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**Helping soccer players help themselves: Effectiveness of a psychoeducational book in
reducing perfectionism**

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Abstract

Building on research that has shown psychoeducational or self-help books to be effective in reducing perfectionism outside of sport, the current study examined the effectiveness of a self-help book (“When Perfect Isn’t Good Enough”; Antony & Swinson, 2009) in reducing perfectionism among athletes. One hundred and fifteen soccer players (male = 44, female = 71, M age = 21.62 years, SD = 5.03) were randomly allocated to a self-help intervention group (n = 55) or a control group (n = 60). Participants completed the Multidimensional Perfectionism Scale, Perfectionistic Cognitions Inventory-10, Attitudes Towards Seeking Professional Psychological Help-Short Form and Sport Emotion Questionnaire pre-intervention, post-intervention (8-weeks later) and at follow-up (5-weeks later). A 2 (group) x 3 (time) factorial ANOVA revealed a significant group x time interaction for socially prescribed perfectionism, perfectionistic cognitions, and negative pre-competition emotions (anxiety, anger, and dejection). Post-intervention, moderate-to-large between-group differences were evident for perfectionistic cognitions and anxiety (d = 0.75 and 0.59). At follow-up, moderate-to-large between-group differences were evident for socially prescribed perfectionism, perfectionistic cognitions, and anxiety (d = 0.51, 1.15, and 0.70). The findings suggest that self-help books may be useful for reducing perfectionism among athletes.

Keywords: intervention; sport; cognitions; self-help, cognitive-behavioural therapy

Lay summary: The current study is the first to examine the effectiveness of a self-help book in reducing perfectionism in athletes. We found evidence that a self-help book can help reduce perfectionism and negative emotions prior to competition in soccer players.

Implications for Practice:

- Self-help books should be considered alongside other strategies when seeking to support athletes with their perfectionism.

Helping soccer players help themselves: Effectiveness of a psychoeducational book in reducing perfectionism

Aspiring soccer players face considerable pressure as they attempt to navigate their route to the elite ranks. They must first earn selection or re-selection (Tabei et al., 2012). Once selected, they must then cope with an intense training environment and accompanying levels of scrutiny and stress (Bailey, 2017). Finally, if elite or professional status is achieved players must maintain fitness, perform consistently at the level expected of them by coaches, teammates and fans, and secure the renewal of their contract on regular basis (Harwood et al., 2010). Understandably, this process can have a heavy psychological toll on soccer players. Some estimates suggest, for example, that at least 1 in 4 professional soccer players report symptoms of depression and anxiety (e.g., Gouttebarga et al., 2015). Unfortunately, there is also evidence that provision of psychological support in soccer is inadequate with one study finding that while 40% of soccer players wanted psychological support, only 10% received it (Prinz et al., 2016). As such, finding ways to support soccer players (and athletes generally), and addressing factors that might undermine their psychological health, is a key area of research.

Perfectionism in Sport

One personality characteristic associated with psychological difficulties among athletes is perfectionism. Perfectionism is a multidimensional personality trait which is comprised of excessively high standards and harsh critical evaluations (Frost et al., 1990). Hewitt and Flett (1991) proposed a model of perfectionism that includes three dimensions: self-oriented perfectionism (SOP), socially prescribed perfectionism (SPP), and other-oriented perfectionism (OOP). SOP captures beliefs that one must strive for exceedingly high personal standards and are harshly self-critical when standards are not met. SPP captures

beliefs that that others hold exceedingly high standards for oneself and that others will be critical if standards are not met. Finally, OOP captures beliefs that others should be perfect and are harshly critical towards others who fail to behave accordingly. These dimensions provide an account of the various ways perfectionism might manifest in an athlete and how perfectionism may lead to different consequences depending on which dimensions are expressed.

A small number of studies have examined Hewitt and Flett's (1991) model in sport. In this research SOP was positively related to a mix of adaptive and maladaptive motivation, emotion/wellbeing and performance outcomes (see Hill et al., 2018). For example, SOP was positively related to both autonomous and controlling forms of motivation, both positive and negative affect, and higher performance and unrelated to performance (e.g., Appleton et al., 2009; Ho et al., 2015; Stoeber et al., 2009). By contrast, in this research SPP was positively related to maladaptive motivation and emotion/wellbeing outcomes and unrelated to performance (see Hill et al., 2018). For example, SPP was positively related to controlling forms of motivation, negative emotions (e.g., dejection), and poorer wellbeing (e.g., depressive symptoms and burnout; Hill et al., 2010; Jowett et al., 2013; Smith et al., 2018). Although research examining OOP in sport is more limited, so far, in the research that has taken place, OOP was positively related to negative emotions (e.g., negative affect and angry reactions to poor teammate performance) and poorer wellbeing (e.g., eating disorder symptoms), but higher team performance (e.g., Grugan et al., 2019; Hill et al., 2014; Kaye et al., 2008).

There is evidence in existing research that perfectionism can be problematic for soccer players. Both cross-sectional and longitudinal research indicates that SPP is positively related to burnout symptoms in soccer academy players (Hill et al., 2008; Smith et al., 2018). The same research indicates that, in contrast, SOP is negatively related to burnout symptoms

cross-sectionally and unrelated longitudinally. However, there is evidence that SOP may be positively related to burnout in soccer players via a tendency to think other people don't value them unconditionally (Hill et al., 2008). Beyond burnout, the same pattern of findings is evident for depressive symptoms in soccer academy players, with SPP a risk factor for higher levels of depressive symptoms and SOP being more ambiguous (Smith et al., 2018). Finally, the most recent evidence suggests that similar relationships are evident among older more elite soccer players and may include social phobia as well (Jensen et al., 2018).

It is likely that some of the problems associated with perfectionism are a result of ruminative thoughts that are a feature of perfectionism. Perfectionistic cognitions are a state-like manifestation of perfectionism, but their occurrence reflects a stable aspect of the cognitive experience of those higher in perfectionism (Hewitt et al., 2017). The experience of perfectionistic cognitions is characterized by recurrent thoughts about self-imposed pressure to be flawless. Thoughts include self-focused imperatives such as "Why can't I be perfect?" and "I should be perfect" (Flett et al., 1998). These thoughts arise primarily from defensive and self-punitive concerns regarding discrepancy between current performance or personal characteristics and perfectionistic ideals (Flett et al., 1998). Reflecting these negative features, the more frequently athletes experience perfectionistic cognitions, the more problems they will experience.

Research examining perfectionistic cognitions in sport is much sparser than trait perfectionism. However, results are similar to those outside of sport. Specifically, research outside of sport suggests that perfectionistic cognitions are an independent aspect of perfectionism and an important source of psychological difficulties, and this was found to be the case in sport. For example, Hill and Appleton (2011) provided some evidence that perfectionistic cognitions were a unique predictor of burnout symptoms beyond trait perfectionism in youth rugby players. In addition, more relevant to the current study,

Donachie et al. (2018, 2019) recently found that perfectionistic cognitions positively predicted pre-competition anxiety, anger, and dejection, and perfectionistic cognitions mediated the relationship between trait perfectionism and pre-competition anxiety and anger in soccer players. Therefore, if practitioners would like to reduce perfectionism and any related psychological difficulties in soccer, addressing perfectionistic cognitions, alongside trait perfectionism, is likely to be important.

Interventions inside and outside of sport

Despite the evidence that perfectionism can be problematic in sport, very few intervention studies for perfectionistic athletes exist. This is despite numerous calls from researchers and practitioners in this area to conduct such research (e.g., Hill et al., 2018; Madigan et al., 2015; Lizmore et al., 2019), and perfectionism being identified as a risk factor for both mental health difficulties in a recent International Olympic Committee consensus statement (Reardon et al., 2019). The latter called for increased research examining both treatment and prevention strategies. From a preventive perspective, athletes who are experiencing sub-clinical psychological issues can benefit from interventions so to relieve existing distress and avoid more serious difficulties. Likewise, athletes experiencing no psychological issues, as yet, can benefit from preventive interventions, too, by optimising performance in competitions, encouraging more holistic development, and making them more resourceful (Schinke et al., 2018). It is therefore important that preventive interventions that address perfectionism and safeguard athlete mental health and wellbeing are developed and evaluated.

To date, four intervention studies in sport have included perfectionism. However, these studies are mixed with regards to methodological quality and findings. Three studies (De Petrillo et al., 2009; Kaufman et al., 2009; Thompson et al., 2011) did not include control

groups or any follow-up measurement post-intervention, and have provided varied findings (e.g., reduced perfectionism, increased perfectionism, or no change). In the remaining study Mosewich et al. (2013) provided the most robust test of an intervention that focused on perfectionism in sport so far, including a control group, randomisation, and a follow-up post intervention. Mosewich et al. (2013) examined the effectiveness of a self-compassion intervention for athletes who self-identified as being self-critical and found that a psychoeducation session and a series of writing modules completed over a 7-day period was effective at reducing concern over mistakes perfectionism (as measured by Sport Multidimensional Perfectionism Scale-2; Gotwals & Dunn, 2009), self-criticism, and rumination.

Research is more extensive outside of sport. A meta-analysis by Lloyd et al. (2015) has summarised evidence for cognitive behavioral therapy (CBT) interventions targeting perfectionism in individuals with elevated perfectionism, as well as individuals with psychiatric disorders associated with perfectionism. It is evident from the research in this meta-analysis ($k = 8$; 4 studies of non-clinical samples) that CBT interventions (between 7 to 12 weeks and 8-14 sessions) can be useful in reducing some dimensions of perfectionism. Four of the eight studies included in the meta-analysis measured SOP and SPP. For SOP, a large-sized reduction was found pre- to post-intervention. For SPP, a medium-sized reduction was found pre- to post-intervention. Note, however, that the individual studies provided poor estimates of effects due to small samples and only in one instance was the effect statistically significant at study level, so some caution is required in interpreting these effects.

One of the key findings of the meta-analysis was that the use of psychoeducational or self-help books may be an effective way to reduce perfectionism. Notably, Steele and Wade (2008) examined the effectiveness of a guided self-help intervention in reducing perfectionism in individuals meeting the criteria for bulimia nervosa. Participants were

randomly assigned to either a 6-week guided self-help intervention using a CBT based book (“When Perfect Isn’t Good Enough”; Antony & Swinson, 1998), a traditional intervention for bulimia nervosa, or a placebo intervention (“Mindfulness-Based Cognitive Therapy for Depression”). No significant interaction effects were found for personal standards and concern over mistakes perfectionism (as measured by the Frost Multidimensional Perfectionism Scale, MPS-F; Frost et al.,1990) and no significant group effects for group were observed at both post-intervention and follow-up. However, the perfectionism group showed significant reductions in personal standards (a dimension of perfectionism related to SOP) and concern over mistakes (a dimension of perfectionism related to both SOP and SPP), bulimia, and depression at post-test. At 6-month follow-up, significant reductions were maintained in concern over mistakes and bulimia. As such, the study provided an initial indication that a self-help book may be effective in reducing perfectionism over time.

Pleva and Wade (2007) also examined the effectiveness of a self-help book (again, *When Perfect Isn’t Good Enough*; Antony & Swinson, 1998) in reducing perfectionism, obsessive-compulsive disorder, and depressive symptoms in a non-clinical group (individuals who self-selected in response to local newspaper and radio advertisements seeking people who were experiencing problems with perfectionism). Participants were randomly assigned to either a guided self-help group or pure self-help group. Again, no significant interaction effects were found but there was some indication that self-help was effective in reducing perfectionism (as measured by the MPS-F; Frost et al., 1990) in both groups. Specifically, both guided self-help and pure self-help groups reported significantly reduced concern over mistakes and doubts about actions over time. In addition, the guided self-help group reported significant reductions in personal standards over time. Both groups reported significant reductions in obsessions, anxiety, and depression.

With these studies as a backdrop, there are several reasons why self-help might be especially useful for perfectionism and in the context of soccer. In regards to perfectionism, self-help books may be especially useful for managing perfectionism as perfectionism is related to lower likelihood of seeking help (e.g., Ey et al., 2000) and related to more negative attitudes towards help-seeking in other contexts (e.g., Abdollahi et al., 2017). This reflects an apparent reluctance to reveal imperfections to others and project an image of perfection to others at all times (Hewitt et al., 2004). It is the same mechanism that appears to explain why perfectionism is associated with poorer long-term mental and physical health and why perfectionism is associated with poorer self-care (e.g., Molnar et al., 2016). Self-help books avoid the need to disclose to others and are more discreet so those higher in perfectionism may be more likely to use this type of support. There is even some evidence that using self-help support can help improve attitudes towards help seeking and make help seeking more likely (e.g., Taylor-Rodgers & Batterham, 2014).

In regards to the context of soccer, the requirement for soccer players to dedicate large amounts of time to training, competing, recovery, and travelling, may make accessing mental health services difficult. Therefore, self-help books are a valuable alternative as they can be used flexibly and are more convenient so can be integrated into their daily lives more easily (e.g., Jones, 2009). Research also suggests that the availability of psychological support is exceeded by its demand among soccer players (e.g., Prinz et al., 2016) and accessing support can be expensive. Self-help books are widely available, cheap, and can require minimal input from professionals. Finally, many of the techniques used in self-help interventions (e.g., CBT-based exercises) can easily be adapted and applied to sporting contexts (Gustafson & Lundqvist, 2016) and are often used when teaching psychological skills to soccer players (e.g., McCarthy et al., 2010) so many soccer players will be familiar with this approach (e.g., Nesti, 2010).

The present research

The purpose of this study was to evaluate the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions, and increasing positive attitudes towards help-seeking in soccer players. Based on previous research, we hypothesized that the intervention group, relative to the control group, would experience a reduction in levels of perfectionism (SOP, SPP, OOP), perfectionistic cognitions and negative emotions (anxiety, anger, and dejection), and an increase in positive attitudes towards help-seeking.

Method

Participants

One hundred and fifteen high-level male and female soccer players recruited from professional clubs, sports academies, and national teams across the UK (male = 44, female = 71, M age = 21.62 years, SD = 5.03, range 18 to 34 years). The mean number of years sport participation was 13.30 years (SD = 4.95, range 3 to 27 years). Figure 1 presents a summary of the flow of participants through each stage of the study. Of the 115 participants, 55 participants were allocated to the intervention group (male = 22, female = 33; M age = 21.16 years, SD = 4.65) and 60 were allocated to the control group (male = 22, female = 38; M age = 22.05 years, SD = 5.39).

Power calculation

Steele and Wade's (2008) study provides an indication of possible effect sizes for interaction terms associated with intervention effectiveness in the current study. Effect sizes for interaction terms for changes in concerns over mistakes in Steele and Wade were partial η^2 = .10 (pre-to post) and .25 (pre- to follow-up). Using G.Power (Faul et al., 2009) for sample size estimation, power of 0.80, an alpha level of 0.05, and effect sizes of partial η^2 =

.10 and .25, provides sample size requirements of 32 and 90 ($n = 16$ or 45 per group) for 2 (group) x 3 (time) ANOVA.

Design and procedure

Following ethical approval from the university research committee, participants were recruited from professional clubs, sports academies, and national teams. This was done via email and telephone to gatekeepers (e.g., coaches/managers) and by directly contacting individual players. The gatekeeper letter and participant information sheet stated our desire to recruit soccer players (aged 18 + years) who self-identified as perfectionists (individuals who strive for extremely high standards and are self-critical) and wanted to learn ways to manage their perfectionism. In this way, similar to Mosewich et al. (2013) who recruited those who self-identified as being self-critical, we recruited participants who self-identified as perfectionists. All participants were given full information about the study along with consent forms and informed that it included a self-help book to read as part of the study. Once participants agreed to take part in the study, they were randomly allocated to the intervention group or to the no-intervention control group using block randomization. Figure 1 illustrates the flow of participants.

The intervention group were given a self-help book and asked to read it independently and complete any tasks or activities in the book over an 8-week period. The self-help book was “When Perfect Isn’t Good Enough” (Antony & Swinson, 2009). This book was used in two previous studies investigating the efficacy of self-help strategies to reduce perfectionism (Pleva & Wade, 2007; Steele & Wade, 2008). The book is 280 pages in length and consists of 16 chapters and 53 exercises. It is comprised of four sections addressing the following topics: identifying perfectionism and the way it manifests; changing perfectionistic thoughts; changing perfectionistic behaviours; and strategies to manage perfectionism. Each chapter

contains exercises to complete such as “identifying your perfectionism triggers”, “your perfectionism diary”, and “writing your epitaph”. The intervention group completed pre-intervention (T1) questionnaires in a two-week period prior to them receiving the book. They were also contacted via email during weeks 3 and 6 to check their progress with the book and to answer any questions they had. Finally, the intervention group completed post-intervention measures after 8 weeks when they returned the book (T2) and then again 5 weeks later (T3).

Although both Steele and Wade (2008) and Pleva and Wade (2007) employed attention control groups, in order to avoid contamination of the intervention or control group (Aycock et al., 2018), the current study employed a true control group. That is, the control group were not given the self-help book and did not receive additional other guidance or materials throughout the course of the study. Instead, they were sent a letter or email thanking them for agreeing to take part and, to avoid the control group’s perception of imbalance or unfairness, they were informed that as part of the waiting list the self-help book would be available after approximately 3-months. As with the intervention group, the control group were asked to complete the questionnaire at pre-intervention (T1) and at two more time points (T2 and T3, after 8-weeks and then another 5-weeks). After all questionnaires were completed, the control group were offered the self-help book and told they would not need to complete any more questionnaires.

Measures

All measures were completed pre-treatment (T1), post-treatment (T2), and follow up (T3).

The Multidimensional Perfectionism Scale (MPS). The MPS (Hewitt & Flett, 1991) is a 45-item measure of perfectionism that consists of the following subscales: SOP (e.g., “One of my goals is to be perfect in everything I do”), SPP (e.g., “The better I do, the better I am expected to do”), and OOP (e.g., “Everything that others do must be of top-notch

quality”). Certain items were modified slightly in order to focus participants on perfectionism in relation to their sport. For example, the items that included the word “work” were amended to “sport”. Each item was rated using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Hewitt and Flett (1991) provided evidence of the validity (e.g., factorial structure), reliability (SOP $\alpha = .86$, SPP $\alpha = .87$, OOP $\alpha = .82$), and test-retest reliability (SOP $r = .69$, SPP $r = .60$, and OOP $r = .66$) of the scale. The MPS was successfully adapted and employed with athletic samples in other studies (e.g., Appleton et al., 2009).

Perfectionistic Cognitions Inventory-10 (PCI-10). The PCI-10 (Hill & Donachie, 2019) is a 10-item measure of the frequency of experiencing perfectionism-related thoughts based on an instrument developed by Flett et al. (1998). Participants indicate how frequently they experienced each of the cognitions (e.g., “I should be perfect”) over the last week on a 5-point scale (0 = *not at all*, 4 = *all of the time*). Hill and Donachie (2019) provided evidence of the validity (e.g., factor structure) and reliability ($\alpha = .82$ and $\alpha = .87$) of the scale. The PCI-10 has also been successfully employed with athletic samples (Donachie et al., 2018).

The Attitudes Towards Seeking Professional Psychological Help-Short Form (ATSPPH-SF). The ATSPPH-SF (Fischer & Farina, 1995) is a 10-item measure of attitudes towards seeking psychological support. Participants rated items (e.g., “If I believed I was having a mental breakdown, my first inclination would be to get professional attention”) on a 4-point scale (0 = *disagree*, 3 = *agree*). Fischer and Farina (1995) provided evidence of the validity (e.g., factor structure), reliability ($\alpha = .77$), and test-retest reliability ($r = .80$) of the scale.

Sport Emotion Questionnaire (SEQ). The SEQ (Jones et al., 2005) is a 22-item measure of the emotions athletes commonly experience prior to competition. The SEQ examines five emotions which can be grouped into two higher-order dimensions: negative

emotions (anxiety, anger, and dejection), and positive emotions (happiness and excitement). The participants were asked to indicate “how they feel right now, at this moment” in relation to their upcoming sports competition on a 5-point scale (0 = *not at all*, 4 = *extremely*). Jones et al. (2005) provided evidence of the validity (e.g., five factors) and reliability (anxiety $\alpha = .87$, anger $\alpha = .84$, dejection $\alpha = .82$, happiness $\alpha = .88$, and excitement $\alpha = .81$) of the scale.

Adherence. As part of the T2 assessment, participants in the intervention group were asked questions, based on Pleva and Wade’s (2007) study, about adherence to the readings. Participants were asked: “how many of the book chapters have you read?”; “how many of the exercises have you completed?”; “how much time have you spent reading the book (in hours)?”; and “how much time have you spent doing the exercises (in hours)?” They were also asked how useful they found the book and exercises on a 10-point scale (1 = *not very useful*, 10 = *very useful*), how readable they found the book and exercises on a 10-point scale (1 = *not very readable*, 10 = *very readable*), and how easy they found the exercises to understand on a 10-point scale (1 = *not very easy*, 10 = *very easy*).

Statistical analyses

All statistical analyses were performed with SPSS version 23.0 (Statistical Package for Social Sciences; IBM, USA). Demographic characteristics were compared between the two groups. Chi-square analyses were used to test for group differences. Using intention-to-treat analyses, where the last available data for each drop out was carried forward to all subsequent points in time (Fisher et al., 1990), all 115 participants were included in the statistical analyses. A 2 (group) x 3 (time) analysis of variance (ANOVA) was the main analysis. The between-subjects factor was group (intervention or control) and the within-subject factor was time (T1, T2, and T3). The effect size (Cohen’s *d*) for between-group effects were calculated with 0.20 denoting a small effect, 0.50 a moderate effect and 0.80 a

large effect (Cohen, 1988). Partial η^2 statistics were calculated to determine the effect size of the interaction effects. A partial $\eta^2 = .01$ signifying a small effect, a partial $\eta^2 = .06$ a moderate effect and a partial $\eta^2 = .15$ a large effect (Richardson, 2011).

Results

Dropout

Three participants in intervention group dropped out at T2 (2.61%). One participant joined the police training programme, another participant had a heavy playing schedule, and the other participant was released from the academy and returned home. Three participants in the control group dropped out at T2 (2.61%). Two players were released from the club and the other participant felt that as she was injured, she would no longer benefit from the intervention. Six participants in the control group (5.22%) did not return T3 measures, despite numerous reminder emails. Four participants in the intervention group (3.48%) failed to return T3 measures; one re-located for a job indicating it was a busy time, two did not return the questionnaire within the timeframe, and one did not respond to email correspondence.

Comparison of dropouts versus completers in the intervention group

In order to investigate any differences between dropouts and completers of the intervention group, a series of independent *t*-tests were carried out. The results are reported in Table 2. There were no significant differences on the measured variables between the dropouts and completers apart from excitement. The dropout group reported higher excitement than the completers (dropout $M = 2.58$, $SD = 0.68$, completer $M = 2.12$, $SD = 1.10$, $t = -1.60$, $p = .03$, Cohen's $d = 0.30$). The dropout group also reported higher happiness than the completers (dropout $M = 2.09$, $SD = 0.72$, completer $M = 1.73$, $SD = 1.09$); however, the difference was non-significant ($t = -1.27$, $p = .06$, Cohen's $d = 0.24$).

Adherence

Participants completed reading of the book between T1 and T2. At T2 assessment, participants reported that they completed on average 7.69 chapters of 16 chapters and 17.59 exercises of 53 exercises. Participants spent an average of 14.90 hours reading and 4.09 hours completing the exercises. After completing the intervention, the participants rated the book and the exercises an average of 6.55 ($SD = 2.49$) for usefulness, 7.27 ($SD = 2.41$) for readability, and 7.36 ($SD = 1.98$) for ease of understanding.

Assessment of instruments

All instruments displayed acceptable internal reliability (Cronbach's alpha) and test-retest reliability (intraclass correlation coefficient). This information is displayed in Table 1.

Differences between and within groups over time

Findings from ANOVA examining changes over time for both groups are presented in Table 4.

Perfectionism. Statistically significant main effects for time emerged for SOP and SPP. Statistically significant main effects for group emerged for SOP, OOP, and perfectionistic cognitions. Finally, time x group interactions were significant for SPP and perfectionistic cognitions (Table 3). Post-hoc analyses of interaction effects revealed at T2 small-to-moderate between-group effect sizes differences for OOP and perfectionistic cognitions ($d = 0.41$ and 0.75) with the intervention group lower in OOP and PCI than the control group. At T3, there were moderate-to-large between-group effect sizes differences for SPP, OOP, and perfectionistic cognitions ($d = 0.51$, 0.55 , and 1.15) with the intervention group lower in SPP, OOP, and perfectionistic cognitions than the control group. The intervention group reported significant reductions in SPP and perfectionistic cognitions from T1 to T2 ($d = 0.28$ and 0.65) and from T1 to T3 ($d = 0.34$ and 0.72). In contrast, the control group reported significant increases in perfectionistic cognitions from T1 to T2 ($d = 0.54$),

significant increases in SPP and perfectionistic cognitions from T2 to T3 ($d = 0.32$ and 0.32), and significant increases in SPP, OOP, and perfectionistic cognitions from T1 to T3 ($d = 0.33$, 0.33 , and 0.78).

Pre-competition emotions. Statistically significant main effects for time emerged for anxiety, anger, dejection, and happiness. Statistically significant main effects for group emerged for anxiety. Finally, time x group interactions were significant for anxiety, anger, and dejection (Table 4). Post-hoc analyses of interaction terms revealed that at T2 there was a small-to-large between-group effect size difference for anxiety ($d = 0.59$) with the intervention group lower in anxiety than the control group. At T3, moderate between-group effect size difference was obtained for anxiety ($d = 0.70$) with the intervention group lower in anxiety than the control group. The intervention group reported significant reductions in anxiety, anger and dejection T1 to T2 ($d = 0.62$, 0.55 , and 0.53) and from T1 to T3 ($d = 0.59$, 0.49 , and 0.42). In contrast, the control group reported significant increases in anxiety from T1 to T2 ($d = 0.28$), significant increases in excitement from T2 to T3 ($d = 0.28$), and significant increases in anxiety from T1 to T2 ($d = 0.29$)

Attitudes towards help-seeking. The main effects for time and group were non-significant for attitudes towards help-seeking. Furthermore, time x group interaction was non-significant for attitudes towards help-seeking.

Adherence. The role of intervention adherence on treatment effectiveness was assessed by examining whether adherence measures (number of book chapters read, number of exercises complete, hours spent reading the book and hours spent completing the exercises) were related to change in outcome variables for which significant interactions were found (using intervention group only and non-intention-to-treat data). Change in outcome variables was measured by calculating unstandardized residualised scores corresponding to a

regression of T2 on T1 scores for each outcome (Castro-Schilo & Grimm, 2018). Pearson's correlations showed that the number of chapters read was significantly correlated with improvements in PCI, $r(51) = 0.38, p = .006$; the number of exercises completed was significantly correlated with improvements in SPP, $r(47) = 0.30, p = .040$, PCI, $r(47) = 0.42, p = .003$, and dejection, $r(47) = 0.31, p = .034$; the time spent reading was significantly correlated with improvements in anger, $r(49) = 0.29, p = .042$, and dejection, $r(49) = 0.34, p = .018$; and the time spent completing exercises was significantly correlated with improvements in PCI, $r(48) = 0.37, p = .010$, and anger, $r(48) = 0.31, p = .035$.

Discussion

The aim of the study was to evaluate the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions, and increasing positive attitudes towards help-seeking in soccer players. Based on previous research, we hypothesized that the intervention group, relative to the control group, would experience a reduction in levels of perfectionism (SOP, SPP, OOP), perfectionistic cognitions and negative emotions (anxiety, anger, and dejection), and an increase in positive attitudes towards help-seeking. In support of the hypotheses, the self-help intervention was effective in reducing SPP, PCI, anxiety, anger, and dejection, but the intervention did not reduce SOP or OOP and nor did it increase positive attitudes towards help-seeking.

Multidimensional Perfectionism

The current study provides evidence of the potential effectiveness of self-help in reducing SPP. In doing so, the findings build on previous work that saw decreases in similar dimensions of perfectionism (e.g., concern over mistakes) using self-help interventions (Pleva & Wade, 2007; Steele & Wade, 2008). In reflecting on why these types of interventions are effective, mirroring other types of support, the book used in the current

study includes a number of exercises that challenge irrational thoughts around the need to please others, which is central to SPP. It appears that people are able to work through these exercises unassisted and that when they do so the exercises can be effective. Self-help interventions of this kind may even be especially useful in context of SPP as they can avoid the fear of negative evaluation central to this dimension and that may make other types of interventions more difficult to use (Steele & Wade, 2008). The positive effects were also evident at follow-up. This is something not often found in previous research with other types of interventions and provides further indication of the possible effectiveness of self-help for SPP (e.g., Goldstein et al., 2014; Steele et al., 2013; Vekas & Wade, 2017).

We found little evidence of the effectiveness of the self-help book for SOP and OOP, by contrast. In regards to SOP, like in the current study, no significant interaction effect was reported by Pleva and Wade (2007) or Steele and Wade (2008) for similar dimensions of perfectionism (personal standards). In explaining this finding, it is possible that SOP and similar dimensions are more resistant to change than SPP, generally, or particularly resistant to this type of intervention. In keeping with this idea, Hewitt et al. (2017) noted that SOP can make people defensive, hypersensitive to criticism, and resistant to change, and so benefit from interventions that are guided by others and specifically designed to build resilience and self-compassion. Intuitively, it may be that soccer players (and athletes generally) are more willing to try to change beliefs that are more apparently irrational (e.g., I need to please others all the time) than beliefs that seem desirable or even essential to them as athletes (e.g., I must be the best all the time). As such, other types of interventions apart from self-help may be required to support athletes in managing SOP.

In regards to OOP, likewise, no effectiveness of the self-help book was observed. In this case, one explanation is that the content of the self-help book focuses more on intrapersonal rather than on interpersonal problems. As OOP involves focusing on other

people's flaws and shortcomings, and diverting attention away from themselves, addressing personal views and beliefs may be more difficult for those higher in OOP (Hewitt et al., 2017). The tendency for those higher in OOP to be judgemental, harshly critical, and impatient may also interfere with intervention compliance (e.g., Stoeber et al., 2018). It is noteworthy, however, that previous studies have found reductions in OOP using CBT (e.g., Kutlesa & Arthur, 2008). It is therefore not clear if the lack of change observed in the current study reflects the specific content of the intervention (types of CBT activities), type of delivery (self-help versus face-to-face or group interventions), or the sample (competitive soccer players). Future research will need to compare the effectiveness of different activities and types of delivery (e.g., face-to-face or web-based; Arpin-Cribbie et al., 2012) in managing OOP to better understand what may or may not be effective for soccer players and other athletes.

Perfectionistic cognitions

To our knowledge, this study is the first to provide evidence that self-help may reduce perfectionistic cognitions. This was also the biggest change observed over the course of the study. Self-help should therefore be considered by practitioners when identifying how best to help support soccer players with perfectionistic cognitions. When considering why PCI was reduced, one of the main strategies of the book is the identification of perfectionistic thoughts, specifically, and how to change them by exploring other possible thoughts and beliefs. These are particular strengths of the book used and help explains its effectiveness in other settings (Pleva & Wade, 2007; Steele & Wade, 2008). The reduction in PCI scores, then, may be a function of how the book is able to help individuals to identify alternative ways of thinking and redress the perfectionistic content of their thoughts. Athletes appear able to do this effectively with little support and can become more adept at doing it over time.

Based on the findings, perfectionistic cognitions may be more amendable to change than other aspects of perfectionism. This is important and noteworthy as many of the negative consequences of being perfectionistic relate to the more immediate thoughts that perfectionistic athletes experience. As highlighted earlier, recent research found that perfectionistic cognitions explain the experience of negative pre-competition emotions in soccer players, for example (Donachie et al., 2018, 2019). Teaching soccer players how to better manage their perfectionistic cognitions, or providing resources to allow them to teach themselves, is therefore one way they might be able to better protect themselves from the negative consequences of being perfectionistic, even if their more engrained perfectionistic characteristics (e.g., SOP) are difficult to change.

Pre-competition emotions and attitudes towards help-seeking

Verifying the effectiveness of the intervention, a reduction in negative pre-competition emotions (anxiety, anger and dejection) was also observed. This is a novel finding in that there are currently no intervention studies that demonstrate that specifically targeting perfectionism may also help reduce a range of negative pre-competition emotions in athletes. There is, of course, evidence of the effectiveness of other interventions (e.g., mindfulness training) to reduce pre-competition anxiety (e.g., Mehrsafari et al., 2019). However, the more intriguing possibility here is that reducing soccer players' perfectionistic cognitions may help them to achieve more optimal emotional states prior to competition. In the same way that teaching athletes to be more self-compassionate may teach athletes to be less self-critical, ruminate less, and have fewer concerns over mistakes (Mosewich et al., 2013), teaching soccer players to be less perfectionistic may also provide some protection from the longer-term psychological consequences related to perfectionism and perfectionistic cognitions, such as burnout and depression symptoms (Hill et al., 2020).

There was no significant change in attitudes towards help-seeking. Previous research has found that perfectionism is associated with poorer attitudes towards help-seeking (e.g., Oliver et al., 2001). We expected that engaging with self-help materials may address some of the stigma associated with help-seeking and challenge some of the views that underpin more negative attitudes. It may be that this is not the case and such attitudes are impervious to this subtle type of intervention. Therefore, more direct and overt attempts to address attitudes towards help-seeking may be required to bring about attitude change. Alternatively, it is possible that in the current study because participants volunteered to take part, and already had moderate levels (as opposed to low levels) of positive attitudes towards help-seeking, that change in this regard was less likely. Regardless, because help-seeking behaviour is extremely important to safeguarding wellbeing, research examining how more positive attitudes can be developed in soccer players is an important area for future research.

Practical Implications

As perfectionistic cognitions significantly reduced because of a self-help book intervention, coaches and sport psychologists who are aware of the role of perfectionistic cognitions may be able to intervene (e.g., use cognitive strategies to calm the soccer player before competition) and employ CBT techniques as a way to target perfectionistic cognitions. As a self-help intervention is non-invasive, accessible, inexpensive, low intensity, and easy to implement, it may be a good resource for soccer players and coaches who have busy schedules, usually managing training and competition commitments alongside personal commitments (e.g., family life, education). Coaches/sport psychologists could use the book as means for increasing participants' knowledge and understanding of perfectionism and their own standards and expectations. In addition, for those working with athletes who suffer from negative pre-competition emotions, self-help books may be useful in reducing negative

emotions. In the meantime, self-help strategies appear to be a useful and empowering tool to help perfectionistic individuals manage their cognitions and emotions.

Limitations and other future directions

The present findings must be considered in the context of the study's limitations. Firstly, although the participants in the study were randomised to a group, we did not employ a double-blind design. Double-blinding helps reduce bias and expectancy effects (Peat et al., 2002). Doing so in future studies will strengthen the confidence in the effectiveness of self-help intervention. Secondly, 15 participants dropped out from the total of 115 participants (13%). There were no large discernible differences between dropouts and completers in the intervention and control group in the variables measured. However, there were smaller differences in terms of excitement and happiness which might partly explain dropout (i.e., happier athletes may feel less need to take part in preventative interventions). It is also possible that there are differences in other unmeasured characteristics. For example, educational level was found to be important in regards to dropout and adherence in other self-help studies so may have been important here particularly as it required reading and comprehension skills (e.g., Karyotaki et al., 2015). Thirdly, as the participants were not screened for mental health issues, we cannot know for sure whether the sample included players with mental health issues and if the effectiveness of the intervention differs if this is the case. Fourthly, all the participants self-identified as perfectionists, rather than identified using pre-defined or cut-off scores (e.g., Arpin-Cribbie et al., 2012). This could be considered a strength in that it served our aim of assessing the "real world" effectiveness of the intervention in players seeking support. However, it could also be considered a weakness in that we did not exclude people who might be considered less perfectionistic. Based on pre-intervention scores, typically, soccer players reported moderate levels of perfectionism in the current study. Future studies may wish to examine effectiveness only in higher scoring

individuals where the assumption is that there is greater need and benefit (e.g., Arpin-Cribbie et al., 2012). Finally, the effectiveness observed here relates to the specific book used. It should not be assumed that the findings generalise to other kinds of self-help or other books or that other kinds of general self-help or books will be effective in context of perfectionism.

Conclusion

This study was the first to examine the effectiveness of a self-help intervention for managing perfectionism in soccer players. It was found that a self-help book was effective at reducing some aspects of perfectionism and negative pre-competition emotions. These types of interventions are therefore worth considering when developing strategies to support perfectionistic soccer players.

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Figure 1.

CONSORT diagram showing the flow of participants through each stage of the study

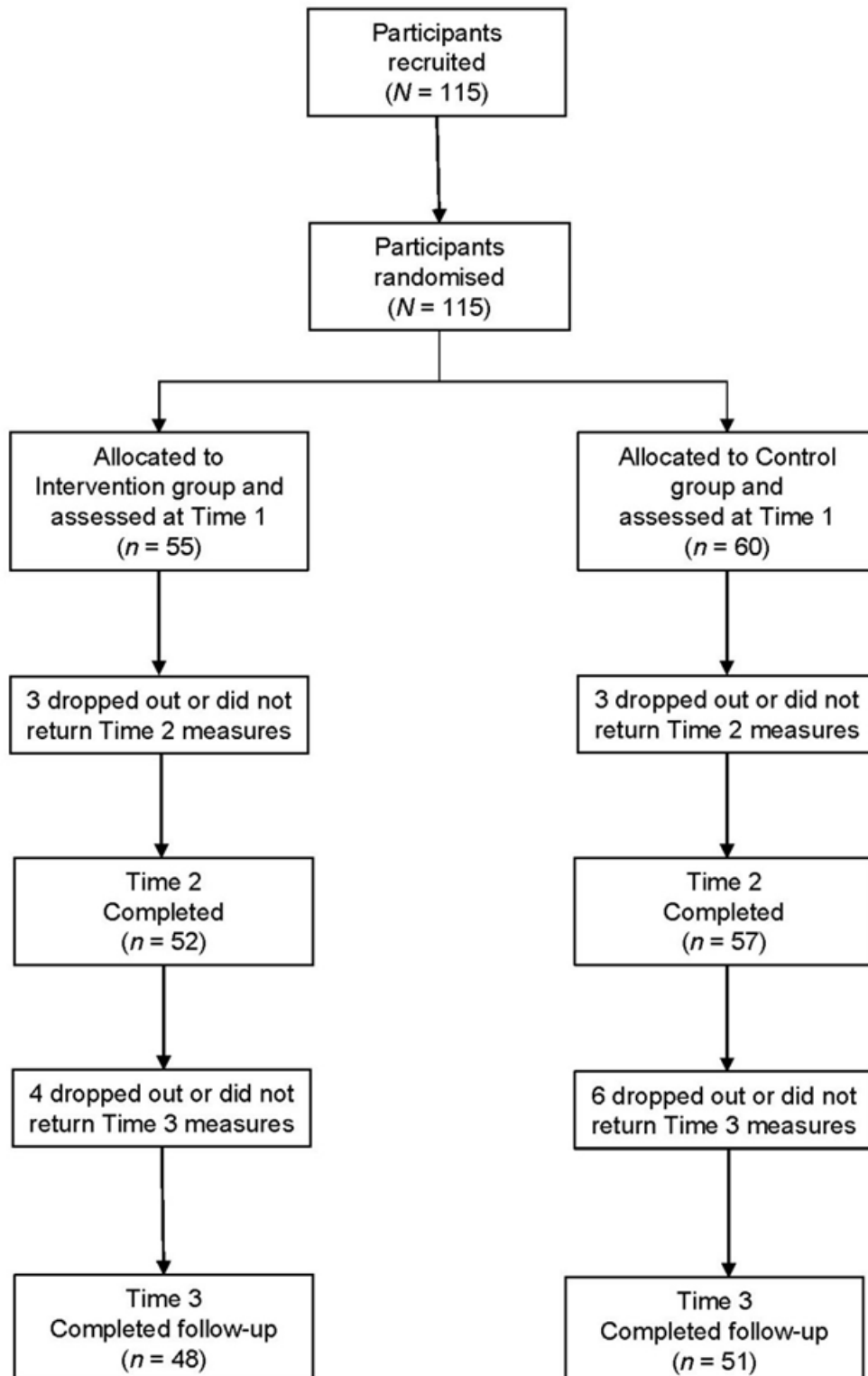


Table 1*Psychometric properties of measures (n = 115)*

Measure	T1	T2	T3	T1-T2			T2-T3			T1-T3		
	α	α	α	ICC	CI ICC	$F(df)$	ICC	CI ICC	$F(df)$	ICC	CI ICC	$F(df)$
SOP	.85	.85	.88	.83	.61-.79	5.93 (114, 115)***	.87	.81-.91	7.68 (114, 114)***	.71	.58-.80	3.40 (114, 114)***
SPP	.82	.83	.83	.75	.64-.83	4.06 (114, 114)***	.86	.83-.91	8.73 (114, 114)***	.67	.53-.76	3.07 (114, 114)***
OOP	.78	.77	.77	.85	.79-.90	6.82 (114, 114)***	.90	.85-.93	9.63 (114, 114)***	.85	.78-.90	6.70 (114, 114)***
PCI	.88	.89	.87	.74	.63-.82	3.88 (114, 114)***	.83	.76-.89	6.01 (114, 114)***	.65	.50-.76	2.87 (114, 114)***
HELP	.80	.78	.79	.84	.76-.89	6.08 (114, 114)***	.90	.86-.93	10.42 (114, 114)***	.77	.67-.84	4.33 (114, 114)***
Anxiety	.89	.92	.89	.72	.59-.81	3.56 (114, 114)***	.83	.75-.88	5.79 (114, 114)***	.59	.41-.72	2.43 (114, 114)***
Anger	.90	.87	.88	.53	.32-.67	2.12 (114, 114)***	.80	.71-.86	4.90 (114, 114)***	.50	.28-.66	2.00 (114, 114)***
Dejection	.92	.88	.93	.60	.42-.72	2.51 (114, 114)***	.80	.70-.85	4.74 (114, 114)***	.55	.35-.69	2.22 (114, 114)***
Happiness	.97	.89	.87	.73	.61-.81	3.66 (114, 114)***	.78	.68-.85	4.55 (114, 114)***	.58	.40-.71	2.39 (114, 114)***
Excitement	.84	.87	.88	.77	.67-.84	4.34 (114, 114)***	.76	.65-.83	4.15 (114, 114)***	.62	.45-.74	2.64 (114, 114)***

Note. ICC = intra-class correlation, CI = confidence interval, SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, HELP = help-seeking attitudes, *** $p < .001$.

Table 2*Differences between dropouts and completers on age, years played and outcome variables at T1*

Variable	Dropout M (<i>SD</i>)	Completer M (<i>SD</i>)	<i>t</i> (<i>p</i>)	Cohen's <i>d</i>
Age	20.06 (2.84)	21.87 (5.28)	1.33 (.18)	0.25
Years playing soccer	14.00 (2.85)	13.18 (5.22)	-0.61 (.54)	-0.11
Self-oriented perfectionism	5.28 (0.75)	5.40 (0.77)	0.58 (.56)	0.11
Socially prescribed perfectionism	4.04 (0.86)	3.99 (0.83)	-0.21 (.83)	0.04
Other-oriented perfectionism	4.40 (0.81)	4.17 (0.74)	-1.12 (.27)	-0.21
Perfectionistic cognitions	2.06 (1.00)	2.01 (0.90)	-1.90 (.85)	-0.04
Help-seeking attitudes	2.01 (0.60)	2.18 (0.58)	1.05 (.30)	0.20
Anxiety	1.88 (1.03)	1.84 (1.15)	-0.12 (.91)	-0.02
Dejection	0.73 (0.87)	0.81 (1.06)	0.31 (.47)	0.06
Excitement	2.58 (0.68)	2.12 (1.10)	-1.60 (.03)	-0.30
Anger	0.83 (0.85)	0.90 (1.06)	0.25 (.81)	0.05
Happiness	2.09 (0.72)	1.73 (1.09)	-1.27 (.06)	-0.24

Table 3*Main group, time and interaction effects (group x time) (n = 115)*

Measure	Group effect	Partial η^2	Time effect	Partial η^2	Group*Time effect	Partial η^2
SOP	$F(1,112) = 15.79, p < .001^{***}$	.12	$F(1,112) = 18.83, p < .001^{***}$	.03	$F(1,112) = 0.17, p = .68$	.00
SPP	$F(1,113) = 1.36, p = .24$	.01	$F(1,113) = 0.94, p = .38$	.01	$F(1.68,189) = 7.91, p < .001^*$	.05
OOP	$F(1,113) = 5.59, p = .02^*$	.05	$F(1.95,220) = 2.47, p = .08$	.02	$F(1.95,220) = 1.29, p = .28$	.01
PCI	$F(1,113) = 10.02, p = .002^{**}$	.08	$F(2,226) = 1.33, p = .27$	.01	$F(2,226) = 37.56, p < .001^{***}$	.25
HELP	$F(1,113) = 0.00, p = .99$	.00	$F(1.72,195) = 2.97, p = .06$	.03	$F(1.72,195) = 1.01, p = .36$	.01
Anxiety	$F(1,113) = 4.71, p = .032^*$	.04	$F(1.90,214) = 3.66, p = .030^*$	.03	$F(1.89,214) = 17.68, p < .001^{***}$	.14
Anger	$F(1,113) = 0.80, p = .37$	.01	$F(1.66,188) = 9.76, p < .001^{***}$	.08	$F(1.66,188) = 4.50, p = .017^*$	.04
Dejection	$F(1,113) = 0.64, p = .43$	.01	$F(1.72,194) = 6.22, p = .004^{**}$	.08	$F(1.94,219) = 5.50, p = .007^{**}$	.05
Happiness	$F(1,113) = 3.45, p = .07$	.03	$F(1.87,211) = 4.97, p = .009^{**}$	.04	$F(1.94,219) = 0.58, p = .55$	.01
Excitement	$F(1,113) = 2.87, p = .09$	.03	$F(1.91,216) = 2.05, p = .13$	.02	$F(1.91,216) = 0.11, p = .89$	.00

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic

cognitions, HELP = help-seeking attitudes, * $p < .05$. ** $p < .01$. *** $p < .001$, two-tailed.

Table 4

Analysis of simple effects on all measures between intervention and control group at each time point (n = 115)

Measure	Time 1					Time 2					Time 3				
	Intervention <i>M (SD)</i>	Control <i>M (SD)</i>	<i>M</i> differ- ence	<i>p</i> values	Coh- en's <i>d</i>	Intervention <i>M (SD)</i>	Control <i>M (SD)</i>	<i>M</i> differ- ence	<i>p</i> values	Coh- en's <i>d</i>	Intervention <i>M (SD)</i>	Control <i>M (SD)</i>	<i>M</i> differ- ence	<i>p</i> val- ues	Coh- en's <i>d</i>
SOP	5.60 (0.74)	5.17 (0.73)	0.42**	.003	0.59	4.91 (0.83)	5.13 (0.75)	-0.22	.138	0.29	4.98 (0.89)	5.18 (0.81)	-0.20	.208	0.20
SPP	4.05 (0.94)	3.94 (0.72)	0.11	.476	0.20	3.83 (0.81)	4.02 (0.73)	-0.19	.188	0.29	3.81 (0.77)	4.18 (0.74)	-0.38**	.009	0.51
OOP	4.10 (0.68)	4.31 (0.81)	-0.21	.133	0.29	4.08 (0.71)	4.37 (0.70)	-0.29*	.029	0.41	4.12 (0.69)	4.48 (0.67)	-0.36**	.005	0.55
PCI	2.12 (0.91)	1.92 (0.89)	0.21	.227	0.23	1.61 (0.86)	2.25 (0.86)	-0.64***	.000	0.75	1.59 (0.82)	2.47 (0.72)	-0.88***	.000	1.15
HELP	2.12 (0.60)	2.18 (0.56)	-0.06	.583	0.00	2.23 (0.56)	2.23 (0.56)	-0.05	.961	0.00	2.27 (0.56)	2.22 (0.59)	0.05	.623	0.00
ANX	1.97 (1.17)	1.72 (1.07)	0.25	.276	0.20	1.34 (1.05)	1.97 (1.13)	-0.63**	.000	0.59	1.24 (1.03)	1.99 (1.10)	-0.76**	.000	0.70
ANG	0.98 (1.15)	0.80 (0.90)	0.19	.336	0.20	0.42 (0.67)	0.70 (0.88)	-0.28	.056	0.35	0.42 (0.75)	0.68 (0.94)	-0.26	.107	0.29
DEJ	0.91 (0.92)	0.69 (0.89)	0.22	.255	0.20	0.39 (0.68)	0.66 (0.81)	-0.27	.054	0.35	0.43 (0.85)	0.70 (0.99)	-0.27	.116	0.20
HAP	1.63 (1.04)	1.94 (1.05)	-0.31	.114	0.29	1.73 (0.97)	2.13 (1.08)	-0.40*	.039	0.41	1.98 (1.04)	2.18 (1.11)	-0.20	.332	0.20
EXC	2.05 (1.04)	2.32 (1.07)	-0.27	.175	0.29	2.09 (1.13)	2.34 (0.98)	-0.24	.215	0.20	2.20 (1.14)	2.52 (0.98)	-0.33	.103	0.29

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions,

HELP = help-seeking attitudes, ANX = anxiety, ANG = anger, DEJ = dejection, HAP = happiness, EXC = excitement, * $p < .05$. ** $p < .01$. *** $p < .001$,

two-tailed.