup>c</sup>	<b>.94</b>	
19. Work-Parent Conflict	-.31 <sup>b</sup>	.11	-.14	.07	.15	-.21	-.03	-.02	.32 <sup>b</sup>	.40 <sup>b</sup>	.70 <sup>c</sup>	.17	.28 <sup>b</sup>	-.20	.17	.16	.52 <sup>c</sup>	.47 <sup>c</sup>	<b>.94</b>
<i>M</i>	43.42	--	--	4.55	.00	3.67	2.94	1.46	3.40	3.04	2.99	4.43	-.00	3.64	2.69	1.31	3.01	2.71	2.60
<i>SD</i>	9.34	--	--	.92	.58	.69	.74	.58	1.17	1.08	1.28	1.01	.63	.69	.71	.63	1.16	1.10	1.29

*Note.* Reliabilities are bolded and italicized along the diagonal. <sup>a</sup> $p < .05$ , <sup>b</sup> $p < .01$ , <sup>c</sup> $p < .001$ .

Time 1 N = 133-138 for all variables except for work-spouse conflict (N = 95-97) and work-parent conflict (N = 60-76).

Time 2 N = 133-138 for all variables except for work-spouse conflict (N = 95-100) and work-parent conflict (N = 60-78).

Table 3

Correlation matrix for all study variables (Time 1 and Time 2) for ABLE and control participants

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Age	—	.06	-.05	.08	.08	-.11	-.07	.33 <sup>b</sup>	.23	-.14	.06	.05	.14	-.23	-.09	.26 <sup>a</sup>	.06	-.25	
2. Gender	.07	—	-.17	.06	-.06	-.10	-.14	.03	.08	.00	-.19	.10	-.14	.04	-.04	-.04	-.10	.12	
<b>Time 1</b>																			
3. Perfectionistic Strivings	-.18	-.12	—	.45 <sup>c</sup>	.16	.14	.14	.07	-.16	-.03	.76 <sup>c</sup>	.29 <sup>b</sup>	.30 <sup>b</sup>	.08	.13	-.09	-.00	.04	
4. Perfectionistic Concerns	-.07	-.08	.41 <sup>c</sup>	—	-.39 <sup>c</sup>	.52 <sup>c</sup>	.45 <sup>c</sup>	.05	.13	-.01	.50 <sup>c</sup>	.64 <sup>c</sup>	-.32 <sup>b</sup>	.42 <sup>c</sup>	.36 <sup>b</sup>	-.03	.22	.06	
5. Conscientiousness	.08	-.02	.13	-.33 <sup>b</sup>	—	-.35 <sup>b</sup>	-.18	-.02	-.24	-.20	.17	-.20	.77 <sup>c</sup>	-.16	-.06	-.07	-.21	-.26	
6. Neuroticism	-.08	-.29 <sup>b</sup>	.00	.47 <sup>c</sup>	-.19	—	.54 <sup>c</sup>	-.06	.21	.10	.15	.43 <sup>c</sup>	-.48 <sup>c</sup>	.75 <sup>c</sup>	.56 <sup>c</sup>	-.04	.30 <sup>a</sup>	.06	
7. Strain	-.08	-.21	.01	.40 <sup>c</sup>	-.23 <sup>a</sup>	.66 <sup>c</sup>	—	.02	.20	-.12	.31 <sup>b</sup>	.47 <sup>c</sup>	-.24 <sup>a</sup>	.56 <sup>c</sup>	.79 <sup>c</sup>	-.05	.30 <sup>a</sup>	-.09	
8. Work Life Conflict	-.12	-.03	-.04	-.04	.04	-.06	.10	—	.39 <sup>b</sup>	.36 <sup>a</sup>	.17	.25 <sup>a</sup>	.07	-.03	.06	.77 <sup>c</sup>	.30 <sup>a</sup>	.30 <sup>a</sup>	
9. Work Spouse Conflict	-.05	.04	.05	.20	.03	.07	.22	.62 <sup>c</sup>	—	.45 <sup>b</sup>	.06	.25 <sup>t</sup>	-.26 <sup>c</sup>	.11	.33 <sup>a</sup>	.51 <sup>c</sup>	.53 <sup>c</sup>	.45 <sup>b</sup>	
10. Work Parent Conflict	-.40 <sup>a</sup>	.03	.15	.27	-.09	-.14	.09	.63 <sup>c</sup>	.70 <sup>c</sup>	—	.08	.14	-.15	.13	.07	.33 <sup>a</sup>	.14	.81 <sup>c</sup>	
<b>Time 2</b>																			
11. Perfectionistic Strivings	-.12	-.08	.71 <sup>c</sup>	.26 <sup>a</sup>	-.01	.00	.07	-.11	.05	.07	—	.42 <sup>c</sup>	.26 <sup>a</sup>	.12	.29 <sup>a</sup>	.12	.18	.16	
12. Perfectionistic Concerns	-.12	-.03	.36 <sup>b</sup>	.59 <sup>c</sup>	-.40 <sup>c</sup>	.28 <sup>a</sup>	.33 <sup>b</sup>	-.02	.00	.31	.46 <sup>c</sup>	—	-.36 <sup>b</sup>	.53 <sup>c</sup>	.53 <sup>c</sup>	.16	.43 <sup>c</sup>	.26	
13. Conscientiousness	.24 <sup>a</sup>	.11	-.06	-.35 <sup>b</sup>	.63 <sup>c</sup>	-.24 <sup>a</sup>	-.18	-.04	.03	-.18	.06	-.38 <sup>c</sup>	—	-.43 <sup>c</sup>	-.27 <sup>a</sup>	.01	-.37 <sup>b</sup>	-.25	
14. Neuroticism	-.23 <sup>a</sup>	-.29 <sup>a</sup>	.12	.36 <sup>b</sup>	-.23 <sup>t</sup>	.57 <sup>c</sup>	.35 <sup>b</sup>	.05	.04	.01	.06	.39 <sup>c</sup>	-.50 <sup>c</sup>	—	.72 <sup>c</sup>	-.09	.40 <sup>b</sup>	.15	
15. Strain	-.09	-.10	.10	.37 <sup>c</sup>	-.24 <sup>a</sup>	.50 <sup>c</sup>	.73 <sup>c</sup>	.09	.24	.27	.13	.43 <sup>c</sup>	-.30 <sup>b</sup>	.45 <sup>c</sup>	—	.02	.40 <sup>b</sup>	.14	
16. Work Life Conflict	-.12	-.00	-.04	.12	-.12	-.07	.16	.58 <sup>c</sup>	.39 <sup>b</sup>	.57 <sup>c</sup>	.00	.17	-.10	.13	.15	—	.46 <sup>c</sup>	.39 <sup>b</sup>	
17. Work Spouse Conflict	-.18	-.02	.08	.31 <sup>a</sup>	-.25	-.00	.24	.47 <sup>c</sup>	.70 <sup>c</sup>	.73 <sup>c</sup>	.23	.23	-.10	.18	.31 <sup>a</sup>	.64 <sup>c</sup>	—	.31	
18. Work Parent Conflict	-.40 <sup>a</sup>	.13	.12	.31	-.10	-.17	.11	.33	.28	.54 <sup>b</sup>	.17	.31	-.04	.15	.16	.65 <sup>c</sup>	.70 <sup>c</sup>	—	

Note. Statistics for the ABLE group are below the diagonal and statistics for the control group are above the diagonal.

<sup>a</sup> $p < .05$ , <sup>b</sup> $p < .01$ , <sup>c</sup> $p < .001$ .

Time 1 N = 69-70 for all variables except for work-spouse conflict (N = 51) and work-parent conflict (N = 45).

Time 2 N = 68-70 for all variables except for work-spouse conflict (N = 51-53) and work-parent conflict (N = 36-46).

Table 4.

*Pattern matrix for Principal Components Analysis of the Time 1 perfectionism items (N = 160)*

		Component	
		1	2
PC	Even when I do something very carefully, I often feel that it is not quite right	.77	-.17
PC	I usually have doubts about the simple everyday things I do	.75	-.15
PC	I am not very satisfied with myself and my accomplishments	.73	-.12
PC	Often, I feel that I have disappointed others	.69	-.07
PC	If someone does a task at work better than I do, then I feel like I failed the whole task	.64	.24
PC	There is a considerable difference between how I am now and how I would like to be	.62	.02
PC	If I do not do as well as other people, it means I am an inferior human being	.62	.12
PC	It takes me a long time to do something "right".	.61	-.21
PC	If I fail partly, it is as bad as being a complete failure	.58	.28
PC	If I fail at work, I am a failure as a person	.58	.09
PC	The fewer mistakes I make, the more people will like me	.56	.09
PC	Success means that I must work even harder to please others	.56	.35
PC	I often find that I don't live up to my own standards or ideals	.56	.17
PC	I tend not to be satisfied with what I have	.52	-.08
PC	My family expects me to be perfect	.48	.19
PC	People expect nothing less than perfection from me	.46	.33
PC	The better I do, the better I am expected to do	.44	.31
PC	People expect more from me than I am capable of giving	.37	.06
PS	It makes me uneasy to see an error in my work.	.37	.33
PC	I tend to get behind in my work because I repeat things over and over	.32	-.02
PS	I set very high standards for myself.	-.06	.71
PS	I strive to be the best at everything I do.	-.02	.70
PS	I do not have very high goals for myself.	-.39	.69
PS	I demand nothing less than perfection of myself.	.21	.67
PS	One of my goals is to be perfect at everything I do.	.22	.67
PS	I strive to be as perfect as I can be.	.10	.65
PS	I am perfectionistic in setting my goals.	.21	.65
PS	I seldom feel the need to be perfect.	.02	.61
PS	I must work to my full potential at all times.	-.06	.60
PS	I never aim for perfection in my work.	-.24	.60

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PS	It is very important that I am perfect in everything I attempt.	.35	<b><i>.59</i></b>
PS	When I am working on something, I cannot relax until it is perfect.	.25	<b><i>.53</i></b>
PS	I do not have to be the best at whatever I am doing.	.25	<b><i>.53</i></b>
PS	I must always be successful at work.	.07	<b><i>.42</i></b>
Eigenvalues		10.27	3.86
% of variance		30.20	11.36

*Note:* Factor loadings above .40 are bolded and italicized. PC = Perfectionistic Concerns, PS = Perfectionistic Strivings

Table 5.

*Pattern matrix for Principal Components Analysis of the Time 2 perfectionism items (N = 138)*

		Component	
		1	2
PC	Even when I do something very carefully, I often feel that it is not quite right	.70	.08
PC	I usually have doubts about the simple everyday things I do	.76	-.08
PC	I am not very satisfied with myself and my accomplishments	.70	-.03
PC	Often, I feel that I have disappointed others	.70	-.09
PC	If someone does a task at work better than I do, then I feel like I failed the whole task	.67	.10
PC	There is a considerable difference between how I am now and how I would like to be	.66	.01
PC	If I do not do as well as other people, it means I am an inferior human being	.68	.03
PC	It takes me a long time to do something "right".	.69	.07
PC	If I fail partly, it is as bad as being a complete failure	.67	.20
PC	If I fail at work, I am a failure as a person	.56	.03
PC	The fewer mistakes I make, the more people will like me	.58	-.01
PC	Success means that I must work even harder to please others	.53	.39
PC	I often find that I don't live up to my own standards or ideals	.63	.20
PC	I tend not to be satisfied with what I have	.53	-.07
PC	My family expects me to be perfect	.56	.01
PC	People expect nothing less than perfection from me	.51	.06
PC	The better I do, the better I am expected to do	.26	.40
PC	People expect more from me than I am capable of giving	.46	-.10
PS	It makes me uneasy to see an error in my work.	.21	.62
PC	I tend to get behind in my work because I repeat things over and over	.65	.12
PS	I set very high standards for myself.	-.05	.82
PS	I strive to be the best at everything I do.	-.12	.82
PS	I do not have very high goals for myself.	-.25	.48
PS	I demand nothing less than perfection of myself.	.25	.74
PS	One of my goals is to be perfect at everything I do.	.25	.68
PS	I strive to be as perfect as I can be.	.07	.75
PS	I am perfectionistic in setting my goals.	.20	.71
PS	I seldom feel the need to be perfect.	-.04	.63
PS	I must work to my full potential at all times.	-.09	.67

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PS	I never aim for perfection in my work.	-.28	<b><i>.40</i></b>
PS	It is very important that I am perfect in everything I attempt.	.24	<b><i>.72</i></b>
PS	When I am working on something, I cannot relax until it is perfect.	.22	<b><i>.67</i></b>
PS	I do not have to be the best at whatever I am doing.	.13	<b><i>.38</i></b>
PS	I must always be successful at work.	.04	<b><i>.61</i></b>
Eigenvalues		10.71	4.57
% of variance		31.50	13.43

*Note:* Factor loadings above .40 are bolded and italicized. PC = Perfectionistic Concerns, PS = Perfectionistic Strivings

Table 6.

*Results of regression analyses for each outcome variable (controlling for conscientiousness and neuroticism)*

Step and Time 1 Predictors	Time 2 Outcomes							
	Strain (N = 140)		WLC (N = 137)		WSC (N = 101)		WPC (N = 79)	
	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$
<b>All Participants</b>								
<b>Step 1</b>		.25 <sup>c</sup>		.02		.05		.06
Conscientiousness	.01		-.11		-.21		-.25 <sup>a</sup>	
Neuroticism	.50 <sup>c</sup>		-.09		.06		-.12	
<b>Step 2.</b>		.02		.00		.03		.02
Conscientiousness	.04		-.10		-.16		-.22	
Neuroticism	.44 <sup>c</sup>		-.11		-.01		-.18	
<b>Perfectionistic Concerns</b>	.15		.05		.19		.16	

*Note.* WLC = work-life conflict; WSC = work-spouse conflict; WPC = work-parent conflict

<sup>a</sup>  $p < .05$ , <sup>b</sup>  $p < .01$ , <sup>c</sup>  $p < .001$

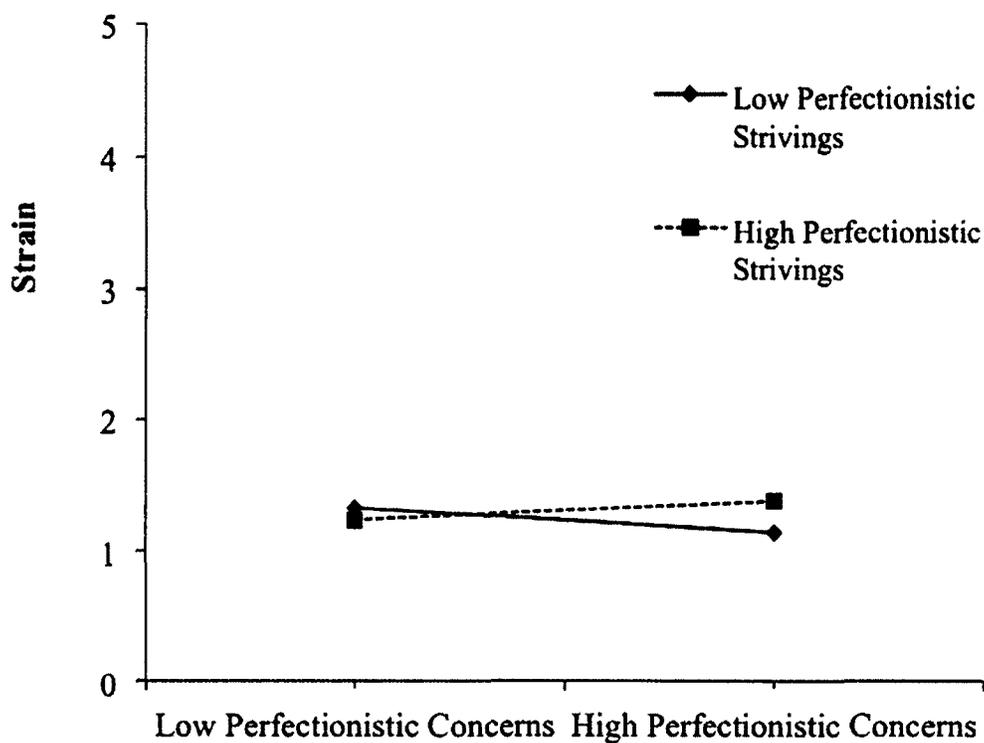
Table 7.

*Results of moderated regression analyses for each outcome variable (controlling for conscientiousness, neuroticism, and outcomes at Time 1)*

Step and Time 1 Predictors	Time 2 Outcomes							
	Strain (N = 140)		WLC (N = 137)		WSC (N = 101)		WPC (N = 79)	
	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$	$\beta$	R2 $\Delta$
<b>All Participants</b>								
<b>Step 1</b>		.56 <sup>c</sup>		.46 <sup>c</sup>		.39 <sup>c</sup>		.50 <sup>c</sup>
Conscientiousness	.04		-.12		-.14		-.09	
Neuroticism	.11		-.04		.04		-.06	
Outcome	.68 <sup>c</sup>		.67 <sup>c</sup>		.59 <sup>c</sup>		.69 <sup>c</sup>	
<b>Step 2.</b>		.00		.00		.00		.01
Conscientiousness	.03		-.11		-.16		-.08	
Neuroticism	.11		-.06		.01		-.10	
Outcome	.68 <sup>c</sup>		.67 <sup>c</sup>		.59 <sup>c</sup>		.68 <sup>c</sup>	
<b>Perfectionistic Strivings</b>	.07		-.05		.11		.05	
<b>Perfectionistic Concerns</b>	-.02		.05		.06		.09	
<b>Step 3.</b>		.01 <sup>a</sup>		.00		.00		.00
Conscientiousness	.01		-.11		-.16		-.10	
Neuroticism	.12		-.06		.01		-.09	
Outcome	.69 <sup>c</sup>		.67 <sup>c</sup>		.59 <sup>c</sup>		.67 <sup>c</sup>	
Perfectionistic Strivings	.06		-.05		.11		.05	
Perfectionistic Concerns	-.01		.05		.06		.09	
<b>PS x PC</b>	.12 <sup>a</sup>		.01		.04		.07	

*Note.* Outcome = Strain, WLC, WSC, WPC; WLC = work-life conflict; WSC = work-spouse conflict; WPC = work-parent conflict; PS = perfectionistic strivings; PC = perfectionistic concerns

<sup>a</sup>  $p < .05$ , <sup>b</sup>  $p < .01$ , <sup>c</sup>  $p < .001$



*Figure 1.* Moderating effects of high and low levels of perfectionistic strivings at Time 1 on the relationship between perfectionistic concerns at Time 1 and strain at Time 2, while controlling for conscientiousness, neuroticism, and strain at Time 1.

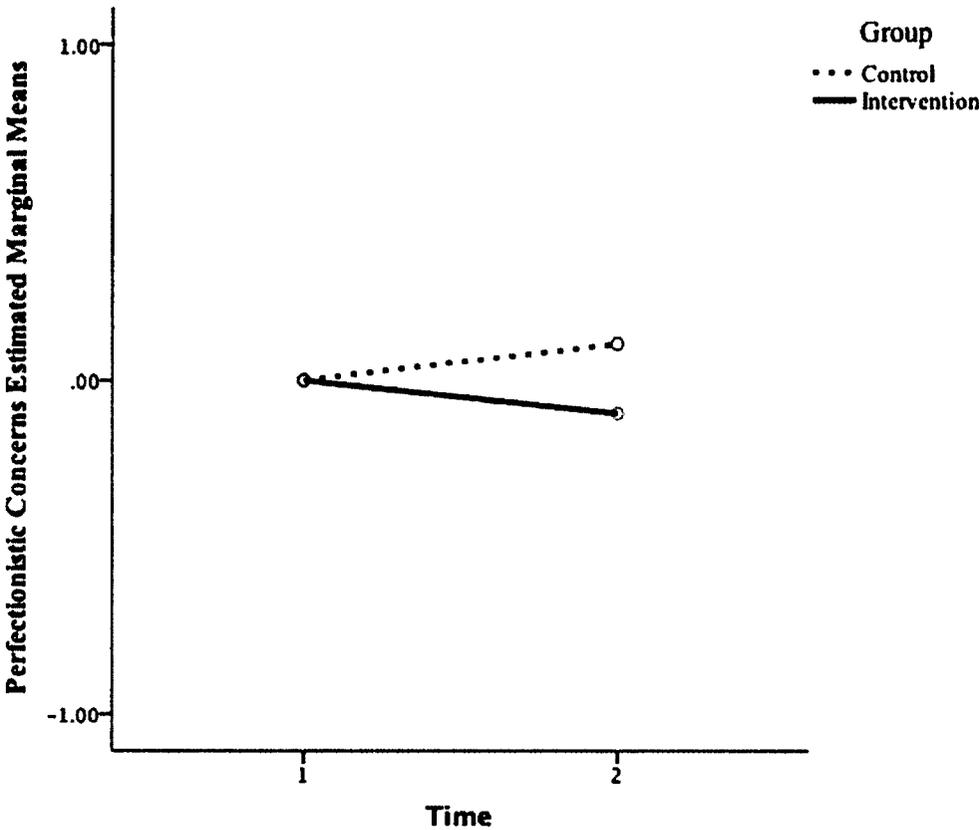


Figure 2. Perfectionistic concerns before and after the ABLE treatment program for the treatment group and the control group.

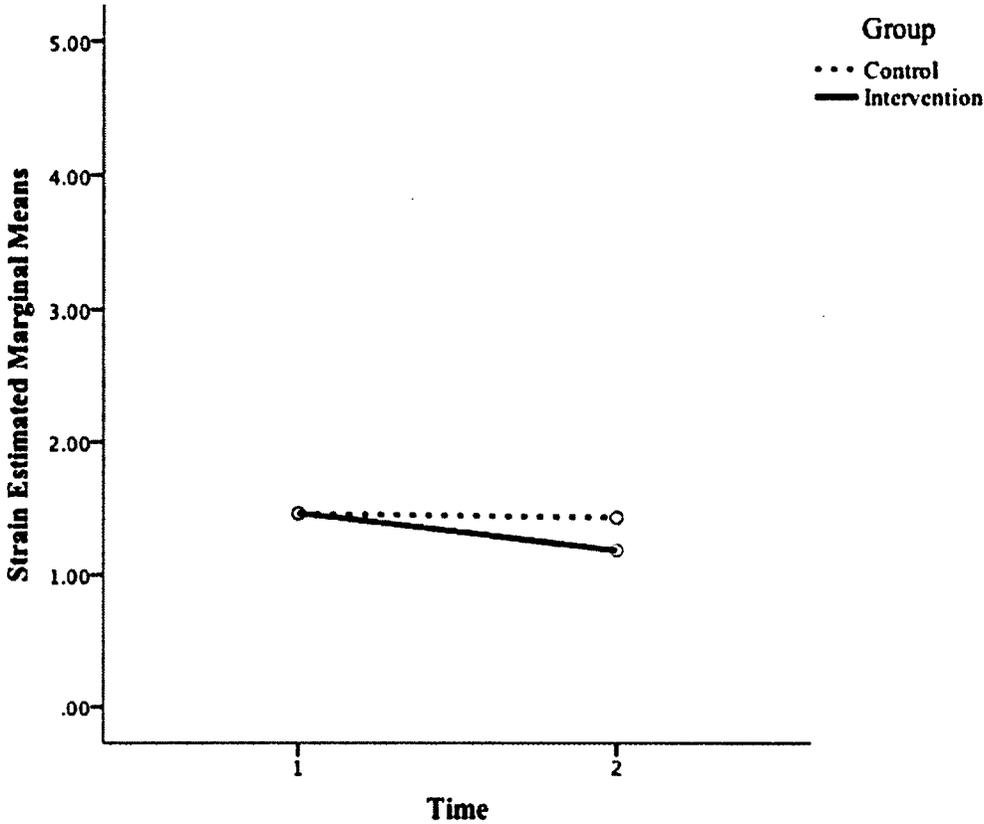


Figure 3. Strain before and after the ABLE treatment program for the treatment group and the control group.

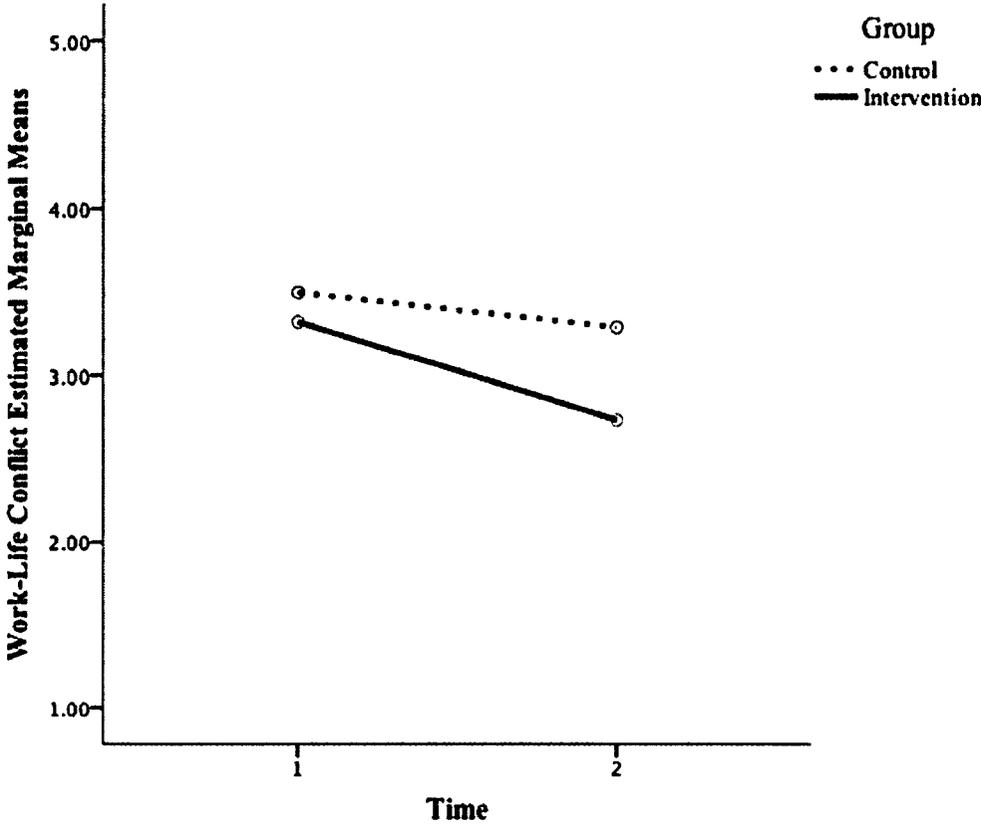


Figure 4. Work-life conflict before and after the ABLE treatment program for the treatment group and the control group.

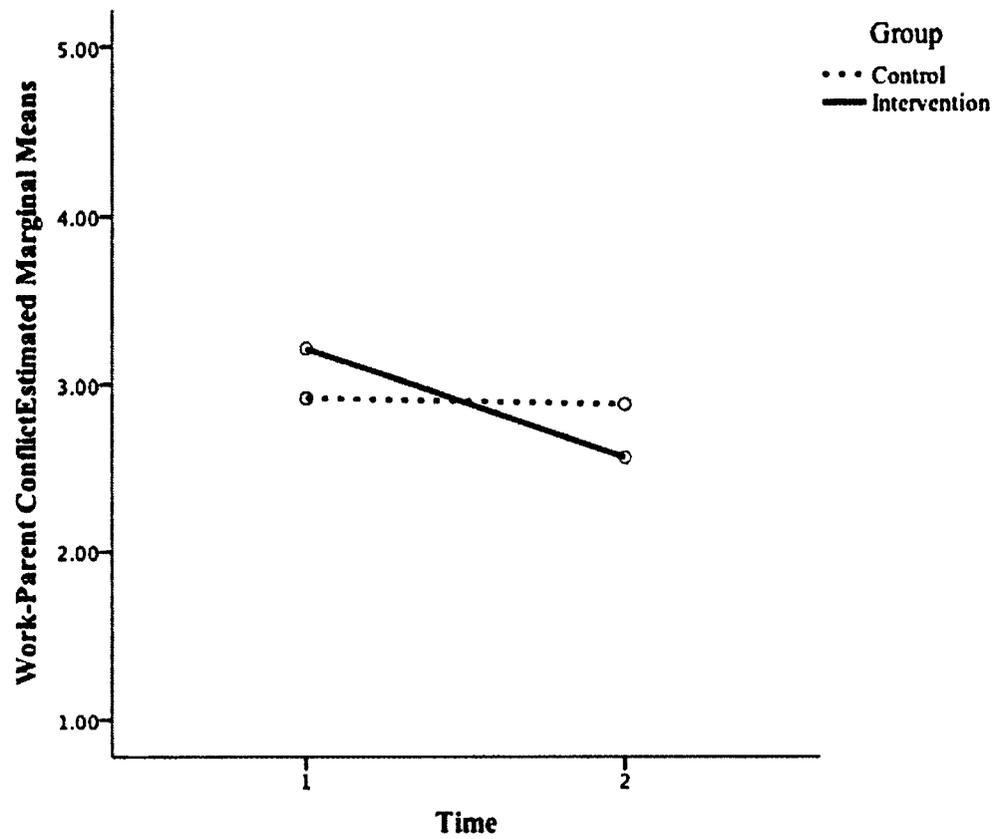


Figure 5. Work-parent conflict before and after the ABLE treatment program for the treatment group and the control group.

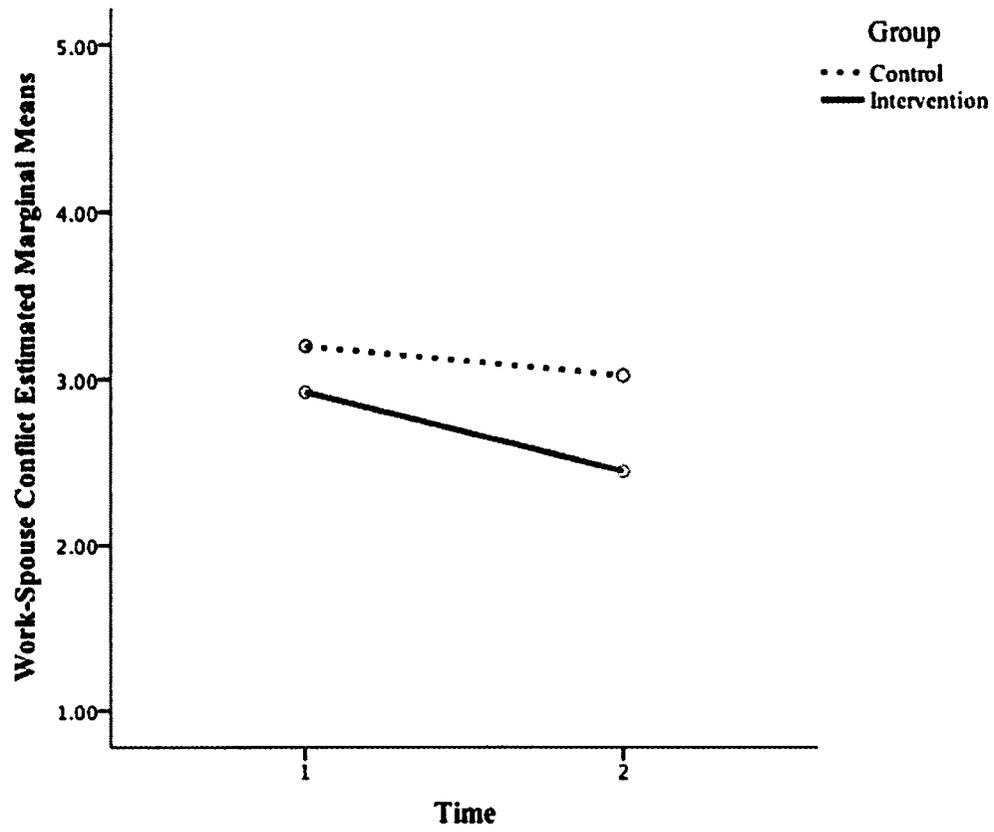


Figure 6. Work-spouse conflict before and after the ABLE treatment program for the treatment group and the control group.

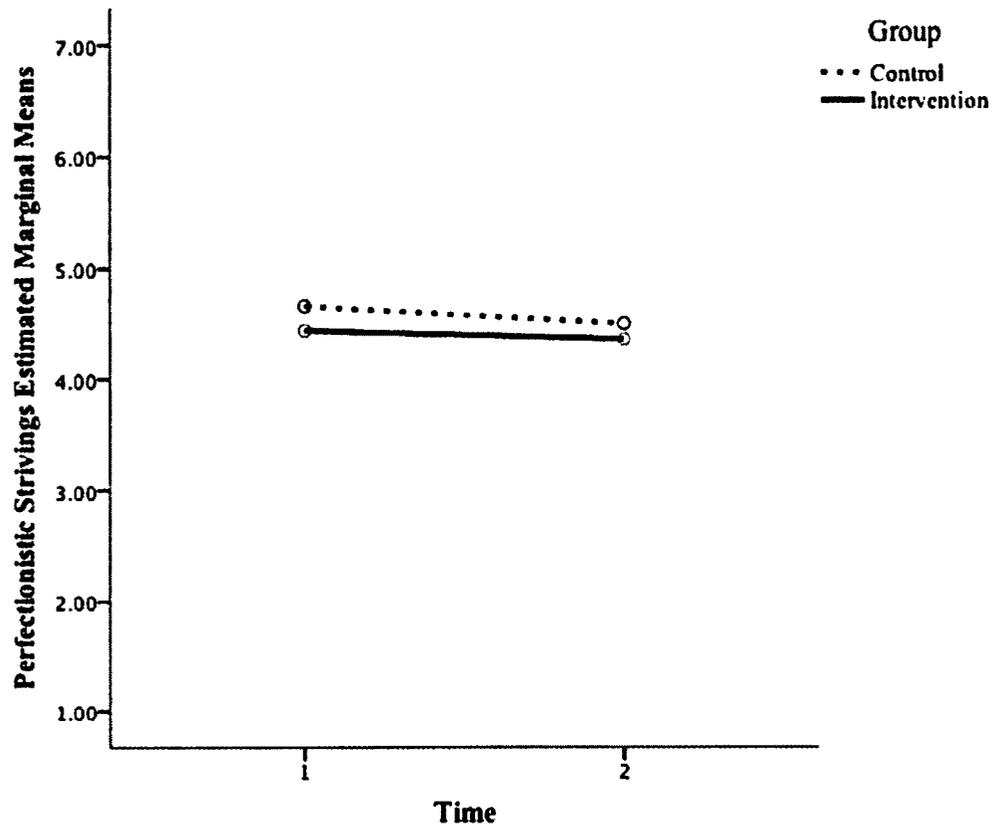


Figure 7. Perfectionistic strivings before and after the ABLE treatment program for the treatment group and the control group.

Appendix A

Achieving Balance in Life and Employment: General Themes for Each Session

**Session 1: Program Introduction**

Introduction to work-life balance and stress

Identify stressors

Impact of psychological well-being, nutrition, and exercise on health

**Session 2: Identifying Priorities and Goal Setting**

Recognizing priorities

Recognizing your perfectionism

Identifying SMART goals

Dealing with barriers to achieving goals

**Session 3: Time Management**

Setting priorities and time management strategies

Procrastination

Perfectionism and procrastination

Effects of multi-tasking

**Session 4: Introduction to Coping**

Learn about specific types of coping

Identifying when each type of coping is most effective

How coping strategies can impact health and well-being

**Session 5: Using Coping Strategies**

Identifying what strategies participants use

Recognize how coping strategies are impacting participants health and well-being

Deep breathing and progressive muscle relaxation

**Session 6: Work-Life Balance**

Overview of work-life balance

Different kinds of work-life conflict

Perfectionism and work-life balance

**Session 7: Work-Life Balance Tailored Topics**

Work-life balance: Spouse/partner

Work-life balance: Children

Work-life balance: Eldercare

Financial concerns

Workaholism and shift work

**Session 8: Workplace Demands**

Stress at work

Job characteristics that contribute to stress and strain

Bullying in the workplace

The costs of an unhealthy workplace

Communication at work

How to stay healthy at work

**Session 9: Workplace Resources**

Job characteristics that can be used as resources to buffer strain

Policies and practices offered by organizations

Psychologically healthy workplaces

**Session 10: Maintaining Progress**

Review of key strategies

Maintaining work-life balance



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