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# A Cognitive Behavioural Coaching Intervention for the Treatment of Perfectionism and Self-Handicapping in a Nonclinical Population

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This study examined the efficacy of a modified form of cognitive behavioural therapy, known as cognitive behavioural coaching, in reducing levels of perfectionism and self-handicapping in a non-clinical population. Twenty-eight research higher degree students participated in an intensive workshop series held over 6 weeks. Perfectionism and self-handicapping were measured at the commencement and conclusion of the workshop series, and again 4 weeks later. Levels of perfectionism fell during the workshop series and this reduction was sustained at follow-up. Levels of self-handicapping did not fall during the workshop series but had fallen significantly by follow-up. Participants' level of satisfaction with their candidature progress also improved. This study demonstrates how the principles of CBT can be successfully modified and used with a nonclinical population.

Perfectionism and self-handicapping are widely studied characteristics that can have a significant negative impact upon both performance and wellbeing. Many studies have attempted to understand their effect on clinical disorders such as depression and anxiety; however, perfectionism and self-handicapping can also have negative consequences for nonclinical populations. Despite the large amount of research on the negative effects of both perfectionism and self-handicapping, little research has been able to demonstrate an effective treatment for either. The current study aims to test the effectiveness of a cognitive behavioural coaching intervention in reducing both perfectionism and self-handicapping among a nonclinical group — namely research higher degree students.

Many studies have linked perfectionism with trait anxiety (Deffenbacher, Zwemer, Whisman, Hill, & Sloan, 1986; Juster et al., 1996), anxiety disorders (Antony, Purdon, Huta, & Swinson, 1998; Flett, Hewitt, & Dyck, 1989), depression (Chang, 2000; Hewitt & Flett, 1991; Kawamura, Hunt, Frost, & DiBartolo, 2001; Rice, Ashby, & Slaney, 1998), eating disorders (Fairburn, 1997; Fairburn, Shafran, & Cooper, 1999), and with a higher incidence of psychological symptoms and suicide risk (Chang, 1998; Rice et al., 1998). Self-handicapping, and in particular procrastination, has also been linked with negative outcomes, such as higher

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levels of depression and anxiety, and reduced self-esteem (Lay & Silverman, 1996; T. Martin, Flett, Hewitt, Krames, & Szanto, 1996; Saddler & Sacks, 1993).

At a subclinical level, people who are more perfectionistic have been shown to be less satisfied with their performance (Frost & Henderson, 1991), show attitudinal inflexibility (Ferrari & Mautz, 1997), experience higher levels of stress (Flett, Parnes, & Hewitt, 2001), be prone to persistent worry and fear of failure (Flett, Hewitt, Blankstein, & Mosher, 1991; Frost, Marten, Lahart, & Rosenblate, 1990), and engage in self-handicapping behaviours (Frost et al., 1990; Hobden & Pliner, 1995; Sherry, Flett, & Hewitt, 2001). Self-handicapping has also been associated with poor adjustment and academic underachievement (Zuckerman, Kieffer, & Knee, 1998) and lower achievement (Garcia, 1995) in nonclinical populations.

One of the difficulties of working with the perfectionism construct is the lack of a widely accepted definition. Despite extensive research (see Shafran & Mansell, 2001 for a review), significant differences remain regarding how the construct of perfectionism is defined. This study adopts the definition proposed by Frost et al. (1990), which has been the basis for much perfectionism research and which highlights two essential features of perfectionism: setting high standards and critical self-evaluation.

Self-handicapping is a related performance-debilitating characteristic also widely experienced by nonclinical populations. Jones and Berglas (1978) first used the term 'self-handicapping' to describe the situation where a person creates obstacles to their achievement of success, with the aim of having a ready-made excuse for failure if it occurs. Self-handicapping is a very broad concept and includes a wide range of behaviours, such as procrastination, overcommitting, and substance abuse. Other behaviours identified include the use of alcohol (Jones & Berglas, 1978), lack of effort or not taking opportunities to practise (Bailis, 2001; Baumeister, Hamilton, & Tice, 1985; Deppe & Harackiewicz, 1996; Kimble, Kimble, & Croy, 1998; Pyszczynski & Greenberg, 1983; Tice & Baumeister, 1990), choosing very difficult goals (Greenberg, 1985), claiming test anxiety (Smith, Snyder, & Handelsman, 1982), side effects of medication (Gibbons & Gaeddert, 1984), emotional and physical symptoms (Smith, Snyder, & Perkins, 1983), and being in a bad mood (Baumgardner, Lake, & Arkin, 1985).

Perfectionism and self-handicapping have many common features, such as a concern about reaching some standard, an inordinate concern about what others will think if the standard is not met, and a self-image that depends on external achievements and recognition. It is not surprising then that many studies have found relationships between perfectionism and self-handicapping. Burka and Yuen (1983) found that procrastinators were likely to display perfectionistic tendencies. Solomon and Rothblum (1984) showed that the majority of reasons for procrastinating among students were related to fear of failure, which included perfectionism. Frost et al. (1990) found that perfectionism was correlated with frequency or severity of procrastination and pointed out that procrastination was often used as a strategy so the individual could avoid less than perfect standards of performance. It is possible that while self-handicapping behaviours have a strategic appeal to anyone, they may be particularly useful to perfectionists who have a lot to lose in evaluative situations. The current study provides an opportunity to further study the links between these two constructs.

### *Perfectionism and Self-Handicapping in the Academic Context*

Many researchers (Covington, 1992; Ellis & Knaus, 1977; Martin, Marsh, Williamson, & Debus, 2003; Urdan & Midgley, 2001) have indicated that perfectionism and self-handicapping are likely to be exacerbated in evaluative situations. This is understandable, because it is in such situations that the perfectionist is challenged to live up to their excessively high expectations, and the self-handicapper's uncertainty about their competence is highlighted. One of the most commonplace and highly evaluative situations is academia.

From a very early age through to higher education, students are constantly being both formally and informally evaluated. Classrooms provide a setting in which students' intelligence and abilities are put on display (Urdan & Midgley, 2001). Martin et al. (2003) point out that competitive educational environments, where rewards are explicitly tied to achievements and where performance depends on out-achieving others, are likely to promote self-protection strategies among students. Covington (1992) states that for many students 'the struggle is to escape being labelled as stupid' (p. 85). In these circumstances perfectionists are particularly vulnerable and self-handicapping provides an excellent alibi for poor academic performance.

Several studies have investigated the incidence of these problems in an academic setting. Ellis and Knaus (1977), Onwuegbuzie (1999) and Solomon and Rothblum (1984) found that college and university students reported high levels of procrastination, a common self-handicapping strategy. Germeroth's (1991) sample of doctoral students reported perfectionism being a major barrier to completion of their dissertation. Urdan and Midgley (2001) identified a range of self-handicapping behaviours specifically seen in an academic setting. These include a lack of effort, failure to seek help when required, avoidance of risks, and not persisting through challenges. Martin et al. (2003) found that students who identified themselves as self-handicappers seemed to seize opportunities to engage in distractions, while low self-handicappers actively resisted distractions.

Studies have also found that, as one would expect, perfectionism and self-handicapping have negative impacts on students and their academic work. Zuckerman et al. (1998) found that self-handicappers used coping strategies based on withdrawal such as denial, disengagement and negative self-focus, while Garcia (1995) found that self-handicappers had low levels of intrinsic goals, poor rehearsal strategies and poor time management strategies. Boice and Jones (1984) found evidence of links between perfectionism and writer's block, and Phillips (1986) noted that perfectionists were more likely to experience essay-writing phobia. Sheppard and Arkin (1989) found that perfectionistic men self-handicapped when they feared they would not perform well on a measure of academic success.

The current study focuses on a specific area of academia, namely doctoral studies. This context provides a unique evaluative situation. While there may be no exams, there is pressure to perform original research and to write to an extremely high level. Doctoral studies are often carried out with little support and feedback over months and years. In the absence of objective feedback about their performance, students' doubts about their own competence have time to increase, leading to avoidance and self-handicapping behaviours.

### *A Cognitive Perspective: Cognitive Behavioural Therapy*

Frost et al.'s (1990) conceptualisation of perfectionism highlights two cognitive inaccuracies on the part of the perfectionist. First, the standards set are excessively high

and second, the self-evaluation is overly critical. This implies two cognitive errors on the part of the perfectionist: setting standards that are not appropriate or reasonable for the circumstances; and that the level of self-evaluation they undertake is out of proportion to the evidence (Shafran, Cooper, & Fairburn, 2002). Many researchers have highlighted the role of cognitions and cognitive processes in perfectionism, such as selective attention (Hollender, 1978), dichotomous thinking, overgeneralisation, 'should' statements (Burns, 1980), overvaluing performance and undervaluing the self (Hamachek, 1978).

Cognitions also play a central role in self-handicapping. Urdan and Midgley (2001) claim that '(a) performance in an achievement situation can reveal information about ability; (b) more effort suggests less ability; and (c) it is possible to manipulate others' perceptions of one's ability by decreasing effort' (p. 131). Throughout this process, cognitive inaccuracies can influence a person's understanding of a situation and their resulting behaviour.

Given the central role of inaccurate cognitive processes in developing and maintaining perfectionism and self-handicapping, one would expect cognitive based approaches to play a central role in attempts to modify perfectionistic beliefs and self-handicapping behaviours. In spite of the abundant literature citing its relationship with many negative outcomes, there is scarce research into the treatment of perfectionism. In their review of research and treatment of perfectionism and psychopathology, Shafran and Mansell (2001) found only one empirical study (Ferguson & Rodway, 1994) in which perfectionism was treated, and that study involved only nine subjects, seven of whom showed a reduction in levels of perfectionism following cognitive behavioural therapy.

Several authors have proposed models for treating perfectionism but these have not been rigorously tested. Burns (1980) proposed a variety of cognitive interventions that could be used in the treatment of perfectionism, such as identifying the advantages and disadvantages of perfectionism, finding other sources of pleasure or worth and identifying cognitive distortions. Antony and Swinson (1998) developed a self-help book for dealing with perfectionism that involved a wide range of cognitive and behavioural strategies, including keeping a perfectionism diary, identifying triggers, examining standards and rigid perfectionistic beliefs, and developing goals and plans for change. Hewitt and Flett (2002) suggest psychotherapy, focusing on the motivations for and antecedents of perfectionism, as the best treatment approach. Shafran et al. (2002), in a cognitive-behavioural analysis of clinical perfectionism, suggest that there should be four components in the treatment of perfectionism: (1) helping the person identify that perfectionism is a problem, (2) broadening the person's scheme for self-evaluation and reducing their reliance on perfectionism as a means of self-evaluation, (3) behavioural experiments, and (4) using cognitive behavioural methods to deal with cognitive inaccuracies.

As with perfectionism, there have been very few empirical-based approaches to treating self-handicapping. However, Higgins and Berglas (1990) suggest that a purely behavioural approach to treating self-handicapping is unlikely to be effective. For example, helping the self-handicapper develop some skills (such as time management for a procrastinator), is unlikely to make a significant difference, as the self-handicapper has a vested interest in retaining the handicap. They suggest the use of cognitive reorientation techniques, such as examining automatic thoughts, replacing negative thoughts, and clarifying the criteria for success. They also point out that

self-handicappers are generally uncertain about their abilities and what counts as success and so the treatment should involve clarifying the criteria for success.

In summary, there is a cognitive component in both perfectionism and self-handicapping and the treatments that have been proposed for both incorporate significant elements of CBT. However, there have been very few attempts to use a structured cognitive behavioural approach to alter levels of perfectionistic and self-handicapping behaviours, especially with a nonclinical group. In this study, we propose a new model, cognitive behavioural coaching (CBC), that is aimed specifically at nonclinical populations. There is little evidence of CBT being used in nonclinical settings and there are some reasons for suggesting a modified form of CBT in these situations. One such example is proposed by Neenan and Palmer (2001). They describe how they use the techniques of CBT in nonclinical situations such as career decision-making, anxiety about making a presentation and everyday problem-solving. To distinguish this approach from CBT, the term 'cognitive behavioural coaching' (CBC) has been used. To date, there is limited empirical research into the effectiveness of CBC.

The current study examines whether our model of CBC can be used to reduce levels of perfectionism and self-handicapping behaviours in a nonclinical population. Since perfectionism and self-handicapping are based on inaccurate thinking and assumptions, a CBC approach targeted at these thoughts and assumptions is expected to be effective. The effects of perfectionism and self-handicapping are likely to be greater in evaluative situations and in particular, in situations where the evaluative task is central to the person's sense of competence and self-worth. Clearly, completing a research thesis is a situation that is highly evaluative and generally of great significance to the student. As such, research students are likely to be prone to perfectionism and self-handicapping, and so offer an ideal population to test the efficacy of CBC.

## Method

### Design

Levels of perfectionism, self-handicapping and satisfaction with candidature progress were measured prior to the commencement of a workshop series (Time 1), at the completion of the 6-week intervention (Time 2), and again at 1-month follow-up (Time 3).

### Participants

Participants were 28 research higher degree (RHD) students who attended, in groups of 9 or 10, a workshop series conducted by the Staff Development and Training Unit at Flinders University. The participants were completing either PhDs or Masters by research. Participants self-nominated for a workshop series called 'Getting Your Thesis Finished — Defeating Self-Sabotage', to which all RHD students at Flinders University were routinely invited to attend. Workshop places were filled on a first-come first-in basis.

The workshop series was conducted three times. The first group consisted of nine participants; the second, nine participants and the third group consisted of ten participants. Nineteen (67.9%) of the participants were female and 17 (60.7%) were enrolled as full-time students. The participants were drawn from all faculties across the university and, as shown in Table 1, were at varying stages in their candidature.

**TABLE 1**

Stage and Total Length of Candidature (Years)

	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Stage of candidature	28	1.0	7.0	3.0	1.8
Total length of candidature	27	2.0	10.0	4.3	2.4

## Measures

Participants were administered questionnaires containing basic demographic questions, a measure of their satisfaction with their progress, and scales measuring perfectionism and self-handicapping.

### *Demographic Data*

Participants were asked to indicate whether their enrolment status was part-time or full-time, their gender, and the stage of their candidature (e.g., first year of 3 years).

### *Current Satisfaction With Progress*

Using a 5-point scale, participants indicated their level of satisfaction with the progress of their study over the previous 4 weeks, ranging from *very dissatisfied* (1) to *very satisfied* (5). Higher scores indicated greater satisfaction with progress.

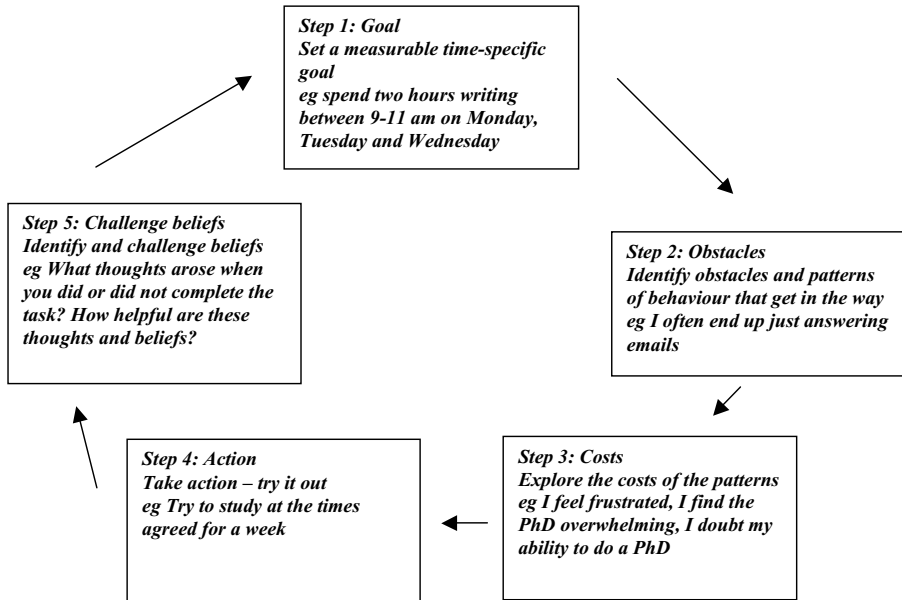
### *Multidimensional Perfectionism Scale (MPS)*

The Multidimensional Perfectionism Scale (Frost et al., 1990) is a 35-item questionnaire designed to measure six dimensions of perfectionism: concern over mistakes ('if I fail at work/school, I am a failure as a person'); personal standards ('I have extremely high goals'); parental expectations ('my parents set very high standards for me'); parental criticism ('I never felt I could meet my parents' expectations'); doubts about actions ('even when I do something very carefully, I often feel that it is not quite right'); and organisation ('I try to be an organised person').

Respondents indicate how strongly they agree or disagree with each statement on a 5-point Likert scale. Lower scores indicate a greater degree of perfectionism. The MPS demonstrated strong internal consistency ( $\alpha = .91$  at Time 1). Several authors (e.g., Zuckerman et al., 1998) suggest omitting the organisation subscale from an overall total; however, this had no effect on any results, hence analyses for the full version are reported.

### *Perfectionism Cognitions Inventory (PCI)*

The Perfectionism Cognitions Inventory (Flett, Hewitt, Blankstein, & Gray, 1998) is a 25-item questionnaire designed to measure the level of automatic perfectionistic thoughts. Participants are presented with a variety of thoughts about perfectionism ('why can't I be perfect'; 'my work should be flawless') and asked to indicate how frequently they had these thoughts over the previous week (0 = *not at all*; 4 = *all the time*). Higher scores represent more frequent perfectionistic thoughts. The PCI displayed strong reliability in our sample  $\alpha = .93$  at Time 1).

**FIGURE 1**

Five-step cognitive behavioural coaching model.

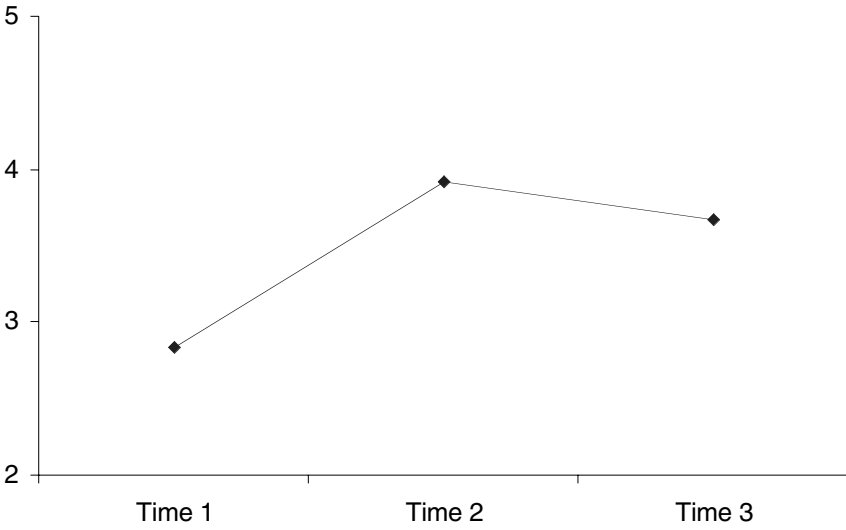
### *Self-Handicapping Scale (SHS)*

The Self-Handicapping Scale (Rhodewalt, Saltzman, & Wittmer, 1984) consists of 25 items describing a range of self-handicapping behaviours and statements. Participants respond on a 6-point Likert scale (0 = *disagree very much*; 5 = *agree very much*). Items include: 'I try not to get too intensely involved in competitive activities so it won't hurt too much if I lose or do poorly'; 'I would do a lot better if I tried harder'. The full SHS showed moderate reliability ( $\alpha = .69$  at Time 1). Reducing the scale to the 14-item version proposed by Zuckerman et al. (1998) improved the internal consistency of the scale to .81, hence the shortened version was used for all analyses.

### **Intervention**

The cognitive behavioural coaching intervention used in this research is based on a workshop series that had been developed over several years by two of the authors. The intervention uses the principles of cognitive and behavioural therapy in a group setting and applies them to the specific issues raised by participants. The workshop series consisted of an initial 2½-hour workshop, five 2-hour workshops held weekly over the following 5 weeks and a 1-hour follow-up workshop held 1 month later. The workshops were conducted by two experienced facilitators: one is a clinical psychologist and the other is completing a masters qualification specialising in cognitive and behavioural psychotherapy. Both facilitators are experienced in using CBT and in working with this target group. The workshops followed a well-defined cognitive behavioural coaching model developed by the authors. The five key steps in the model are summarised in Figure 1.





**FIGURE 2**  
Levels of satisfaction with progress at Time 1, Time 2 and Time 3.

The CBC model allows for each participant’s individual issues to be examined and specific strategies and actions agreed upon. The techniques used included behavioural experiments and reality testing, cognitive restructuring, thought diaries, normalising of thoughts, checking of assumptions, structured problem-solving, identification of safety behaviours, exposure with an explanation of the rationale for exposure, relapse prevention and maintenance strategies, action planning, and out-of-workshop homework

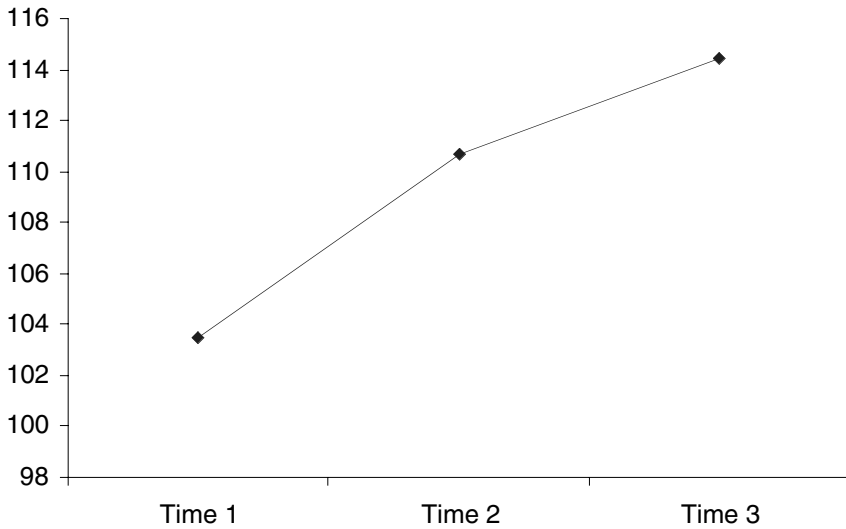
One month after the sixth workshop a follow-up workshop was held. During this workshop progress was reviewed, issues or obstacles that had arisen were discussed and the participants identified strategies that they could implement in the future.

**Results**

Separate mixed ANOVAs for each dependent variable found no significant differences between male and female participants, full-time and part-time students, or between first year, middle and last year participants, for any of the measures ( $p < .05$ ). As such, all participants in the sample are considered together.

**Satisfaction With Progress**

It was predicted that participants’ rating of their satisfaction with their progress would increase following the intervention. A within-subjects ANOVA found a main effect of time,  $F(2, 46) = 11.625, p < .001, \eta^2 = .336$ . As Figure 2 shows, during the course of the workshop series, participants’ view of their satisfaction with progress increased and this increase was maintained during the following month. Planned comparisons showed that participants’ rating of their satisfaction with their progress was significantly higher at Time 2 than at Time 1 ( $p < .001$ ). There was no difference between satisfaction levels at Time 2 and Time 3,  $p > .05$ .

**FIGURE 3**

Levels of perfectionism (MPS) at Time 1, Time 2 and Time 3.

### Perfectionism

It was predicted that participants' levels of perfectionism, as measured by the Multidimensional Perfectionism Scale (Frost et al., 1990) and Perfectionism Cognitions Inventory (Flett et al., 1998) would reduce following the CBC intervention. Participants' scores on the full MPS increased from Time 1 to Time 2, with this increase maintained to Time 3 (note: high scores indicate lower levels of perfectionism). A within-subjects ANOVA produced a main effect of time,  $F(2, 46) = 7.924$ ,  $p < .001$ ,  $\eta^2 = .256$ . Scores were significantly lower at Time 1 than at Time 2,  $p < .05$ . There was no significant difference between scores at Time 2 and Time 3,  $p > .05$ . Figure 3 shows the levels of perfectionism over time.

Table 2 shows that of the six subscales in the MPS only two — concern over mistakes and personal standards — showed significant changes over the course of the program.

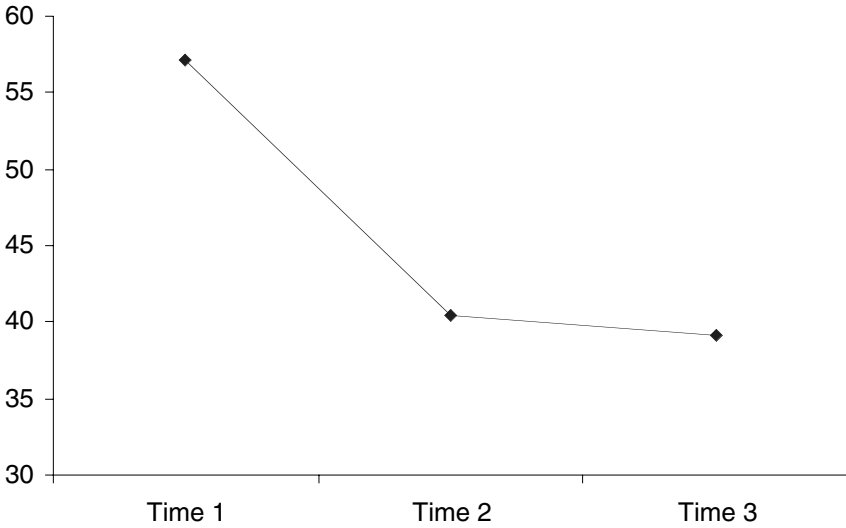
**TABLE 2**

Means (and Standard Deviations) for the Subscales of the MPS

	Time 1	Time 2	Time 3	<i>F</i>
Concern over mistakes	28.50 (8.51)	32.13 (7.69)	32.96 (7.92)	6.302**
Personal standards	17.75 (4.93)	19.13 (5.13)	20.58 (5.16)	3.401*
Parental expectations	16.04 (6.27)	17.08 (6.09)	17.33 (6.47)	2.38
Parental criticisms	14.00 (5.93)	13.71 (5.77)	14.71 (5.83)	1.55
Doubts about actions	11.75 (3.44)	13.13 (2.79)	12.63 (3.13)	2.39
Organisation	15.42 (3.75)	15.54 (4.17)	16.21 (4.63)	0.61

Note: \* $p < .05$

\*\* $p < .01$



**FIGURE 4**  
Levels of perfectionism (PCI) at Time 1, Time 2 and Time 3.

### Perfectionism Cognitions Inventory (PCI)

Participants’ perfectionistic cognitions fell during the workshop and this change was maintained during the follow-up period. There was significant main effect of time,  $F(2, 40) = 16.114, p < .001, \eta^2 = .446$ . PCI scores were higher at Time 1 than at Time 2,  $p < .001$ . There was no difference between scores at Time 2 and Time 3,  $p > .05$ . Figure 4 shows the levels of perfectionism over time.

### Self-Handicapping (Short)

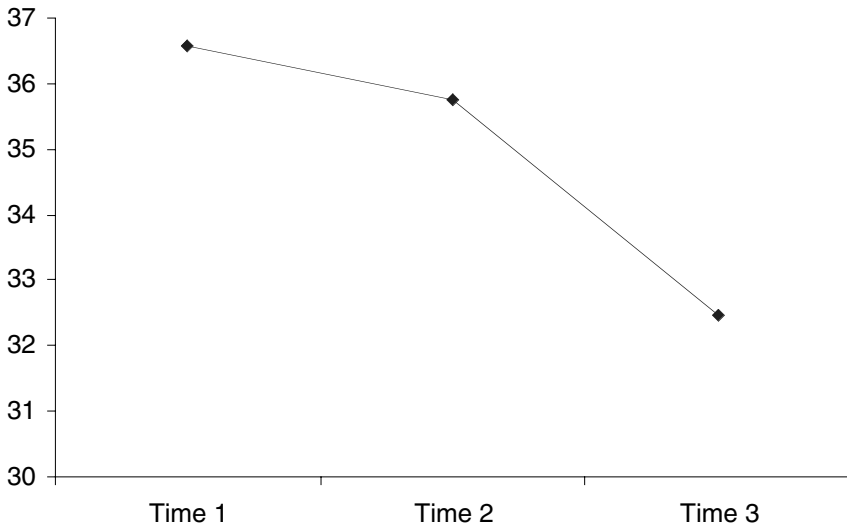
It was predicted that participants’ rating of their level of self-handicapping would reduce following the intervention. Analysis of the SHS (14 items) scores showed there was significant main effect of time,  $F(2, 44) = 3.70, p < .05, \eta^2 = .144$ . There was no significant difference between scores at Time 1 and Time 2,  $p > .05$ . However, scores were lower at Time 3 than at Time 2,  $p < .05$ . This result indicates that participants’ levels of self-handicapping did not change significantly during the workshop series but that during the following month there was a significant drop in levels of self-handicapping, as shown in Figure 5.

### Correlations Between Measures

Table 3 shows that as expected there was a high degree of correlation between the MPS, the PCI and the SHS. There was no correlation between any of these measures and satisfaction with progress.

### Discussion

Perfectionism and self-handicapping are associated with many negative psychological outcomes in both clinical and nonclinical populations. The purpose of this study

**FIGURE 5**

Levels of self-handicapping (SHS) at Time 1, Time 2 and Time 3.

was to examine whether levels of perfectionism and self-handicapping are amenable to change using a specific intervention, a cognitive behavioural coaching workshop series. The results indicate that with a population of research higher degree students it is possible to reduce levels of perfectionism and self-handicapping and that this reduction can be sustained over time. Although there have been many studies that have measured perfectionism and self-handicapping, this study is one of the very few systematic attempts to change people's levels of either perfectionism or self-handicapping. These findings are all the more important as many researchers (e.g., Blatt, 1995; Hewitt & Flett, 1996; Sorotzkin, 1998) point out that perfectionism is often difficult to change and that perfectionists are often reluctant to consider any approach that might impact on their perfectionistic beliefs.

### Perfectionism

The study found a significant reduction in participants' levels of perfectionism (both MPS and PCI) at the end of the 6-week workshop series and this reduction

**TABLE 3**

Correlations Between the Measures at Time 1

	MPS	PCI	SHS	Satisfaction
MPS	—	-.68**	-.47*	.25
PCI		—	.48*	-.23
SHS			—	-.21
Satisfaction				—

Note: \* $p < .05$

\*\*  $p < .01$

was maintained at 1-month follow-up. The change in perfectionism as measured by the MPS was accounted for by two of the MPS subscales: concern over mistakes and personal standards. Both of these subscales contain items that indicate very black-and-white thinking and absolutist beliefs, for example, 'if I fail at work/school, I am a failure as a person'; 'if I do not set the highest standards for myself, I am likely to end up as a second-rate person'. These cognitive inaccuracies were targeted by the cognitive behavioural approach, which encouraged participants to identify their automatic thoughts and underlying beliefs and then challenge them.

The other four subscales did not show any significant change over the course of the intervention. As would be expected, the measures of parental expectations and parental criticisms did not change significantly. Most of these items relate to childhood events and so they are highly unlikely to change over time. The organisation subscale also did not change over time. Many researchers have suggested omitting this subscale from the MPS as it may be measuring a different construct. Many of the items relate to neatness and organisation. It may be that neatness and organisation are not intrinsic aspects of the perfectionism construct. In any event, the cognitive behavioural approach in this study did not focus on neatness and organisation and so it would be reasonable to expect that this measure did not change.

The remaining subscale, doubts about actions, also did not change significantly during the intervention. It would seem reasonable to expect that a subscale measuring doubts might be influenced by a CBC approach. There are a number of possible explanations as to why doubts about actions did not change following our intervention. First, some of the items in the scale do not appear to be specifically related to doubts, for example, 'It takes me a long time to do something "right"; or I tend to get behind in my work because I repeat things over and over'. Second, it may be that although the participants were able to change their perfectionistic standards, some of their doubts remained.

The second scale used to measure perfectionism, the PCI, assesses the level of perfectionistic thoughts. During the workshop series thoughts such as these were examined and challenged and as hypothesised there was a significant reduction in the levels of these cognitions. These changes are consistent with reductions in the more cognitive-based subscales of the MPS. This finding is in line with that of Flett et al. (1998) who found that the PCI was significantly correlated with the MPS subscales. These findings suggest that a person's level of perfectionism, and in particular, the more clearly cognitive aspects of perfectionism, can be changed by a structured cognitive behavioural intervention.

### Self-Handicapping

As discussed earlier, self-handicapping involves a number of cognitive processes relating to individual's assumptions about their competence and how they are perceived by others. As many of these assumptions may be inaccurate, one would expect a cognitive behavioural approach to bring about changes in levels of self-handicapping behaviour. This was borne out by the present study. Participants' levels of self-handicapping behaviours did reduce over the course of the intervention. However, the changes took a different pattern to those described above for perfectionism. There was no significant difference in self-handicapping levels during the 5 weeks of the workshop series (Time 1 to Time 2). However, 4 weeks later at the follow-up session (Time 3), the levels of self-handicapping behaviours had dropped significantly.

One possible explanation for this pattern could relate to a difference between perfectionism and self-handicapping. Perfectionism tends to be a cognitive construct (e.g., how you view the world), and both measures of perfectionism tapped into these cognitions. Self-handicapping on the other hand generally involves more behaviours (e.g., procrastinating, over-committing). It may be that during the workshop series participants were able to change some of their perfectionistic beliefs but that behavioural change took longer to occur. Some of the behaviours may have become entrenched habits or patterns that require time and effort to change. In any event one of the implications is that interventions aimed at changing self-handicapping behaviours may need a longer-term approach.

### **Satisfaction With Progress**

One of the interesting findings of the study was that although participants' levels of satisfaction with their progress increased significantly over the course of the study this was not correlated with the other measures. This suggests that other factors played a role in determining level of satisfaction; for example, feedback from their supervisor, or particular difficulties that they might be having at that time. Also, a 1-item measure was used, which might be sensitive to fluctuations in mood or other factors.

### ***Relationship Between Perfectionism and Self-Handicapping***

This study found a strong correlation between perfectionism (both measures) and self-handicapping. This is in line with previous research (Frost et al., 1990; Hobden & Pliner, 1995; Sherry et al., 2001). The link between these two constructs is not unexpected, as they both deal with people's concerns about standards, levels of competence and how people are perceived by others. One theoretical model that we are proposing is that the need to be perfect and other core beliefs, such as fear of failure, create the need to develop self-handicapping behaviours. For example, if a person holds a belief that they need to perform to an excellent standard in a test, and they have some doubts about their ability to do so, then one solution is to self-handicap, for example, by publicly withdrawing effort. In this model, perfectionism becomes one of a number of drivers of self-handicapping behaviours. This model is supported by the findings for self-handicapping, which showed it took longer to reduce than perfectionism, implying that behaviours, rather than purely cognitions, are involved.

### **Limitations**

Despite the significant findings of this study there are a number of issues that should be noted. This study did not use a control group and as such, some claims are limited. The number of participants in the study, while larger than any previous study, are still relatively small and future research with larger groups would be beneficial. This study was conducted over a 10-week period. It would be desirable to assess the sustainability of changes in perfectionism and self-handicapping over longer timeframes. Finally, this study was conducted with a nonclinical population in a particular setting (higher education). It is important that future research attempts to assess the efficacy of cognitive behavioural approaches in a variety of nonclinical (and clinical) settings.

### **Conclusion**

The most significant implication of this study is that, by the use of a comprehensive cognitive behavioural approach — namely CBC — levels of perfectionism

and self-handicapping behaviours can be changed, at least within a nonclinical population. In dealing with perfectionism, cognitive behavioural approaches that target beliefs relating to personal standards and concern over mistakes are likely to be most effective. In dealing with self-handicapping it will be important that interventions be of sufficient length to allow participants to put new behaviours in place. Cognitive Behavioural Therapy (CBT) has become the treatment of choice for a wide range of psychological disorders. Its use has largely been confined to the treatment of clinical populations. This study has shown how the principles of CBT can be successfully modified with a nonclinical population. This broader application of cognitive behaviourism opens up a large number of opportunities for clinicians and educators, not to mention the vast majority of us that have some perfectionistic and self-handicapping tendencies.

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