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Cognitive-Behavioral Approaches for Reducing Perfectionism Cognitions in Athletes

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Abstract

Research outside of sport has shown that cognitive-behavioral approaches can help reduce perfectionism. However, research inside of sport is still in its infancy. We compared three cognitive-behavioral approaches (Cognitive Therapy [CT], Acceptance and Commitment Therapy [ACT], and Rational Emotive Behavior Therapy [REBT]) in reducing perfectionism cognitions in an applied sport psychology context. Using a single-subject multiple baseline design, 12 academy rugby league players (*M age* = 19.1 years, *SD* = 0.99) received eight, one-to-one CT, ACT, or REBT sessions over six weeks. Measures of perfectionism cognitions and related outcomes were collected on a weekly basis, before, during, and after the intervention. The findings supported the use of all three cognitive-behavioral approaches with ACT appearing to be particularly beneficial for reducing perfectionism cognitions. Due to the limitations of single-case research and lack of control over extraneous variables, more rigorous tests and comparisons of these interventions are now needed to confirm our findings.

Keywords: Performance; Sport; Interventions

Cognitive-Behavioral Approaches for Reducing Perfectionism Cognitions in Athletes

Athletes can suffer many negative consequences because of their perfectionism. This includes emotional, motivational, and performance difficulties (Hill et al., 2018). As a consequence, it is necessary to identify how best perfectionism can be managed in sport. However, sport psychologists have very little evidence to draw on when it comes to understanding what the best interventions might be to use in this regard. Previous research outside of sport (e.g., clinical, education, exercise) has identified cognitive-behavioral approaches as an effective method to reduce perfectionism (e.g., Robinson & Wade, 2021). With this in mind, the aim of the present study is to compare three different cognitive-behavioral approaches - Cognitive Therapy (CT), Acceptance and Commitment Therapy (ACT), and Rational Emotive Behavior Therapy (REBT) - in reducing athlete perfectionism in an applied setting.

Multidimensional Perfectionism

Perfectionism is a multidimensional personality trait that comprises exceedingly high personal standards which are accompanied by overly critical evaluations of behavior (Frost et al., 1990). When considered at its broadest, perfectionism is typically divided into two higher order dimensions – perfectionistic strivings (PS) and perfectionistic concerns (PC). PS comprise elements of “self-oriented striving for perfection and the setting of very high personal performance standards” whereas PC comprise elements of “aspects associated with concerns over making mistakes, fear of negative social evaluation, feelings of discrepancy between one’s expectations and performance, and negative reactions to imperfection” (Gotwals et al., 2012, p. 264). PS is related to a mix of positive and negative performance, motivation, and well-being outcomes in athletes, whereas PC is related to only negative and maladaptive motivation and well-being outcomes (Hill et al., 2018).

Perfectionism also involves cognitive and information-processing mechanisms that gives rise to harsh internal thoughts and dialogue with the self (Hewitt et al., 2017). These self-defeating cognitions, referred to as perfectionism cognitions, typically manifest as automatic, ruminative thoughts and images centred on the need to be perfect. Unlike trait perfectionism, perfectionism cognitions are more state-like and so better explain the day-to-day experiences of individuals with high levels of perfectionism (e.g., “Why can’t I be perfect?”). Based on perfectionism cognitions theory (Flett et al., 2017), perfectionism cognitions are rooted in structural (e.g., self-schemas), propositional (e.g., attitudes), and operational (e.g., biases) levels of cognitive processing (Ingram et al., 1990), and are intertwined with the use of an irrational “ideal self” as the basis for ongoing self-evaluation. From this perspective, perfectionism cognitions can be understood as a specific form of negative perseverative thought triggered by a deeply engrained sense that one is always falling short of an “ideal” or should be doing better or performing better.

Research shows that perfectionism cognitions play an important role in the experiences of athletes (Donachie et al., 2023). For instance, more frequent perfectionism cognitions have been found to be positively related to athlete burnout, even after controlling for trait perfectionism (Crowell & Madigan, 2022). More frequent perfectionism cognitions have also been identified as a key mechanism that explains some of the effects of trait perfectionism by mediating between trait perfectionism and more negative pre-competition emotions (Donachie et al., 2018, 2019). These and other findings support suggestions that perfectionism cognitions are a key source of the debilitating effects of perfectionism in sport. Therefore, it will be important for athletes to be able to manage perfectionism cognitions (Watson et al., 2024). However, at the moment, little is known in sport on how best to do so. In the current study, we address this limitation by examining whether different cognitive-

behavioral approaches might be effective in reducing perfectionism cognitions among athletes.

Cognitive Behavior Therapy

Cognitive Behavioral Therapy (CBT) is a widely used term that refers to a broad range of cognitive-behavioral approaches. Although the terms CBT and cognitive-behavioral approaches are often used interchangeably, the term *cognitive-behavioral approaches* is more apt as it allows for different types of therapies of a similar kind to be distinguished between. There are a number of different cognitive-behavioral approaches but they share similarities in that they are typically structured, evidence-based psychological interventions, designed to help individuals understand unhelpful patterns of thinking, feeling, and behaving (Collard, 2023). Of note, with over 70 years of research examining them, cognitive-behavioral approaches have consistently demonstrated effectiveness in treating complex psychological difficulties such as anxiety and depression (Thoma et al., 2015). Their utility has also been shown in sport psychology where these approaches are widely regarded as a leading method for enhancing both athlete performance and well-being (Turner et al., 2023).

Cognitive-behavioral approaches have emerged in three distinct "waves:" behavioral therapy, cognitive therapy, and values-based therapy (Thoma et al., 2015; Turner et al., 2023). These approaches differ in focus and underlying principles (Hayes et al., 2006). Cognitive-behavioral approaches were initially grounded in operant learning and classical conditioning, before evolving to incorporate cognitive concepts and, more recently, specific approaches centered on acceptance and mindfulness (Rachman, 2015). Each approach has introduced new perspectives and therapeutic techniques that has given practitioners greater insight and flexibility in supporting clients. However, it also the case that due to their differences, careful consideration of their comparative merits is also required when selecting the best means of providing psychological support. In the present study, we focus on

comparison of three specific cognitive-behavioral approaches, each of which has shown varying levels of success in reducing perfectionism in a sport setting. By comparing these approaches, we aim to provide further insight into their utility in applied contexts and preliminary evidence of their relative effectiveness in reducing perfectionistic cognitions in athletes.

Cognitive Therapy

One intervention that is considered is CT (Beck, 1976). CT is considered by many psychologists as having the strongest evidence-base for treating several psychological conditions (e.g., depression; Hofmann et al., 2013). CT is a second wave cognitive-behavioral approach that targets thoughts, feelings, and behaviors. CT is based on the cognitive model that suggests that if you have a negative experience, you might experience negative emotions as a result, and those bad feelings might then lead you to behave in a more dysfunctional way. Perfectionistic athletes frequently have automatic negative thoughts when their unrealistically high internal expectations are not met (e.g., "I should have done better"), which are shaped by underlying dysfunctional core beliefs. CT helps athletes recognise these thoughts and teach them to challenge and restructure these harmful beliefs. Restructuring automatic negative thoughts is fundamental to CT (Turner et al., 2020).

There is considerable evidence to support the use of CT for reducing perfectionism outside of sport. Notably, a recent systematic review and meta-analysis demonstrated the positive impact of both self-help and face-to-face CT in reducing perfectionism (e.g., Galloway et al., 2022). The review, which contained fifteen RCTs, also underscored the benefits of CT in decreasing symptoms of anxiety, depression, and eating disorders. However, there have also been some questions raised recently over the overall effectiveness of CT for perfectionism (e.g., the implications of high drop-out rates) which have been cause for pause and reflection (Smith et al., 2023). Despite these questions, though, CT-based

interventions remain the most examined and, in turn, most supported approach to addressing perfectionism at the current time.

CT is also emerging as an effective tool for reducing perfectionism inside of sport. For example, Donachie and Hill (2020) tested the effectiveness of an 8-week, CT-based self-help book to reduce perfectionism in academy footballers. The self-help book included 53 exercises including self-assessment, reflection and writing tasks, and familiarisation and practice of specific strategies to help address perfectionistic thinking and behaviors (e.g., weighing up the benefits of perfectionistic standards, keeping a perfectionism diary, and resetting goals). Adopting an RCT, 115 participants were randomly allocated to a waitlist control group or a self-help intervention group. The researchers found significant differences for perfectionism cognitions between the control group and intervention group following the intervention. As such, Donachie and Hill provided the first evidence that a self-help, CT-based book may be useful in reducing perfectionism cognitions in athletes.

Acceptance and Commitment Therapy

Another intervention that is considered is ACT (Hayes et al., 1999). As a third-wave cognitive-behavioral approach, ACT does not aim to change the content of thoughts and feelings (as in CT), but instead focuses on changing how individuals relate to and interact with these experiences (Hayes, 2004). ACT promotes change through contextualism—a focus on the broader situational and experiential context (Hayes, 1993). In regards to perfectionism, ACT helps perfectionistic athletes adopt a more flexible and accepting stance toward their perfectionistic thoughts and feelings. The approach places a strong emphasis on human language and cognition and is grounded in Relational Frame Theory (RFT; Hayes et al., 2001), which explains how language influences behavior. Through this foundation, ACT aims to enhance psychological flexibility—the ability to be open, present, and committed to

value-driven action. This flexibility supports athletes in developing a greater sense of coherence and reducing rigid perfectionistic patterns.

There are fewer studies examining ACT in reducing perfectionism outside of sport than use CT, but studies that do exist have been supportive of its use. For example, Ong et al. (2019) tested the efficacy of a 10-week ACT intervention for clinical perfectionism (an overdependence on self-evaluation toward personally demanding standards, despite adverse consequences; Shafran et al., 2002) and associated outcomes (e.g., anxiety). Using an RCT design, a sample of adults with high levels of clinical perfectionism were randomly assigned to an intervention group or a waitlist control group. The intervention was based on an ACT protocol for OCD adapted to perfectionism and delivered in 50-minute sessions that focused on creative hopelessness, acceptance, defusion, values and committed action. The findings revealed that the ACT group had significantly lower concerns over mistakes (a key dimension of trait perfectionism) compared to the control group after the intervention.

There is a limited, but growing body of research on the use of ACT inside of sport to support athletes with perfectionism, too. This includes studies using similar techniques (e.g., mindfulness; Kaufman et al., 2009). In the most recent study, Watson et al. (2024) tested an 8-week online ACT intervention to reduce perfectionism in female football players. Again, using an RCT design, players were randomly allocated into either an intervention group or waitlist control group. The ACT intervention included access to eight modules of pre-recorded content, worksheets, and homework covering issues of being present, mindfulness, acceptance, diffusion, values, self-observation, and committed action. It was found that following the intervention, the intervention group had significantly lower perfectionism cognitions compared to the control group. This work is encouraging in regards to the benefits of ACT for perfectionism in sport and offers an alternative to CT for practitioners to consider when working with athletes with the same issues.

Rational Emotive Behavior Therapy

A final intervention that is considered is REBT (Ellis, 1957). REBT is a second wave cognitive-behavioral approach that provides a theoretical framework to identify and change irrational beliefs through cognitive restructuring and endorsing rational beliefs (Ellis, 1957). REBT promotes psychological health and well-being, and postulates, that all disturbance occurs as a consequences of dysfunctional information processing (Ellis, 1962). At its core, REBT holds that rational and irrational beliefs are key cognitive mediators between our inferences and our emotional and behavioral consequences. REBT will help perfectionistic athletes reduce their irrational beliefs and reframe those that are tied to perfectionism. Ellis (2002) listed perfectionism as one of the most common irrational beliefs and because of this perfectionism can be viewed as potentially manageable via REBT.

In reviewing research, surprisingly, the authors found only two studies adopting REBT as an intervention for perfectionism outside of sport (Yang & Han, 2020; Samfira & Sava, 2023). Yang and Han (2020) delivered an REBT-based intervention to female students to reduce binge eating and perfectionism using a non-randomized pretest-posttest design. Samfira and Sava (2023) delivered an REBT-based intervention to teachers to increase self-acceptance and reduce perfectionism also using a non-randomized pre, post, and follow-up design. Neither study found support for REBT in reducing perfectionism. However, by virtue of their quasi-experimental designs, the research provides a weaker basis for understanding the possible benefits of this approach. In addition, both studies examined total perfectionism making it difficult to ascertain if some element of perfectionism changed (e.g., PS vs PC). As such, the strength of the case for using REBT in the management of perfectionism is far less than the other approaches.

There is just one example of an REBT intervention to manage perfectionism inside of sport. Tóth et al. (2023) explored the effectiveness of an REBT intervention on indicators of

PS and PC (high standards and discrepancy) with junior ice-hockey players. Using a quasi-experimental design, players were assigned to either an REBT intervention group, a mindfulness intervention group, or a control group. The REBT intervention consisted of eight 1-hour group sessions and seven homework assignments over for a duration of 8-weeks that focused on education, disputation, and replacement and reinforcement. The mindfulness intervention was equivalent in terms of type of deliver and time but had a focus on education, self-compassion, acceptance, cognitive diffusion coping, and self-control. In support of the use of REBT, the researchers found that the REBT intervention group had significantly lower perfectionism compared to the mindfulness and control group following the intervention. This study has therefore provided the first evidence that REBT may be an effective intervention for the management and reduction of perfectionism and a further alternative to CT-based intervention.

The Present Study

With the availability of different approaches in mind, the aim of the present study was to compare three cognitive-behavioral approaches in reducing perfectionism cognitions in an applied sport psychology context. In this regard, we provide useful information to practitioners considering the merits of different approaches and support researchers in developing robust tests of the effectiveness of different interventions. Perfectionism-related consequences were also assessed to better understand any additional benefits of each intervention (cognitive appraisals, pre-competition emotions, and performance satisfaction). Based on previous research, it was hypothesized that there would be a reduction in perfectionism cognitions (through either changing the cognitions [CT], accepting the cognitions [ACT], or reducing the irrational cognitions and beliefs tied to perfectionism [REBT]), as well as reductions in threat and loss appraisals, negative emotions, and an

increase in challenge appraisals, positive emotions, and performance satisfaction for all athletes in the three cognitive-behavioral approaches.

Method

Participants and Procedures

Participants were recruited from the youth academy of a professional rugby league club in the UK. In order to be eligible to take part in the study, participants had to self-identify as being perfectionistic. An original sample of 15 participants agreed to take part. However, three participants withdrew during week 1 due to injury and were therefore all excluded (noting that they received support for their individual issues). The remaining participants ($n = 12$) were all male, aged between 18 and 21 (M age = 19.1 years, $SD = 0.99$), and trained between 9 and 15 hours a week ($M = 12.0$, $SD = 2.04$). Participants were assigned to one of three cognitive-behavioral approaches (CT, $n = 4$; ACT, $n = 4$; REBT, $n = 4$). It is typically recommended to have no less than three participants for single-case research (Epstein et al., 2021). As such, the sample size was considered sufficient for the aims of the study and type of design. The study was approved by a university ethics committee and informed consent was obtained from all participants.

Intervention

Participants received a 6-week long, face-to-face intervention, which included eight sessions each lasting around 60 minutes. The first two sessions were aimed at developing the participants attitudes toward sport psychology support (Watson et al., 2021), as well as establishing a working alliance between the participant and first author (Sharp et al., 2015). This meant that each intervention approach received six sessions based on that particular cognitive-behavioral approach. In addition, each participant received inter-session homework tasks. Homework tasks support adherence as well as the overall impact of the intervention (Thelwell et al., 2008). Each session was designed to correspond to an aspect of

perfectionism (e.g., fear of failure). Details of each session including activity and homework assignments are provided as supplementary material. All of the interventions were delivered by the lead author who is a HCPC registered sport and exercise psychologist in the UK and experienced in using all three cognitive-behavioral approaches.

Design

The present study used a single-case multiple-baseline design which incorporated multiple interventions. Single-case multiple-baseline designs are considered especially useful in evaluating interventions in applied contexts (Barker et al., 2020). Typically, these designs are characterized by a baseline (A) and an intervention (B) with the timings of the intervention between participants staggered to enhance the conviction that observed effects are a function of the intervention (Kazdin, 1982). Here, we extended this type of design for the inclusion of three different interventions. The principles of the design remain the same with a focus on within-participant change as the main means of assessing the intervention and comparing the different approaches, and step-change, in our case, between participants receiving different interventions, helping further establish the effectiveness of all of the interventions (Barker et al., 2013). All outcome variables (perfectionism cognitions, cognitive appraisals, pre-competition emotions, and performance satisfaction) were collected from all participants at pre-intervention, during the intervention, post-intervention and at a 3-month follow-up. There were 16 data collection points in total with pre-intervention and post-intervention measurements of 3 to 6 points of measurement depending on the participant (excluding the 3-month follow-up).

Measures

Perfectionism Cognitions. To measure perfectionism cognitions, the Perfectionism Cognitions Inventory-10 (PCI-10; Hill & Donachie, 2019) was used. The PCI-10 is a short version of the original 25-item Perfectionism Cognitions Inventory (Flett et al., 1998).

Participants indicated how frequently they experienced different perfectionistic thoughts (e.g., ‘Why can’t I be perfect?’) over the last week on a 5-point scale (0 = ‘not at all’, 4 = ‘all of the time’). The PCI-10 has adequate internal reliability (Cronbach’s $\alpha > .70$; Hill & Donachie, 2019).

Cognitive Appraisals. To measure cognitive appraisals, the Appraisal of Life Events scale (ALE; Ferguson et al., 1999) was used. The ALE is an adjective checklist that assesses an athletes’ perception of their environment using threat (6 items, e.g., ‘Threatening’), challenge (6 items, e.g., ‘Exciting’), and loss (4 items, e.g., ‘Pitiful’). The ALE includes 16 items scored on a 6-point scale (0 = ‘not at all’ and 5 = ‘very much so’). A number of previous studies have provided evidence of its reliability and validity (e.g., Dixon et al., 2017).

Pre-Competition Emotions. To measure pre-competition emotions, the Sport Emotion Questionnaire (SEQ; Jones et al., 2005) was used. The SEQ measures negative (14 items; e.g., ‘anxiety’ and ‘dejection’) and positive (8 items; e.g., ‘happiness’ and ‘excitement’) emotions. Participants are asked to indicate how you feel right now, at this moment to their upcoming sports competition on a 5-point scale (0 = ‘not at all’, 4 = ‘extremely’). The SEQ has been reported to be a reliable measure of both pre- (Cronbach’s $\alpha > .81-.88$) and post- competition (Cronbach’s $\alpha > .70-.89$) emotions (Allen et al., 2013).

Performance Satisfaction. Participants rated their performances out of 10 using a self-report measure after each match/performance (Didymus & Fletcher, 2017). Based on the procedure outlined by Levy et al. (2011), the participants rated their performance satisfaction on a 10-point scale (1 = ‘totally dissatisfied’ and 10 = ‘totally satisfied’). The performance satisfaction measure instructed players to record how satisfied they were with their most recent individual performance, rather than the performance of the team.

Social Validation

Social validation data was collected at the 3-month follow up period, using brief interviews (see Bailey & Turner, 2023). These interviews were no more than 15 minutes per participant and aimed at understanding the participants thoughts and feelings regarding the intervention. This additional qualitative data is considered an integral part of single-case research (Barker et al., 2013). All of the interviews were conducted by the lead author.

Data Analysis

Descriptive statistics, percentage change in scores, and two statistics that quantify non-overlap between pre-intervention and post-intervention scores were used to assess and compare the interventions. When making comparisons between scores we did not include the 3-month follow-up score. The two non-overlap statistics were percentage of data points exceeding the median (PEM) and difference in percentage improvement rates in the two phases (or improvement rate difference, IRD) (see Parker et al., 2011, for a full discussion of these metrics)¹. For PEM, we considered ≤ 50 to signal ineffectiveness, ≤ 69 to signal a mild/questionable effectiveness, 70 to 89 to signal moderate effectiveness, and ≥ 90 to signal strong effectiveness (Ma, 2006). For IRD, we used ≤ 50 to signal a very small effect, 50 to 70 to signal a moderate effect, and ≥ 70 to signal a large effect (Parker et al., 2009). The two non-overlap statistics were calculated using a Shiny app-based calculator (Pustejovsky et al., 2024).

Results

The results are presented for each cognitive-behavioral approach. First, the intervention effects for each participant for all variables using % changes are provided.

¹ We also explored the use of inferential statistics commonly deployed in single-case designs. These included nonoverlap of all pairs [NAP], Tau-U, and Tau-BC. However, the small number of data points within each phase resulted in extremely wide confidence intervals. **As a consequence, these statistics lacked precision and the ability to meaningfully distinguish between small, moderate, or large effects so had limited interpretive value in the current study.**

Second, PEM and IRD scores to evaluate the effectiveness of each approach are provided. Finally, social validation data to account for participants' perceptions of the intervention are provided. Three-month follow-up scores are excluded from post-intervention means and SDs. Results are reported for the CT approach in Table 1 and Table 2, ACT approach in Table 3 and Table 4, and the REBT approach in Table 5 and Table 6. Figure 1-10 provides the graphs for each approach (see supplementary material).

Cognitive Therapy Approach

In the CT approach, all participants reported a decrease in perfectionism cognitions between 15% to 24%. All participants had a decrease in threat between 21% to 33%. All but one participant reported a decrease in loss between 12% and 27%. All participants reported an increase in challenge between 16% to 31%. All participants negative pre-competition emotions decreased between 15% to 45%. All participants reported an increase in both excitement between 6% and 33% and happiness between 37% to 52%. Finally, all participants reported an increase in performance satisfaction between 62% to 150%.

For participant A, PEM signaled strong effectiveness (≥ 90) for all study variables except for loss, which PEM signaled as total ineffectiveness (PEM = 17). Similarly, the IRD estimates for participant A signaled large effects (IRD ≥ 70) for all study variables except for loss and anger, which the IRD signaled very small effects (IRD = 25 and 50, respectively). For participants B, C, and D, the PEM and IRD estimates signaled strong effectiveness (≥ 90) and large effects (≥ 70) for all study variables.

Participants reported feeling more positive towards themselves, especially after suffering a bad result or poor individual performance. For example, Participant A said, "I find myself having more resilience...I don't become critical about myself or others straightaway". Participants in the CT approach also reported having less perfectionistic thoughts. For example, Participants D said, "I definitely don't have the same pressure to be perfect all of

the time anymore...It's such a weight off my shoulders". All the participants also reported evaluating their performances more positively. For example, Participant B said, "I don't have the same reaction after games. I can think about the game and my performance more logically".

Acceptance and Commitment Therapy Approach

In the ACT approach, all participants reported a decrease in perfectionism cognitions between 59% to 69%. All participants had a decrease in threat between 37% to 48%. All but one participant reported a decrease in loss between 27% and 42%. All participants reported an increase in challenge between 31% to 48%. All participants negative pre-competition emotions decreased between 29% to 63%. All participants reported an increase in both excitement between 33% to 232% and happiness between 30% to 372%. Finally, all participants reported an increase in performance satisfaction between 165% to 309%.

For participant E, PEM signaled strong effectiveness (≥ 90) for all study variables except for excitement, which PEM signaled as mild or questionable effectiveness (PEM = 60). The IRD estimates for participant E signaled large effects (IRD ≥ 70) for all study variables except for excitement, which the IRD signaled as moderate effects (IRD = 55). For participants F, G, and H, the PEM and IRD estimates signaled strong effectiveness (≥ 90) and large effects (≥ 70) for all study variables.

Participants in the ACT approach reported feeling pressure and expectation. For example, Participant F said, "I am definitely more relaxed about playing. I don't have the same pressure or constant thought of 'I must be perfect' towards myself" Participants in the ACT approach also reported being calmer and accepting of performances. For example, Participant E said, "I just let mistakes go now... It's such a weight off my shoulders".

Rational Emotive Behavior Therapy Approach

In the REBT approach, all participants reported a decrease in perfectionism cognitions between 6% to 17%. All participants had a decrease in threat between 40% to 42%. All but one participant reported a decrease in loss between 35% and 41%. All participants reported an increase in challenge between 29% to 50%. All participants negative pre-competition emotions decreased between 24% to 60%. All participants reported an increase in both excitement between 8% to 224% and happiness between 47% to 111%. Finally, all participants reported an increase in performance satisfaction between 96% to 291%.

For participants I, J, K, and L, PEM signaled strong effectiveness (≥ 90) for all study variables. Similarly, IRD signaled large effects ($IRD \geq 70$) for all variables.

Participants who received the REBT approach reported feeling less critical about themselves and others. For example, Participant L said, "Before, my immediate reaction was to shout at myself...now I think more rationally about the situation". Participants in the ACT approach also reported feeling happier and more positive. For example, Participant J said, "I don't react to mistakes the same way...I am far happier now, even when I play Infront of others.

Comparing Intervention Outcomes

All three cognitive-behavioral approaches appeared to reduce levels of perfectionism cognitions for the athletes. There was no distinction between them in regards to PEM or IRD with large effects and strong effectiveness in all cases for perfectionism cognitions. However, the percentage of change for perfectionism cognitions was highest for ACT, followed by CT and REBT. For the other variables, again, all approaches were associated with improvements for almost all participants and variables (the only exception was an increase in appraisal of loss for one participant receiving CT). The degree of benefit appeared to differ, though. Based on percentage change, PEM and IRD, CT offered lesser improvement for more

athletes and more variables than the other two approaches (most evident for appraisals of loss, dejection, and anger). ACT and REBT were typically similar for other variables in regards to percentage change, PEM and IRD. However, there were a small number of notable exceptions that included lesser improvements in excitement and happiness for ACT than REBT based on PEM and IRD.

Discussion

The purpose of the present study was to compare three cognitive-behavioral approaches in reducing perfectionism cognitions in sport. It was hypothesized that there would be a reduction in perfectionism cognitions and associated changes in related outcomes (threat, loss, and challenge appraisals, positive and negative emotions, and performance satisfaction) for each athlete and across each of the three cognitive-behavioral approaches. Broad support was found for the hypothesis with all three cognitive-behavioral approaches reducing perfectionism cognitions and associated with other benefits.

CT, ACT and REBT on Perfectionism

CT is currently the most examined and supported type of intervention for reducing perfectionism across domains. Building on this work, and studies in sport examining CT-based self-help (Donachie & Hill, 2020), the present findings align with evidence that CT, delivered one-to-one, can be effective for reducing perfectionism cognitions in athletes. As perfectionistic thoughts are an engrained and repetitious way of thinking, it is possible that the thought stopping and cognitive restructuring techniques included in CT are beneficial for athletes dealing these types of thoughts. In particular, CT may improve athletes' capability to upend perfectionistic thoughts or replace unhelpful perfectionistic thoughts (e.g., "I must be perfect" versus "It is ok to make mistakes"). On this basis, and with substantial research available outside of sport, continued examination of the use of CT for perfectionism in sport is warranted.

Like with CT, the findings also provided evidence that one-to-one ACT can reduce perfectionism cognitions in athletes. This is consistent with previous research, notably, work assessing the effectiveness of an online, self-paced, ACT intervention (see Watson et al., 2024). The possible effectiveness of ACT and its principles makes an interesting point of comparison in regards to possible reasons why athletes may experience a decrease in perfectionism cognitions. It seems that improving psychological flexibility and allowing perfectionistic thoughts to pass also provides a viable way of dealing with perfectionism cognitions, and they may not necessarily need to be stopped or changed. Rather, the creation of psychological distance between the thoughts and their meaning may be sufficient to reduce their occurrence and potentially quell their negative influence. Underlying this change may also be a greater sense of self-compassion and relief from the burden of an irrational “ideal self” which is both aligned with the use of ACT and research suggesting the absence of self-compassion is a key issue in perfectionism (Ong et al., 2019.)

The third and final intervention, REBT, also appeared effective for all athletes in the current study in reducing perfectionism cognitions. This finding is consistent with the only other study to examine whether REBT reduced perfectionism in sport (Tóth et al., 2023). Unlike the other two approaches, REBT focuses directly on identifying and changing underlying irrational beliefs (e.g., “I must perform perfectly or others will criticise me”; Jordana & Turner, 2023). As these types of beliefs are entangled with perfectionism addressing them could provide a healthier outlook for athletes who hold irrational beliefs about self-evaluation and the need to be perfect. For example, using REBT, athletes may be better able to logically rationalise events that previously evoked stress and triggered perfectionism cognitions. In addition, because REBT involves replacing irrational beliefs with more rational ones, it may act both preventatively and proactively against negative

thoughts by reducing dysfunctional emotions and promoting functional emotions (Ellis & Dryden, 1997).

Comparing CT, ACT, and REBT

In comparing the three approaches, ACT provided the largest changes in perfectionism cognitions in comparison to the other two cognitive-behavioral approaches. In seeking to understand why this was the case, it is possible that, when it comes to perfectionism, allowing thoughts to be accepted is might be more effective for some athletes than trying to remove these thoughts altogether (Hill, 2023). It may also be that as athletes are taught to be more present, they ruminate less over past mistakes (Watson et al., 2024). Finally, it could be especially beneficial for perfectionistic athletes to align their behavior with healthier personal values as these athletes often tie their achievement to their self-worth. By focusing more on healthier personal values (e.g., prioritizing a well-rounded life), perfectionistic athletes may experience fewer perfectionistic thoughts (Hayes, 2004).

In regards to the other variables that were assessed, the findings for cognitive appraisals were more encouraging for both ACT and REBT approaches compared to the CT approach. It may be that learning to take a ‘step back’ to assess a situation, rather than reacting or engaging with a situation immediately, something that is central to ACT but not CT, may be more helpful with gaining perspective and rallying resources to promote a sense of challenge and lower a sense of threat and loss (Hayes et al., 2012). Similarly, trying to rationalize thoughts may also be more beneficial than attempting to eliminate them altogether, especially for the appraisal of competitive situations that offer varying degrees of controllability (Uphill et al., 2019). This difference is perhaps understandable given that eliminating or avoiding difficult situations and negative thoughts might ultimately not be possible for many athletes. Rather, accepting that you feel threatened may be a better strategy for reducing threat and fear than trying not to feel threatened (Wood & Turner, 2025).

In regards to negative pre-competition emotions, the three approaches were largely indistinguishable. Athletes appeared to get some benefit from all of the three approaches. However, positive pre-competition emotions were more complex. The REBT approach was the most effective in increasing feelings of excitement and happiness about competition. In comparison, the CT and ACT approaches were more inconsistent in their benefits. This finding may be a further indication of how useful REBT may be in regards to promoting more functional or healthy emotions rather than just reducing dysfunctional and unhealthy ones (Jordana & Turner, 2023). Moreover, REBT may be better for identifying and addressing underlying faulty or negative beliefs about themselves and lead to a more optimistic perspective toward performance (Turner et al., 2024). Regardless, overall, it suggests that for the athletes in our study, CT, ACT and REBT, aided them in being less angry, anxious, and dejected, but were less successful in promoting more positive emotions.

Applied Implications

The present study contains several important applied implications for practicing sport psychologists. However, note, these suggestions are tentative and should be considered in context of the limitations of the study design and the need for additional robust replication of our findings. Firstly, we recommend that sport psychologists who work with perfectionistic athletes consider the benefits of the three cognitive-behavioral approaches for their own practice. They offer an extensive array of techniques that could be used to work effectively with perfectionistic athletes. We also encourage sport psychologists to consider the promising (but preliminary) findings here against research that has shown that other common approaches to working with athletes (e.g., Psychological Skills Training) may be less effective for perfectionism (Watson et al., 2022). In all, sport psychologists should be using evidence-based interventions when working with perfectionism and be aware of how different approaches might be deployed to enhance their applied work (Watson, 2024).

Secondly, we suggest that sport psychologists consider the merits of ACT, in particular, as an approach to support perfectionistic athletes. There is far less research that has examined this approach. However, the findings of research, including those in the current study, are indicative of its possible benefits (see Watson et al., 2024, for a robust test of an ACT intervention). Its use could possibly include traditional face-to-face delivery, as was the case in the current study. As used in research deploying robust RCT designs, it might also be delivered online and even be used effectively when self-guided (Watson et al., 2024). More research is needed to test the effectiveness of ACT and better understand exactly why ACT may be especially beneficial for perfectionism (and when it might not be). However, ACT could eventually emerge an important intervention for perfectionism in sport.

Finally, with evidence of varying degrees of benefits for the specific athletes in the current study, sport psychologists will need to tailor interventions to individual needs (Moore & Bonagura, 2019). Not all perfectionistic athletes will respond the same way to each approach, so assessing which approach aligns best with an athlete's preferences and needs is essential for intervention effectiveness. In addition, in the current study we focused on perfectionism cognitions. However, perfectionism is a multidimensional and complex trait (Hewitt et al., 2017). It is also associated with a wide range of clinical and non-clinical outcomes (Hill et al., 2025). As such, careful consideration of both the ways in which perfectionism is manifesting and the impact it is having on athletes is needed as part of intervention design.

Limitations and Future Research

The present study has several limitations. First, single-case research has numerous methodological weaknesses (Smith, 2012). As a quasi-experimental design, no causality can be established (Tate & Perdices, 2019). As such, the current study should be treated as a platform for more rigorous research designs. A particularly important design issue relates to a

lack of blinding of the researchers and participants. This issue is difficult to address for sport and exercise psychology interventions, especially in an applied context. However, greater control of participant expectancy and researcher bias might be introduced via use of standardized scripts or pre-recordings as part of interventions (Bobrownicki et al., 2022). Second, the baseline observation phase of our design ranged between 3 and 6 weeks, and ideally would be larger to introduce more stability in the measurement (Barker et al., 2020). Finally, additional time point measures would have also permitted the use of statistics that support generalizability and estimates of standard errors and confidence intervals. At the moment, the study provides only a descriptive account of the changes we observed in those that took part and cannot be assumed to apply to athletes beyond the study.

Conclusions

The present study provides evidence to support the potential use of cognitive-behavioral approaches in reducing perfectionism cognitions and other related issues. Athletes who used CT, ACT, and REBT all reported reductions in perfectionism cognitions with ACT appearing to be the most beneficial. These approaches could be useful to practitioners working with perfectionistic athletes. More rigorous tests and comparisons of these interventions are now needed.

References

- Allen, M. S., Jones, M., McCarthy, P. J., Sheehan-Mansfield, S., & Sheffield, D. (2013). Emotions correlate with perceived mental effort and concentration disruption in adult sport performers. *European Journal of Sport Science, 13*(6), 697-706.
<https://doi.org/10.1080/17461391.2013.771381>
- Bailey, R. G., & Turner, M. J. (2023). The effects of a brief online rational-emotive-behavioral-therapy program on coach irrational beliefs and well-being. *The Sport Psychologist, 37*(4), 266-273. <https://doi.org/10.1123/tsp.2023-0009>
- Barker, J. B., Mellalieu, S. D., McCarthy, P. J., Jones, M. V., & Moran, A. (2013). A review of single-case research in sport psychology 1997–2012: Research trends and future directions. *Journal of Applied Sport Psychology, 25*(1), 4-32.
<https://doi.org/10.1080/10413200.2012.709579>
- Barker, J. B., Slater, M. J., Pugh, G., Mellalieu, S. D., McCarthy, P. J., Jones, M. V., & Moran, A. (2020). The effectiveness of psychological skills training and behavioral interventions in sport using single-case designs: A meta regression analysis of the peer-reviewed studies. *Psychology of Sport and Exercise, 51*, 101746.
<https://doi.org/10.1016/j.psychsport.2020.101746>
- Beck, A. T. (1976) *Cognitive therapy and the emotional disorders*. New York City, NY: International Universities Press.
- Bobrownicki, R., Carson, H. J., MacPherson, A. C., & Collins, D. (2022). Unloading the dice: selection and design of comparison and control groups in controlled trials to enhance translational impact within motor learning and control research. *International Journal of Sport and Exercise Psychology, 20*(5), 1330-1344.
<https://doi.org/10.1080/1612197X.2021.1956567>

- Collard, J. (2023). Cognitive-behavioural therapy (CBT). In M. J. Turner (Eds.), *Applying cognitive behavioural therapeutic approaches in sport* (pp. 5-25). London: Routledge.
- Crowell, D., & Madigan, D. J. (2022). Perfectionistic concerns cognitions predict burnout in college athletes: a three-month longitudinal study. *International Journal of sport and exercise psychology*, 20(2), 532-550. <https://doi.org/10.1080/1612197X.2020.1869802>
- Didymus, F. F., & Fletcher, D. (2017). Effects of a cognitive-behavioral intervention on field hockey players' appraisals of organizational stressors. *Psychology of Sport and Exercise*, 30, 173-185. <https://doi.org/10.1016/j.psychsport.2017.03.005>
- Dixon, M., Turner, M. J., & Gillman, J. (2017). Examining the relationships between challenge and threat cognitive appraisals and coaching behaviours in football coaches. *Journal of Sports Sciences*, 35(24), 2446-2452. <https://doi.org/10.1080/02640414.2016.1273538>
- Donachie, T. C., & Hill, A. P. (2020). Helping soccer players help themselves: Effectiveness of a psychoeducational book in reducing perfectionism. *Journal of Applied Sport Psychology*, 34(3), 564-584. <https://doi.org/10.1080/10413200.2020.1819472>
- Donachie, T. C., Hill, A. P., & Etherson, M. (2023). Perfectionism cognitions in sport, dance, and exercise. In A. P. Hill (2nd Eds.), *The psychology of perfectionism in sport, dance and exercise* (pp. **). London: Routledge.
- Donachie, T. C., Hill, A. P., & Hall, H. K. (2018). The relationship between multidimensional perfectionism and pre-competition emotions of youth footballers. *Psychology of Sport and Exercise*, 37, 33-42. <https://doi.org/10.1016/j.psychsport.2018.04.002>
- Donachie, T. C., Hill, A. P., & Madigan, D. J. (2019). Perfectionism and precompetition emotions in youth footballers: A three-wave longitudinal test of the mediating role of

- perfectionistic cognitions. *Journal of Sport and Exercise Psychology*, 41(5), 309-319.
<https://doi.org/10.1123/jsep.2018-0317>
- Ellis, A. (1957). Rational psychotherapy and individual psychology. *Journal of Individual Psychology*, 13(1), 38.
- Ellis, A. (1962). *Reason and emotion in psychotherapy*. Secaucus, NJ: Citadel Press.
- Ellis, A. (2002). *Overcoming resistance: A rational emotive behavior therapy integrative approach*. New York: Springer.
- Ellis, A., & Dryden, W. (1997). *The practice of rational emotive behavior therapy*. Revised edition. New York: Springer.
- Epstein, L. H., Bickel, W. K., Czajkowski, S. M., Paluch, R. A., Moeyaert, M., & Davidson, K. W. (2021). Single case designs for early phase behavioral translational research in health psychology. *Health Psychology*, 40(12), 858-874.
- Ferguson, E., Matthews, G., & Cox, T. (1999). The appraisal of life events (ALE) scale: Reliability and validity. *British Journal of Health Psychology*, 4(2), 97-116.
<https://doi.org/10.1348/135910799168506>
- Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology*, 75(5), 1363-1381. <https://doi.org/10.1037/0022-3514.75.5.1363>
- Flett, G. L., Hewitt, P. L., Nepon, T., & Besser, A. (2017). Perfectionism cognition theory: The cognitive side of perfectionism. In J. Stoeber (Eds.), *The psychology of perfectionism* (pp. 89-110). London: Routledge.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, 14(5), 449-468.
<https://doi.org/10.1007/BF01172967>

- Galloway, R., Watson, H., Greene, D., Shafran, R., & Egan, S. J. (2022). The efficacy of randomised controlled trials of cognitive behaviour therapy for perfectionism: a systematic review and meta-analysis. *Cognitive Behaviour Therapy*, 51(2), 170-184. <https://doi.org/10.1080/16506073.2021.1952302>
- Gotwals, J. K., Stoeber, J., Dunn, J. G., & Stoll, O. (2012). Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence. *Canadian Psychology*, 53(4), 263-279.
- Hayes, S. C. (1993). Goals and varieties of scientific contextualism. In S. C. Hayes, L. J. Hayes, H. W. Reese., & T. R., Sarbin. (Eds.), *The varieties of scientific contextualism* (pp. 11-27). Reno, NV: Context Press.
- Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, 35(4), 639-665. [https://doi.org/10.1016/S0005-7894\(04\)80013-3](https://doi.org/10.1016/S0005-7894(04)80013-3)
- Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational Frame Theory: A Post-Skinnerian account of human language and cognition*. New York: Plenum Press.
- Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1-25. <https://doi.org/10.1016/j.brat.2005.06.006>.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. Guilford Press.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). The Guilford Press.
- Hill A. P. (2023). *The psychology of perfectionism in sport, dance and exercise*. London: Routledge.

- Hill, A. P., & Donachie, T. C. (2019). Not all perfectionism cognitions are multidimensional: evidence for the perfectionism cognitions Inventory-10. *Journal of Psychoeducational Assessment*, 38(1), 15-25. <https://doi.org/10.1177/0734282919881075>
- Hill, A. P., Kim, H., Ashdown-Franks, G., & Pratt, V. B. (2025). An umbrella review of a decade of meta-analyses examining the correlates of multidimensional perfectionism. *Canadian Psychology/Psychologie canadienne*. <https://doi.org/10.1037/cap0000450>
- Hill, A. P., Mallinson-Howard, S. H., & Jowett, G. E. (2018). Multidimensional perfectionism in sport: A meta-analytical review. *Sport, Exercise, and Performance Psychology*, 7(3), 235-270. <https://doi.org/10.1037/spy0000125>
- Hofmann, S. G., Asmundson, G. J., & A. T. (2013). The science of cognitive therapy. *Behavior Therapy*, 44(2), 199-212. <https://doi.org/10.1016/j.beth.2009.01.007>
- Jones, M. V., Lane, A. M., Bray, S. R., Uphill, M., & Catlin, J. (2005). Development and validation of the sport emotion questionnaire. *Journal of Sport and Exercise Psychology*, 27(4), 407-431. <https://doi.org/10.1123/jsep.27.4.407>
- Jordana, A., & Turner, M. J. (2023). Perfectionism in sport: A rational emotive behaviour therapy perspective. In A. P. Hill (2nd Eds.), *The psychology of perfectionism in sport, dance and exercise*. London: Routledge.
- Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). Evaluation of mindful sport performance enhancement (MSPE): A new approach to promote flow in athletes. *Journal of Clinical Sport Psychology*, 3(4), 334-356. <https://doi.org/10.1123/jcsp.3.4.334>
- Kazdin, A. E. (1982). Single-case experimental designs in clinical research and practice. *New Directions for Methodology of Social & Behavioral Science*, 13, 33-47.

- Levy, A. R., Nicholls, A. R., & Polman, R. C. J. (2011). Pre-competitive confidence, coping, and subjective performance in sport. *Scandinavian Journal of Medicine & Science in Sports*, 21(5), 721-729. <https://doi.org/10.1111/j.1600-0838.2009.01075.x>
- Moore, Z. E., & Bonagura, K. (2019). Evidence-based sport psychology counseling. In M. H. Anshel, T. A. Petrie, & J. A. Steinfieldt (Eds.), *APA handbook of sport and exercise psychology: Sport psychology*. American Psychological Association.
- Ong, C. W., Barney, J. L., Barrett, T. S., Lee, E. B., Levin, M. E., & Twohig, M. P. (2019). The role of psychological inflexibility and self-compassion in acceptance and commitment therapy for clinical perfectionism. *Journal of Contextual Behavioral Science*, 13, 7-16. <https://doi.org/10.1016/j.jcbs.2019.06.005>
- Ong, C. W., Lee, E. B., Krafft, J., Terry, C. L., Barrett, T. S., Levin, M. E., & Twohig, M. P. (2019). A randomized controlled trial of acceptance and commitment therapy for clinical perfectionism. *Journal of Obsessive-Compulsive and Related Disorders*, 22, 100444. <https://doi.org/10.1016/j.jocrd.2019.100444>
- Parker, R. I., Vannest, K. J., & Brown, L. (2009). The improvement rate difference for single-case research. *Exceptional Children*, 75(2), 135-150. <https://doi.org/10.1177/001440290907500201>
- Parker, R. I., Vannest, K. J., & Davis, J. L. (2011). Effect size in single-case research: A review of nine nonoverlap techniques. *Behavior Modification*, 35(4), 303-322. <https://doi.org/10.1177/0145445511399147>
- Pustejovsky, J. E, Chen, M., Grekov, P., & Swan, D. M. (2024). Single-case effect size calculator (Version 0.7.3) [Web application]. <https://jepusto.shinyapps.io/SCD-effect-sizes/>

- Rachman, S. (2015). The evolution of behaviour therapy and cognitive behaviour therapy. *Behaviour research and therapy*, 64, 1-8.
<https://doi.org/10.1016/j.brat.2014.10.006>
- Robinson, K., & Wade, T. D. (2021). Perfectionism interventions targeting disordered eating: A systematic review and meta-analysis. *International Journal of Eating Disorders*, 54(4), 473-487. <https://doi.org/10.1002/eat.23483>
- Samfira, E. M., & Sava, F. A. (2023). The effectiveness of a rational-emotive intervention on teachers' unconditional self-acceptance, perfectionism, and pupil control ideology. *Frontiers in Psychology*, 14, 1240269.
<https://doi.org/10.3389/fpsyg.2023.1240269>
- Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: A cognitive-behavioural analysis. *Behaviour Research and Therapy*, 40(7), 773-791.
[https://doi.org/10.1016/S0005-7967\(01\)00059-6](https://doi.org/10.1016/S0005-7967(01)00059-6)
- Sharp, L. A., Hodge, K., & Danish, S. (2015). Ultimately it comes down to the relationship: Experienced consultants' views of effective sport psychology consulting. *The Sport Psychologist*, 29(4), 358-370. <https://doi.org/10.1123/tsp.2014-0130>
- Smith, J. D. (2012). Single-case experimental designs: A systematic review of published research and current standards. *Psychological Methods*, 17(4), 510-550.
<https://doi.org/10.1037/a0029312>
- Smith, M. M., Hewitt, P. L., Sherry, S. B., Flett, G. L., Kealy, D., Tasca, G. A., Ge, S., Ying, F., & Bakken, K. (2023). A meta-analytic test of the efficacy of cognitive behavioural therapy for perfectionism: A replication and extension. *Canadian Psychology / Psychologie canadienne*, 64(4), 355-376. <https://doi.org/10.1037/cap0000360>
- Tate, R., & Perdices, M. (2019). *Single-case experimental designs for clinical research and neurorehabilitation settings: Planning, conduct, analysis and reporting*. Routledge.

- Thelwell, R. C., Weston, N. J., Greenlees, I. A., & Hutchings, N. V. (2008). Stressors in elite sport: A coach perspective. *Journal of Sports Sciences, 26*(9), 905-918.
<https://doi.org/10.1080/02640410801885933>
- Thoma, N., Pilecki, B., & McKay, D. (2015). Contemporary cognitive behavior therapy: A review of theory, history, and evidence. *Psychodynamic Psychiatry, 43*(3), 423-461.
<https://doi.org/10.1521/pdps.2015.43.3.423>
- Tóth, R., Turner, M. J., Mannion, J., & Tóth, L. (2023). The effectiveness of rational emotive behavior therapy (REBT) and mindfulness-based intervention (MBI) on psychological, physiological and executive functions as a proxy for sports performance. *BMC Psychol, 11*(1), 442. <https://doi.org/10.1186/s40359-023-01486-8>
- Turner, M. J., Aspin, G., Didymus, F. F., Mack, R., Olusoga, P., Wood, A. G., & Bennett, R. (2020). One case, four approaches: The application of psychotherapeutic approaches in sport psychology. *The Sport Psychologist, 34*(1), 71-83.
<https://doi.org/10.1123/tsp.2019-0079>
- Turner, M., Jones, M., & Wood, A. (2023). *Applying cognitive behavioural therapeutic approaches in sport*. Taylor & Francis.
- Turner, M. J., Wood, A. G., Barker, J. B., & King, A. (2024). “It is just a bad day”: Using Rational Emotive Behaviour Therapy to bolster healthy adaptation in a paralympic athlete. In G. Breslin & G. Leavey (Eds.), *Mental health and well-being interventions in sport* (pp. 48-69). London: Routledge.
- Uphill, M. A., Rossato, C. J., Swain, J., & O’Driscoll, J. (2019). Challenge and threat: A critical review of the literature and an alternative conceptualization. *Frontiers in Psychology, 10*, 1255. <https://doi.org/10.3389/fpsyg.2019.01255>

- Watson, D. R. (2024). Insights and challenges of working with perfectionism in sport. *Journal of Sport Psychology in Action, (aop), 1-14*.
<https://doi.org/10.1080/21520704.2024.2316911>
- Watson, D. R., Hill, A. P., & Madigan, D. J. (2021). Perfectionism and attitudes toward sport psychology support and mental health support in athletes. *Journal of Clinical Sport Psychology, 17(1)*, 11-26. <https://doi.org/10.1123/jcsp.2020-0052>
- Watson, D. R., Hill, A. P., & Madigan, D. J. (2022). Psychological skills training and perfectionism: A single-subject multiple baseline study. *Journal of Applied Sport Psychology, 35(5)*, 854-873. <https://doi.org/10.1080/10413200.2022.2137597>
- Watson, D. R., Hill, A. P., Madigan, D. J., & Donachie, T. (2024). Effectiveness of an online acceptance and commitment therapy programme for perfectionism in soccer players: A randomized control trial. *Sport, Exercise, and Performance Psychology, 13(1)*, 5-22. <https://doi.org/10.1037/spy0000333>
- Wood, S., & Turner, M. J. (2025). Using Acceptance and Commitment Therapy with athletes. *Scandinavian Journal of Sport and Exercise Psychology, 7*, 1-9.
<https://doi.org/10.7146/sjsep.v7i.150889>
- Yang, J., & Han, K. S. (2020). A rational emotive behavior therapy-based intervention for binge eating behavior management among female students: a quasi-experimental study. *Journal of Eating Disorders, 8(1)*, 1-12. <https://doi.org/10.1186/s40337-020-00347-8>