

Using Acceptance and Commitment Therapy with Athletes

Samuel Wood¹ and Martin J. Turner²

¹Department of Sport and Exercise Science, Manchester Metropolitan University Institute of Sport, Manchester, UK,

²Department of Psychology, Manchester Metropolitan University, Manchester, UK.

Corresponding author: Samuel Wood

E-mail: s.wood@mmu.ac.uk

Department of Sport and Exercise Science, Manchester Metropolitan University, Institute of Sport Building, 99 Oxford Road Manchester M1 7EL, United Kingdom

Abstract

Acceptance and Commitment Therapy (ACT) appears to be ubiquitous in sport, becoming a dominant approach to sport psychology in Scandinavia. Yet most resources are typically outside the academic literature. Therefore, aside from case study reports, little is known about how ACT can be adopted as a psychotherapeutic approach to sport psychology delivery. This paper provides professional practice insights into the application of ACT in sport over and above what can be typically portrayed in research studies. We outline how sport psychology practitioners can introduce ACT to sport settings, consider the delivery of ACT via different modalities (individual consultations, brief and single session interventions, and workshops), and discuss assessing the effectiveness of ACT in sport. We hope this paper encourages sport psychologists to adopt ACT in their work.

Keywords: *Applied sport psychology, Cognitive defusion, Functional contextualism, Psychological flexibility, Relational frame theory*

Highlights

- Acceptance and Commitment Therapy (ACT) appears to be growing in sport psychology
- The evidence for ACT's effectiveness makes pursuing ACT in sport a worthy endeavour
- We provide insights into ACT in sport from applied experience
- We outline how ACT can be used across typical modalities for sport psychology
- We discuss some challenges of applying ACT to sport

Using Acceptance and Commitment Therapy with Athletes

Historically, the applied work of sport psychologists (SPs) has seen athlete performance improved through mental skills training (e.g., goal setting, imagery) (Andersen, 2009). However, a growing body of literature highlights that the cognitive-behavioural tradition is integral to SPs' professional practice, meaning applied sport psychology is not limited to mental skills training alone (see Turner et al., 2023; Wedding & Corsini, 2019). The overwhelming range of psychotherapeutic approaches that form theoretical orientations for practice delivery can be difficult for SPs – both experienced and neophyte – to navigate (Tod & Eubank, 2020). Of the cognitive behavioural therapies (CBTs) applied to sport, Acceptance and Commitment Therapy (ACT) is gaining momentum (see Olusoga & Yousuf, 2023). Numerous case studies demonstrate ACT's effectiveness for a range of presenting problems including: body image (Wood & Fletcher, 2023); low self-confidence (Wood & Turner, 2024a); performance

anxiety (Wood & Turner, 2024b); injury rehabilitation (Price et al., 2022); and perfectionism (Watson et al., 2023).

Applying so-called third-wave behavioural therapies to sport (see Turner et al., 2023) is not new. More than twenty years ago, fundamental elements of ACT were introduced to the sport context as Mindfulness-Acceptance-Commitment (MAC) interventions (Gardner & Moore, 2012; Moore & Gardner, 2001). Although MAC includes ACT, it is a manualised protocol presented as an alternative to psychological skills training and separate to ACT (see Gardner & Moore, 2017; Moore, 2009). Despite ACT being embedded in clinical practice, we argue that ACT's flexible, principles-driven delivery (Ong et al., 2024) mean there is little need for sport-adapted versions or alterations of ACT interventions to make them (more) agreeable to athletes or a sport psychology audience. If ACT is being applied in sport, we argue there is a need to understand how ACT principles – for which over 500 meta-analyses or systematic, scoping, and narrative reviews (see <https://shorturl.at/fwDTX>), including meta-analyses of meta-analyses exists – can be applied to sport settings.

Throughout the current paper we provide professional practice insights into the application of ACT in sport from our applied experience and our perspective. Some resources explore the application of ACT within sport, yet these are typically outside the academic literature (e.g., Hegarty & Huelsmann, 2020) providing descriptive tasks with limited, research-informed guidance for interventions. With ACT becoming a dominant approach to sport psychology in Scandinavia, our paper aims to support those practitioners interested in applying ACT to their work by providing an overview of ACT's theoretical paradigm, therapeutic processes and strategies, and relating these to sport. We hope that raising the awareness of these aspects within the SP community – within Scandinavia and internationally – leads to more effective professional practice (Poczwadowski et al., 2004). We aim this work at two broad audiences: trainee and neophyte SPs exploring different psychotherapeutic approaches to sport as they establish a theoretical orientation for their practice delivery; and supervisors of trainee SPs who may be unfamiliar with ACT and looking for a concise resource to support trainees interested in ACT. First, we provide a brief overview of ACT's theoretical background and underpinning processes. Then we discuss the introduction of ACT to applied sport settings, drawing on our practitioner reflections. We then consider the different modalities for ACT interventions in sport, using applied examples where necessary.

An Overview of ACT

Following decades of development, struggle and criticism (see Hayes et al., 2023), ACT has grown enormously since it emerged in the 1980s (Hayes et al., 1999). Recognised by the World Health Organisation (WHO; 2021), the National Health Service (NHS; 2024), and the National Institute for Health and Care Excellence (NICE; 2021), ACT aims to alleviate suffering by promoting valued living.

Theoretical Background

ACT is built on two foundational pillars: the philosophy of functional contextualism (FC); and relational frame theory (RFT; Hayes et al., 2006). FC argues, pragmatically, that "truth" is what works within a given context, and how a behaviour meets an individual's idea of success (Hayes et al., 1999). RFT, a behavioural theory of cognitions (i.e., a language-based model of learning), explains how we link different stimuli (Hayes et al., 1999). We learn basic relationships – here versus there; big versus small – and derive relationships from knowledge. For example, "cat" is associated with the sound /kæt/ and the four-legged animal. However, we can draw relationships between things we have never seen paired, constantly making (automatic) judgements and comparisons. Once developed, associations are difficult to reshape; and if changed through direct training (e.g., cognitive restructuring), they risk resurging if the new pattern no longer works (Harris, 2019).

This web of associations within a given context is termed "relational frames". These relations form verbal rules, like "I cannot be successful if I'm anxious", which can govern behaviour, dominate our perceptions of contexts, and influence the direct consequences of behaviour (i.e., an individual's actual performance) (Hegarty & Huelsmann, 2020). Here, behaviour is seen as an interaction between the individual and their context (Hayes et al., 1999), shaped by existing knowledge, previous learning, and experience. Consequently, all words, and therefore (virtually) all thoughts, have an emotional component attached to them (Hegarty & Huelsmann, 2020). Together, RFT and FC highlight how verbal knowledge and rules can

dominate and mediate the relationship between environment and behaviour, leaving us at risk of stressing about upcoming, or past, events.

The Underpinning Processes of ACT

ACT provides individuals a choice in when to allow thoughts, emotions, and bodily sensations to control them, and when to attend to pressing matters (Harris, 2019). ACT allows us to consider changing behaviour by manipulating one's environment, relational frames, or behaviour, directly or indirectly (Hayes et al., 2004). ACT starts from the premise that life's experiences provide pain for each of us, which "naturally creates psychological suffering" (Harris, 2019, p. 2). These "normal instances of psychological pain" (Hayes et al., 2012, p. 19) cause *psychological dysfunction* (Harris, 2019). ACT poses that *cognitive fusion* occurs when an event and our cognitions about it become inseparable, causing us to respond to thoughts as if they are literal truths, which dominate other sources of behavioural regulation and, consequently, restrict and prevent actions towards what is important (Ruiz et al., 2023). This can lead to an ongoing struggle to avoid or remove unwanted thoughts and feelings (i.e., *experiential avoidance*), inflexible attention processes, and reduced attempts to pursue valued behaviours (Hayes et al., 1999).

ACT promotes *psychological flexibility* (Harris, 2019) through six core therapeutic processes (depicted as the ACT hexaflex model), which can be grouped into three functional units (Luoma et al., 2007), or pillars (Hegarty & Huelsmann, 2020). The first, *awareness*, captures the concepts of contacting with the present moment (i.e., flexibly paying attention to, and engaging in, here-and-now experiences), so we can learn to actively notice (i.e., *self-as-context*) (Harris, 2019). The second, *openness*, addresses cognitive fusion and separating ourselves from our thoughts and feelings (i.e., *defusion*), seeing cognitions non-judgementally and less literally (i.e., *acceptance*). Third, *engagement* in our chosen activity (being clear on values and acting on them through *committed action*), initiates and sustains life-enhancing action (i.e., doing what matters; Harris, 2019). In summary, ACT interventions aim to replace cognitive fusion, experiential avoidance, behavioural rigidity, and inactivity, with mindfulness, acceptance, and clarification of values to change overt behaviour.

Using ACT in Applied Sport Psychology

Having briefly outlined the therapeutic processes that underpin ACT, this section discusses each pillar (awareness, openness, and engagement) in more detail, demonstrating how they *might* be applied to sport settings, using experiential examples, throughout. In other words, we are not prescriptive with our offerings here, but rather, we offer some guidance as to how ACT could be applied with athletes.

Exploring Cognitive (De)Fusion, Avoidance, and Acceptance to Develop Openness

Exploring "What's showing up?" for the athlete helps the SP to better understand the athlete's current challenge(s) (i.e., presenting problem) by identifying the athlete's cognitive fusion and experiential avoidance. ACT is a flexible process with no correct place to start within the ACT hexaflex model (Turner et al., 2020). However, there is a (somewhat) natural link between the athlete's cognitive fusion and experiential avoidance and discussions that typically occur within the intake process (see Keegan, 2016; Taylor & Schnieder, 1992).

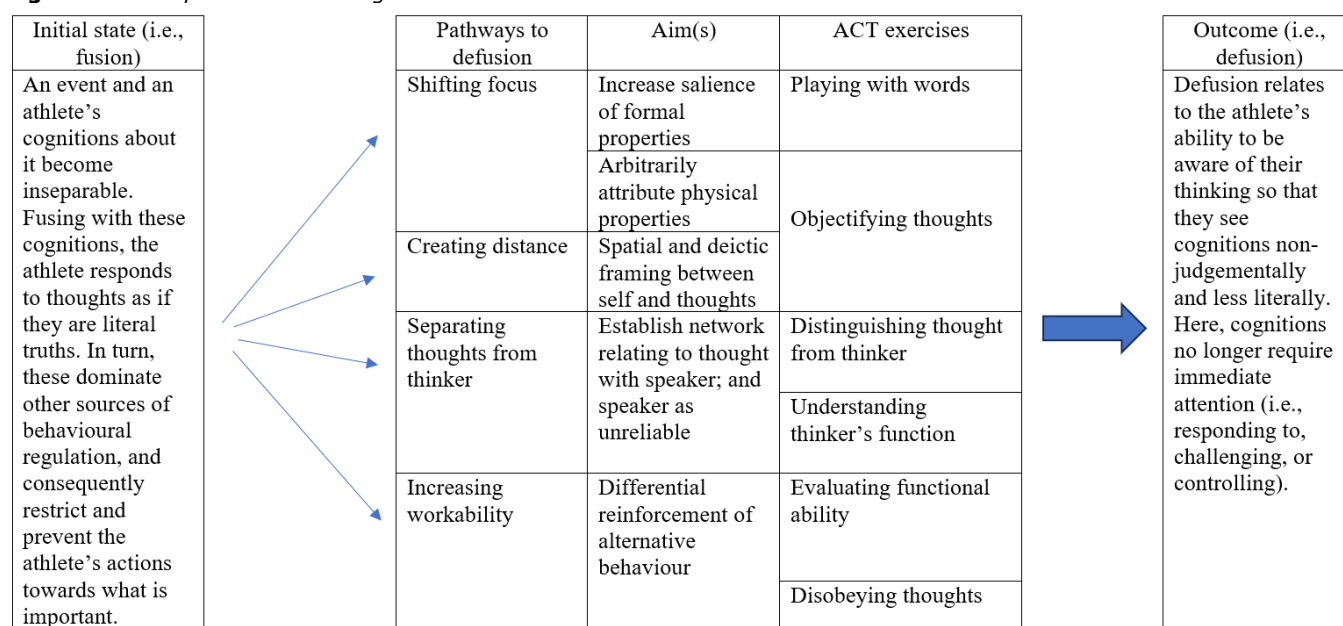
High cognitive fusion means the athlete's thoughts overpower other interpretations of their situation. For example, an athlete may fuse with future-focused cognitions (e.g., "What if I fail?", "What if I do badly?"),

with their self-concept (e.g., “What if I’m not good enough?”, “Will I ever be good enough?”), or rules (e.g., pressure giving back to those who supported them). Let us take the example of an athlete who has recurrent thoughts of being sick at competitive events (where the thought of being sick negatively impacts their performance). This arbitrary relationship established between the stimuli “competition” and “being sick” is relational framing. This is controlled by relational contexts of causality (if, then) and the functional contextualism of anxiety (i.e., threat or pressure). Therefore, the aversive function of being sick may transform the function of competition, evoking a “fused” response that is congruent with the thought’s content, leaving the athlete avoiding competitive events. Typically, the athlete’s fusion is reflected in their behaviour. Asking, “What would I see you do if you were having these thoughts?” paints a picture of the athlete they currently are, contrasting this against the athlete they hope to be. For example, an athlete low in confidence may lack commitment – to training, learning new skills, or withdraw from physical aspects of a game. They may become frustrated and shout, throw their head back, look like they have given up, be overly self-critical, or ruminate (i.e., *experiential avoidance*).

A key aspect for developing openness is encouraging the athlete to accept, rather than change, the cognitions they are fusing with. Within the wider ACT literature,

defusion is discussed as a procedure, process, and outcome, which creates ambiguity, decreases precision, and increases the chances of making category mistakes (Assaz et al., 2023). Seeing fusion and defusion as a continuum (Blackledge, 2007), defusion might be best considered an outcome (Assaz et al., 2023). Consequently, defusion exercises develop flexible thinking and encourage the athlete to experience thoughts and feelings simply as mental events, rather than seeing them as completely true or reflective of reality (Ruiz et al., 2023). Defusion aims to encourage athletes to observe thoughts non-judgementally, reducing the power (and negative impact) of unhelpful thoughts on emotions and behaviours (Assaz et al., 2023). There is no agreed-upon taxonomy for categorising or linking cognitive defusion processes with possible interventions. In addition, some exercises potentially ascribe to more than one component of psychological flexibility (e.g., contact with the present moment, self-as-context). Given the wider ACT literature is yet to evidence the effectiveness of one approach over another (see Ruiz et al., 2023), SPs might briefly introduce different routes to defusion, before exploring in more detail the route the athlete connects with best. Athletes might need practice to find exercises comfortable and effective. Below, we outline four routes to achieving defusion, highlighting possible exercises aligned to each (summarised in Figure 1).

Figure 1. Conceptualisation of Cognitive Defusion



Shifting Focus

Playing with words exercises are somewhat exposure-based procedures (i.e., repeated contact with the target thought). For example, an athlete experiencing performance anxiety, fusing with cognitions about performing badly, might repeatedly think “What if I do badly?”. Shifting the focus of this thought, they might repeat “What if I do badly?” out loud, sing “What if I do badly?” to a familiar tune (e.g., happy birthday), or say “What if I do badly?” in a strange tone (i.e., the voice of a cartoon character) or say it slowly, emphasising the syllables (Harris, 2019). These exercises promote defusion by shifting the stimulus control from the word’s meaning to their formal properties (e.g., how the words sound and feel;

i.e., movement of the jaw, mouth, and tongue) (Assaz et al., 2023).

Creating Distance

Attributing physical properties, (e.g., size, shape, weight, and texture) to a thought helps establish spatial distance between the thought and individual (Assaz et al., 2023). Sticking with the previous example, the athlete might visualise “What if I do badly?” on paper, see the words flash across a computer screen, or visualise a “self-doubt” monster (Harris, 2019). Alternatively, the SP might describe thoughts like passengers on a bus being driven by the athlete (Hegarty & Huelsmann, 2020). Objectifying thoughts in this way enhances the salience of physical

properties, albeit arbitrarily attributed, reducing the control the thought exerts over the athlete (Assaz et al., 2023). The idea this changes a thought's function has not been investigated, yet we are anecdotally aware of the benefits of a distant perspective as we might respond differently to a dangerous situation unfolding in our town/city versus a different continent. (Kross & Ayduk, 2017).

Separating Thoughts from Thinker

Here thoughts are seen as a verbal response – a psychological experience – from the “thinking athlete”. Helping the athlete understand their mind is separate to them encourages self-evaluation of themselves as an unreliable, untrustworthy thinker (Harris, 2019). In the same way that dreams are different to reality, the athlete's behaviour does not represent reality, despite being functionally valid (i.e., solves problems and helps the athlete interact more effectively with their environment) (Assaz et al., 2023). First, the SP can help the athlete understand “What if I do badly?” is constructed in seconds because of randomly defined relations influenced by previous history (Hayes et al., 2006). Second, the athlete can learn to “thank” their brain for the thought “What if I do badly?”, or notice “I’m having the thought that I might do badly?” to see thoughts as thoughts (Harris, 2019).

Increasing Workability

This requires the athlete to evaluate the function of their cognitions, considering how useful the thought “What if I do badly?” is in pursuing valued-based living – which links to workability and the choice point (i.e., “are the thoughts or the athlete in charge?”; see Harris, 2019). Alternatively, the athlete can consider disobeying their thoughts, creating an incongruent experience between thought and action (e.g., performing an action after convincing themselves not to) (Assaz et al., 2023). Here, the usual response is extinguished in favour of a new or alternative one that is reinforced, achieving defusion by broadening the stimulus control (Assaz et al., 2023).

Emphasising Engagement: Values and Committed Action

Identifying “what's important” to the athlete helps them understand the athlete they want to be. The SP might start by introducing values, discussing goals as specific targets, like travelling to a destination (e.g., travelling to the United States) and values (e.g., curiosity, empathy, humility) as more like a general direction of travel (e.g., travelling West). Values provide an alternative focus to the athlete's sport-specific, outcome goals, which they might (rather positively) perceive as more within their control. Presenting the athlete with a list of values to choose from might be most productive. The athlete should then consider how each value relates to them. Sometimes, this task is effective when done without the gaze of the SP. However, it is important to discuss the athlete's values to understand why they are important for them and their performance. Once the initial list of values has been created, the SP should facilitate a refining process, grouping and discarding values, so that the athlete develops 3-5 “headline” values. Asking them to think about the tributes they would dream of hearing in their retirement also encourages the athlete to focus on what is important. Next the developed labels are finalised. Here, the SP prompts the athlete to consider how they might demonstrate their values in training and competition (i.e., their committed action), encouraging practical ways to action values, by describing their intended behaviours.

Improving Awareness: Actively Noticing and Being Present

Introducing *the noticing self* is perhaps best done using experiential exercises. First, the athlete sits quietly with their forefinger on their thigh. Focusing on their breathing, the athlete is encouraged to clear their head of any thought, and then wait to see what thoughts appear. If thoughts are future-focused (e.g., “What if I play badly in this weekend's match?”), they slide their fore finger towards their knee. If thoughts focus on the past (e.g., “I was really poor in training today”), they slide their finger towards their hip. Having the athlete physically move their finger up and down their thigh helps identify thoughts wandering, like a spotlight searching and scanning, but able to settle. Formal mindfulness activities over a week, recorded by the athlete, can help document typical cognitions. This helps the athlete notice recurrent thoughts, appreciate that few thoughts need acting on, and learn to notice thoughts non-judgementally (i.e., self-as-context). Additionally, the SP can cross-check the thoughts identified here with those the athlete fuses with, demonstrating the iterative nature of ACT interventions.

Similarly, breathing exercises can help the athlete learn to connect with here-and-now-experiences. Colourful breathing asks the athlete to see one colour when inhaling and a different colour when exhaling, engaging other senses (i.e., listening to and feeling breaths) with breathwork. Alternatively, “sense-checking”, where the athlete notices what they can see, hear, feel, touch, and taste, can be effective. For example, focusing on individuals in the crowd and crowd noise; noticing signage around them; feeling the breeze against their body; feeling and listening to their feet moving on the floor; or seeing the detailing of their equipment. Of course, noticing every sense can be overwhelming. In addition, highlight that Lego, Sudoku, crosswords, colouring, swimming while focusing on the black line at the bottom of the pool are all examples of being present. This makes “being present” feel achievable and (possibly) links to activities the athlete is already doing, appreciating that mindfulness is about bringing focus – and consequently, thoughts – to the “here and now”. These exercises can be easily incorporated into normal sporting routines, emphasising that mindfulness is more dynamic than meditation or yoga. Together, these sessions encourage the athlete to see thoughts as thoughts, while equipping them with strategies to be present when entangled in, and/or overwhelmed by, unhelpful performance thoughts.

Exploring Different Modalities for Employing ACT in Applied Sport Psychology

Our aim here is to outline how ACT can be used across typical modalities for SPs: individual consultations; brief and single-session therapy; and educational workshops. Importantly, within this section, we share our perspective of how ACT might be used in applied sport psychology. We hope this provides further value. To provide context, we relate what is discussed above to the example supporting athletes with performance anxiety.

Individual Consultations

ACT encourages practitioners to continually develop new and varied strategies within interventions (Smout, 2012). A strength of ACT is its flexible, principles-driven delivery (Ong et al., 2024), meaning it can be delivered within a range of professional philosophies, suited to both client-led and practitioner-led approaches to service delivery. It is important to note that there is no “correct order” for ACT interventions (see Turner et al., 2020), a correct order to explore the hexaflex model, or indeed a

need to address the different aspects of the hexaflex in equal measure within a single intervention. Published case studies demonstrate that ACT can be delivered over short interventions (e.g., six sessions; see Wood & Turner, 2023), or over longer durations (see Wood & Turner, 2024a). SPs employing ACT might continually review treatment goals (Hayes et al., 2004) and ask athletes to complete tasks between sessions (see Turner & Barker, 2014). Taking the above into consideration, we now present how ACT might be employed in individual consultations supporting an athlete with performance anxiety, based on the first author's experiences.

In session 1, the SP might explore what performance-hindering cognitions the athlete experiences, and labelling these, to improve the athlete's ability to notice (and consequently become more aware of) their thoughts. For example, the athlete might be fusing with their self-concept, questioning if they "will ever be good enough". Session 2 might focus on exploring the athlete's values and how these can be demonstrated. Following our example, let us assume the athlete values "growth", "curiosity", and "adventurousness". Demonstrating these through actions of committing to, and being brave in, uncomfortable situations might help facilitate a focus on the process – and learning from experiences – more than the outcome of a season or career. In session 3, the SP might explore the types of behaviour(s) typically observed when the athlete experiences the cognitions they fuse with (i.e., experiential avoidance). In sessions 4 and 5, the SP can begin to educate the athlete on strategies to facilitate acceptance. For example, the athlete might use the "thanks brain" response to defuse their thought "Will I ever be good enough?" and formal mindfulness activities to connect with the present moment and appreciate not all thoughts need acting on (i.e., self-as-context). These exercises help to increase the athlete's workability of their thoughts. In session 6, the SP might conduct a formal review of work conducted.

Brief and Single Session Interventions

Traditionally, SPs deliver interventions over multiple sessions (Pitt et al., 2020). However, fast-paced environments that SPs often operate requires effective and impactful interventions within a single session (see Bowman & Turner, 2022). Consequently, the use of brief and single-session CBTs in sport psychology is growing (Britton et al., 2024), with evidence supporting single sessions of ACT (e.g., Barreto & Gaynor, 2019). Using the framework outlined by Turner (2022), condensing a 'typical' session into a very brief 15 minutes might look like this:

First 3 minutes

Focus on building rapport (e.g., "How have things been?" "How was training earlier?" "Did you see the game last night?"), and setting the agenda for the session (e.g., "What do you want to talk about today?" "What can we get done?").

Middle 10 minutes

Successful single-session interventions set realistic and appropriate goals for how the SP can best support the athlete in one session. Rather than squeeze multiple sessions into one, the SP should be selective, focussing support where needed. The ACT matrix might prove useful for structuring discussions (see Schwabach et al., 2019), with noticing (i.e., being present) captured at the centre of the matrix. In our example of performance anxiety, the SP might focus on cognitive fusion. The athlete might be fusing with future-focused thoughts (e.g., "What if I do badly") or their self-concept (e.g., "What if I'm not good enough?"). First, the SP might encourage the athlete to label their

recurrent thoughts (e.g., "here's the 'I'm not good enough story' again"). The SP might then focus on the defusion strategy of "thanks brain", creating distance between the athlete and their thought. Next, the SP might educate the athlete on the importance of connecting with the present moment by physically moving (e.g., pressing their feet into the floor, stretching, standing, shrugging their shoulders) or engaging their senses (e.g., "What can I feel, see, and hear?"). This requires practice (as a homework task) but can be easily incorporated into most sporting routines, pre- and mid-performance (both in training and competition).

Last 2 minutes

Summarise the work done (e.g., "So, going forward you say you are going to..."), referring to the ACT matrix and the exercises discussed. Closing questions (e.g., "Is there anything else you wanted to talk to me about?") will conclude the interaction.

Workshops

Within the wider literature, ACT workshops may be termed acceptance and commitment *training* more than therapy due to the lack of therapeutic processes (Cihon et al., 2021). Either way, ACT is still an appropriate acronym (Hayes et al., 2011) which we continue to use throughout this section. The experiential nature of ACT exercises makes them highly suitable for workshops, but some ACT concepts might be better suited to workshops than others. For example, in group scenarios, engagement is perhaps the easiest pillar to cover, with openness perhaps the most challenging with athletes potentially feeling vulnerable sharing publicly, or discussing with peers, the cognitions they are fusing with. Crucially, a lack of transparency of workshop delivery, combined with a lack of experimental control, make it difficult to evidence effectiveness of, or replicate, workshops (Cihon et al., 2021). With workshops typically forming a core part of applied sport psychology, we discuss here how an ACT workshop on performance anxiety might look within a sport context.

Starter Activity

Focusing on reducing the effects of anxiety by connecting with the present moment, a workshop might start by asking participants to recall experiences of near perfect, previous performances, when they were in a flow state, linking to the idea of being fully present in sport and its importance to good performances. Exercises that demonstrate mindfulness (e.g., colouring tasks, sudoku's, crosswords, and puzzles) are also friendly ways to introduce the concept of "being present".

Therapeutic Processes of ACT

It is important to explain the background of ACT (e.g., the hexaflex model and key processes associated with the theme of the workshop). In addition, highlighting the evidence-base for the effectiveness of being mindful during sport might be useful (e.g., Birrer et al., 2012; Gardner & Moore, 2012).

Practical/Experiential Activities

Next, the SP might cover a formal mindfulness activity, like the finger on the thigh exercise outlined above, or simply have athletes study their water bottles (i.e., looking for any visible marks on the outer casing, examining logos, the finish of the bottle; feeling the weight of the water inside the bottle; listening to the sound of the water move as the bottle is tilted side to side). These exercises encourage connecting with the present moment. As a second activity, the group might explore their values (individually and as a group, if required) while considering their associated desired behaviours (i.e., committed action). Here, a digital tool (e.g., Padlet) can collate responses across the group. In addition, coaches might appreciate the output of this workshop – a player-led

resource for athlete/player management. Of course, as with all group delivery, it can sometimes be challenging to both ensure tasks are received by the group, as intended, and to keep the group on task.

Summary

Recapping on the main points helps connect the practical activities and theory. Importantly, asking athletes what they have learned, and leaving time for questions and feedback helps evaluate whether the workshop achieved its intended outcomes.

Some Potential Challenges of Applying ACT in Sport

Arguably, the notion of challenging and restructuring unhelpful cognitions, typically associated with second-wave behaviour therapies (e.g., cognitive therapy and rational emotive behaviour therapy; Beck, 2011; Young & Turner, 2023) is more established in applied sport psychology. This can mean that ACT's approach of prioritising the workability of thoughts (i.e., "Will focusing on these thoughts take you closer to the athlete you want to be?") and seeing unhelpful thoughts non-judgementally and less literally (i.e., accepting, rather than changing, unhelpful thoughts) appears counter intuitive. ACT's philosophy needs clearly communicating to sport organisations and athletes to navigate this difficult "sell". Acceptance as part of the athletic experience is well evidenced (Gardner & Moore, 2012) and acceptance is linked to reducing ironic rebound effects (Wegner, 1994) and reinvestment (Baumeister, 1984). Focusing on the present moment can facilitate automatic execution of performance (Gardner & Moore, 2012) and allow for goal-directed adjustments (Birrer et al., 2012). Nonetheless, acceptance can be (mis)interpreted as "rolling over" and "listening" to performance-hindering cognitions. It is often useful to highlight how challenging or changing cognitions increases the struggle for emotional control (i.e., creative hopelessness). To illustrate this, SPs might ask the athlete to numb their leg with their thoughts, to delete a memory from their day, or to not think about their sport (Harris, 2019). Highlighting how ineffective strategies to control cognitions might have served in the past, and how the high pressured environment of sport risks unhelpful cognitions resurfacing (Hayes et al., 1999), allows exploration of different strategies to handle unhelpful cognitions (i.e., acceptance and defusion; see Harris, 2019).

In addition, increasing awareness of thoughts, mindfulness (often perceived to be quiet meditation) and the self-as-context (or the "noticing self"), can be difficult concepts to explain to athletes. Indeed, ACT employs some abstract concepts, delivered through a series of (potentially confusing) metaphors. The ACT matrix (Schwabach et al., 2019) provides a framework to visually represent actions and internal experiences from the athlete's perspective. The matrix captures actions that move the athlete toward (i.e., committed action) or away from (i.e., experiential avoidance) the athlete they want to be along a horizontal continuum, which is intersected with a vertical continuum that represents (internal) 'mental experiencing' (i.e., the client's thoughts and feelings) at one end and (external) 'physical experiences' (i.e., how the client acts) at the other (Levin et al., 2017). This creates four quadrants: the athlete's experiences (i.e., physical and mental) and the function of their actions (i.e., helpful and unhelpful). This invites the athlete to take a self-as-context and 'present moment' view of most situations (Schwabach et al., 2019). Rather helpfully, this tool encapsulates the flexibility of ACT interventions, where the SP can begin the intervention with

either quadrant, and progress to subsequent quadrants in any order.

Lastly, a more prominent challenge of applying ACT within sport is difficulties assessing and evaluating its effectiveness. This issue has two components. First, is evaluating applied practice – for example, interventions delivered through individual consultations. Here, taking a constructivist approach (see Keegan, 2016), verbal feedback can be a valued mechanism for understanding athlete experiences of interventions. Hartley's (2020) prompts (e.g., what progress have you made during our work together? Have we achieved the goals of our work? Is there anything you would change?) can frame these discussions. In our experience, athletes discuss feeling better able to regulate their emotions; more present and focused; and less distracted by their negative thoughts; how accepting cognitions takes the pressure off needing to find solutions; and prefer focusing on values, more than goals.

Despite a growing number of applied case studies, to further establish ACT in sport, research is needed to understand the effects of ACT with athletes using single-case experimental designs and qualitative examinations of the nature and type of psychological (in)flexibility. Further, although pre- and post-intervention measurements can increase confidence that an intervention is responsible for observable changes (Anderson et al., 2002), this requires some additional thought with ACT interventions. Psychometric measures assessing changes in sport-specific issues, like the self-compassion scale (Raes et al., 2011), the Trait and State Sport-Confidence Inventories (Vealey, 1986), and the Sport Anxiety Scale-2 (Smith et al., 2006), are rooted in second-wave behaviour therapy approaches – which have different therapeutic outcomes to ACT – and typically focus on assessing changes in cognitions. For example, items on the SAS-2 like "I worry I will not play well" is a cognition that athletes are likely to experience before and after an ACT intervention focused on reducing an athlete's performance anxiety. Consequently, despite the athlete feeling less anxious, SAS-2 scores may remain unchanged – because the intervention goals were not to change the content of cognitions – meaning it is unhelpful to evaluate the effectiveness of ACT interventions in sport using these psychometric measures (see Wood & Turner, 2024b).

Several, clinically-focused ACT psychometric measures exist that evaluate various ACT concepts, including: adaption to stressful events (the Cognitive Flexibility Inventory; Dennis & Vander Wal, 2010); consistency of acting in line with values (the Valuing Questionnaire; Smout et al., 2014); mindfulness (the Five Facet Mindfulness Questionnaire; Baer et al., 2006); believability of thoughts (the Automatic Thoughts Questionnaire-Believability; Netemeyer et al., 2002); and fusion with cognitions (the Cognitive Fusion Questionnaire; Gillanders et al., 2014). However, their general focus can hinder athlete engagement when applied to a sport context. The Athlete Mindfulness Questionnaire (Zhang et al., 2017) with several subscales that are close to ACT processes (connecting with the present moment; awareness; and acceptance) might be the most appropriate questionnaire for measuring ACT interventions in sport. Yet, developing sport-focused ACT measures for other aspects of the ACT hexaflex model (e.g., defusion) relevant for the athlete population would be fruitful to effectively capture changes across different groups. Moreover, this would facilitate the execution of experimental studies (e.g., experimental vs. control conditions) which would robustly support the use of ACT with athletes.

Concluding Remarks

The use of ACT in sport settings has grown exponentially in recent years, and this professional practice paper adds to the growing literature concerning the details and procedures in using ACT with athletes. A newer approach than other, more established, CBTs, ACT is in the early stages of empirical evaluation. Consequently, despite its growing application to various domains, there is still questionable evidence that ACT is effective (see Hacker et al., 2016). We offer a model of practice that could be adopted with athletes, detail how ACT can be applied, and document some challenges SPs might face, especially the challenges of quantitatively evidencing the effects of ACT, highlighting the need for sport-specific measurement aligned with ACT's mechanisms of change. Future research should investigate the mechanisms that underpin ACT and how these facilitate performance through objective measures of performance.

References

- Andersen, M. B. (2009). The "canon" of psychological skills training for enhancing performance. In *Performance psychology in action: A casebook for working with athletes, performing artists, business leaders, and professionals in high-risk occupations*. (pp. 11-34). American Psychological Association. <https://doi.org/10.1037/11876-001>
- Anderson, A. G., Miles, A., Mahoney, C., & Robinson, P. (2002). Evaluating the effectiveness of applied sport psychology practice: Making the case for a case study approach. *The Sport Psychologist*, 16(4), 433-454. <https://doi.org/https://doi.org/10.1123/tsp.16.4.432>
- Assaz, D. A., Tyndall, I., Oshiro, C. K., & Roche, B. (2023). A process-based analysis of cognitive defusion in acceptance and commitment therapy. *Behavior Therapy*, 54(6), 1020-1035.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using Self-Report Assessment Methods to Explore Facets of Mindfulness. *Assessment*, 13(1), 27-45. <https://doi.org/10.1177/1073191105283504>
- Barreto, M., & Gaynor, S. T. (2019). A single-session of acceptance and commitment therapy for health-related behavior change: Protocol description and initial case examples. *Behavior Analysis: Research and Practice*, 19(1), 47-59. <https://doi.org/10.1037/bar0000093>
- Baumeister, R. F. (1984). Choking under pressure: self-consciousness and paradoxical effects of incentives on skillful performance. *Journal of personality and social psychology*, 46(3), 610.
- Beck, J. S. (2011). *Cognitive behaviour therapy: Basics and beyond* (2nd ed.). Guildford Press.
- Birrer, D., Röthlin, P., & Morgan, G. (2012). Mindfulness to enhance athletic performance: Theoretical considerations and possible impact mechanisms. *Mindfulness*, 3(3), 235-246.
- Blackledge, J. T. (2007). Disrupting verbal processes: Cognitive defusion in acceptance and commitment therapy and other mindfulness-based psychotherapies. *The Psychological Record*, 57, 555-576.
- Bowman, A. W., & Turner, M. J. (2022). When time is of the essence: The use of rational emotive behavior therapy (REBT) informed single-session therapy (SST) to alleviate social and golf-specific anxiety, and improve wellbeing and performance, in amateur golfers. *Psychology of sport and exercise*, 60, 102167. <https://doi.org/https://doi.org/10.1016/j.psychsport.2022.102167>
- Britton, D., Wood, A. G., & Pitt, T. (2024). Having Impact and Doing It Quickly: The Place for Brief and Single-Session Cognitive-Behavioral Therapies in Sport Psychology Practice. *The Sport Psychologist*, 1-10. <https://doi.org/10.1123/tsp.2021-0146>
- Cihon, J. H., Ferguson, J. L., Leaf, J. B., Milne, C. M., Leaf, R., & McEachin, J. (2021). Acceptance and commitment training: A review of the research. *European Journal of Behavior Analysis*, 22(2), 275-295. <https://doi.org/10.1080/15021149.2021.1880688>
- Dennis, J. P., & Vander Wal, J. S. (2010). The cognitive flexibility inventory: Instrument development and estimates of reliability and validity. *Cognitive Therapy and Research*, 34(3), 241-253. <https://doi.org/https://doi.org/10.1007/s10608-009-9276-4>
- Gardner, F. L., & Moore, Z. E. (2012). Mindfulness and acceptance models in sport psychology: A decade of basic and applied scientific advancements. *Canadian Psychology/Psychologie Canadienne*, 53(4), 309.
- Gardner, F. L., & Moore, Z. E. (2017). Mindfulness-based and acceptance-based interventions in sport and performance contexts. *Current Opinion in Psychology*, 16, 180-184.
- Gillanders, D. T., Bolderston, H., Bond, F. W., Dempster, M., Flaxman, P. E., & Campbell, L. T. (2014). The development and initial validation of the cognitive fusion questionnaire. *Behavioural Therapy*, 45(1), 83-101. <https://doi.org/10.1016/j.beth.2013.09.001>
- Hacker, T., Stone, P., & MacBeth, A. (2016). Acceptance and commitment therapy – Do we know enough? Cumulative and sequential meta-analyses of

- randomized controlled trials. *Journal of Affective Disorders*, 190, 551-565. <https://doi.org/https://doi.org/10.1016/j.jad.2015.10.053>
- Harris, R. (2019). *ACT made simple: An easy-to-read primer on acceptance and commitment therapy* (2nd ed.). New Harbinger Publications.
- Hartley, C. (2020). Navigating subclinical sport psychology as a trainee: A case study of acceptance and commitment therapy in elite youth athletics. *Case Studies in Sport and Exercise Psychology*, 4(S1), S1-44.
- 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/https://doi.org/10.1016/j.brat.2005.06.006>
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy* (Vol. 6). Guilford Press New York.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guilford Press.
- Hayes, S. C., Strosahl, K. D., Luoma, J., Smith, A. A., & Wilson, K. G. (2004). ACT case formulation. In S. C. Hayes & K. D. Strosahl (Eds.), *A Practical Guide to Acceptance and Commitment Therapy*. Springer.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). Guilford Press.
- Hegarty, J., & Huelsmann, C. (2020). *ACT in Sport: Improve Performance through Mindfulness, Acceptance, and Commitment*. Dark River.
- Keegan, R. (2016). *Being a sport psychologist*. Palgrave Macmillan.
- Kross, E., & Ayduk, O. (2017). Chapter Two - Self-Distancing: Theory, Research, and Current Directions. In J. M. Olson (Ed.), *Advances in Experimental Social Psychology* (Vol. 55, pp. 81-136). Academic Press. <https://doi.org/https://doi.org/10.1016/bs.aesp.2016.10.002>
- Levin, M. E., Pierce, B., & Schoendorff, B. (2017). The acceptance and commitment therapy matrix mobile app: A pilot randomized trial on health behaviours. *Journal of Contextual Behavioural Science*, 6(3), 268-275.
- Luoma, J., B., Hayes, S. C., & Walser, R., D. (2007). *Learning ACT: An acceptance & commitment therapy skills-training manual for therapists*. New Harbinger Publications.
- Moore, Z. E. (2009). Theoretical and empirical developments of the Mindfulness-Acceptance-Commitment (MAC) approach to performance enhancement. *Journal of Clinical Sport Psychology*, 3(4), 291-302.
- Moore, Z. E., & Gardner, F. L. (2001, October). *Taking applied sport psychology from research to practice: Integrating empirically supported interventions into a self-regulatory model of athletic performance*. Annual Conference of the Association for the Advancement of Applied Sport Psychology, Orlando, Florida.
- Netemeyer, R. G., Williamson, D. A., Burton, S., Biswas, D., Jindal, S., Landreth, S., Mills, G., & Primeaux, S. (2002). Psychometric properties of shortened versions of the automatic thoughts questionnaire. *Educational and Psychological Measurement*, 62(1), 111-129. <https://doi.org/https://doi.org/10.1177/0013164402062001008>
- NHS. (2024). *Acceptance and Commitment Therapy*. <https://shorturl.at/LHQF9>
- NICE. (2021). *Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain*. Retrieved 13/05/2024 from <https://shorturl.at/UfZVe>
- Olusoga, P., & Yousuf, S. (2023). Acceptance and Commitment Therapy (ACT). In *Applying Cognitive Behavioural Therapeutic Approaches in Sport* (pp. 26-43). Routledge.
- Ong, C. W., Ciarrochi, J., Hofmann, S. G., Karekla, M., & Hayes, S. C. (2024). Through the extended evolutionary meta-model, and what ACT found there: ACT as a process-based therapy. *Journal of Contextual Behavioral Science*, 32, 100734. <https://doi.org/https://doi.org/10.1016/j.jcbs.2024.100734>
- Pitt, T., Thomas, O., Lindsay, P., Hanton, S., & Bawden, M. (2020). A Framework of Single-Session Problem-Solving in Elite Sport: A Longitudinal, Multi-Study Investigation [Original Research]. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.566721>
- Poczwardowski, A., Sherman, C. P., & Ravizza, K. (2004). Professional philosophy in the sport psychology service delivery: Building on theory and practice. *The Sport Psychologist*, 18(4), 445-463.
- Price, D., Wagstaff, C. R., & Thelwell, R. C. (2022). "What if I Get Injured?": An Acceptance and Commitment Therapy Approach for Fear of Injury With a Semielite Youth Snowboarder. *Case Studies in Sport and Exercise Psychology*, 6(1), 12-20.
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and Factorial Validation of a Short Form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy*, 18, 250-255.
- Ruiz, F. J., Gil-Luciano, B., & Segura-Vargas, M. A. (2023). Cognitive Defusion. In M. P. Twohig, M. E. Levin, & J. M. Petersen (Eds.), *The Oxford Handbook of Acceptance and Commitment Therapy* (pp. 206-229). Oxford University Press.
- Schwabach, J., Bartley, J., & Polk, K. (2019). Sorting it out: A framework for increasing mental flexibility and valued action in athletes using the ACT matrix. *Journal of Sport Psychology in Action*, 10(4), 208-213.
- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, 28(4), 479-501.
- Smout, M. (2012). Acceptance and commitment therapy: Pathways for general practitioners [Journal Article]. *Australian Family Physician*, 41(9), 672-676. <https://shorturl.at/2N2B4>
- Smout, M., Davies, M., Burns, N., & Christie, A. (2014). Development of the valuing questionnaire (VQ). *Journal of Contextual Behavioral Science*, 3(3), 164-172.
- Taylor, J., & Schnieder, B. (1992). The sport-clinical intake protocol: A comprehensive interviewing instrument for applied sport psychology. *Professional Psychology: Research and Practice*, 23(4), 318-325.

- Tod, D., & Eubank, M. (2020). *Applied sport, exercise, and performance psychology: Current approaches to helping clients*. Routledge.
- Turner, M., Jones, M., & Wood, A. (2023). *Applying cognitive behavioural therapeutic approaches in sport*. Taylor & Francis.
- Turner, M. J. (2022). *The Rational Practitioner: The Sport and Performance Psychologist's Guide To Practicing Rational Emotive Behaviour Therapy*. Routledge.
- 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.
- Turner, M. J., & Barker, J. B. (2014). Using Rational Emotive Behavior Therapy With Athletes. *The Sport Psychologist*, 28, 75-90. <https://doi.org/http://dx.doi.org/10.1123/tsp.2013-0012>
- Vealey, R. (1986). Conceptualisation of sport-confidence and competitive orientation: Preliminary investigation and instrument development. *Journal of Sport Psychology*, 8, 221-246.
- Watson, D. R., Gustafsson, H., & Lundqvist, C. (2023). Working with perfectionistic athletes in sport: An Acceptance and Commitment Therapy perspective. In *The Psychology of Perfectionism in Sport, Dance, and Exercise* (pp. 285-304). Routledge.
- Wedding, D., & Corsini, R. J. (2019). *Current psychotherapies* (11th ed.). Cengage.
- Wegner, D. M. (1994). Ironic processes of mental control. *Psychological review*, 101(1), 34.
- WHO. (2021). *New stress management course for people living with adversity*. <https://shorturl.at/EQ4XW>
- Wood, S., & Fletcher, D. (2023). Using Acceptance and Commitment Therapy for Unhelpful Thinking Toward Body Image With an Elite Figure Skater. *Case Studies in Sport and Exercise Psychology*, 7(1), 98-106. <https://doi.org/10.1123/cssep.2023-0016>
- Wood, S., & Turner, M. J. (2023). Using an Acceptance and Commitment Therapy Approach for Fear of (Re)Injury With a Competitive Figure Skater. *Case Studies in Sport and Exercise Psychology*, 7(1), 150-157. <https://doi.org/10.1123/cssep.2023-0033>
- Wood, S., & Turner, M. J. (2024a). Using Acceptance and Commitment Therapy to Develop Self-Confidence in a Neurodivergent Athlete. *Case Studies in Sport and Exercise Psychology*, 8(1), 37-46. <https://doi.org/10.1123/cssep.2023-0040>
- Wood, S., & Turner, M. J. (2024b). Using an Acceptance and Commitment Therapy Approach to Overcome Distractive Overthinking with a High School Baseball Player. *Case Studies in Sport and Exercise Psychology*, 8(1), 8-15. <https://doi.org/http://dx.doi.org/10.1123/cssep.2023-0036>
- Young, P., & Turner, M. J. (2023). To (i)B or not to i(B), that is the question: on the differences between Ellis' REBT and Beck's CT. *the Cognitive Behaviour Therapist*, 16, e16, Article e16. <https://doi.org/10.1017/S1754470X23000090>
- Zhang, C.-Q., Chung, P.-K., & Si, G. (2017). Assessing acceptance in mindfulness with direct-worded items: The development and initial validation of the Athlete Mindfulness Questionnaire. *Journal of Sport and Health Science*, 6(3), 311-320.

<https://doi.org/https://doi.org/10.1016/j.ishs.2015.09.010>