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Edited by Stephanie J. Hanrahan and Mark B. Andersen
Acceptance-based behavioral therapies and sport

Frank L. Gardner and Zella E. Moore

During the past decade, there has been a dramatic increase in the theory development, scientific research, and practice of psychological interventions often known as acceptance-based behavioral therapies (ABBT; Roemer & Orsillo, 2009). These approaches, derived from the clinical discipline within professional psychology, are often referred to as the “third wave” of behavioral psychology, and have a view of human progress, human suffering, and overall human existence that is distinctly different to previous models of therapy. The most well-known ABBT in clinical psychology is acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999), which has demonstrated sound efficacy as an intervention for a variety of clinical issues such as depression, binge eating disorder, generalized anxiety disorder, substance abuse and dependence, and borderline personality disorder (e.g., Roemer & Orsillo, 2009). These revolutionary theoretical developments and associated interventions have not gone unnoticed in the sport-performance domain. Specifically within sport psychology, the mindfulness–acceptance–commitment (MAC) approach to performance enhancement, which Gardner and Moore (2007) developed in 2001, is an acceptance-based intervention aimed at enhancing high-level competitive performance and overall psychological well-being. In this chapter we discuss the ABBT movement and its relevance to the sport context.

Behavioral psychology through the ages

The first wave of behaviorism focused on the development of basic laws of learning, and stressed the observable relationships between stimuli, responses, and the reinforcing (and punishing) consequences following those responses (Skinner, 1953). The second wave of behaviorism was represented by the cognitive revolution within psychology (Bandura, 1969), the focus of which was to explicate and ultimately reduce, eliminate, or otherwise control maladaptive internal processes, such as cognitions and emotions, to enhance psychological wellbeing (Beck, 1976; Meichenbaum, 1977). It was during this period in the evolution of cognitive-behavioral psychology that sport psychology had its primary genesis, and the field has been strongly influenced by the theoretical models and intervention strategies that were in vogue during this time.
The foundation of behavioral psychology has always been a commitment to sound empiricism and the evolution of psychological science. Although the first two waves of the behavioral movement led to effective, albeit at times limited, interventions for a range of psychological issues (Nathan & Gorman, 2002), fascinating scientific developments began to reshape behaviorism in the late 1990s (Hayes et al., 1999), giving rise to the third wave of behaviorism. Based on emerging empirical findings, the theoretical underpinnings of the acceptance-based third-wave movement take a different perspective on the link between cognitions, emotions, and behavior. Although a comprehensive review is beyond the scope of this chapter, in summary: (a) reviews of the literature indicate that little data have been accumulated over more than 30 years of research to support the position that modification of cognitions is the essential mechanism of change in cognitive-behavioral therapy (Longmore & Worrell, 2007); (b) findings within experimental psychopathology have implicated constructs such as emotion regulation, experiential avoidance, and distress intolerance as better predictors of psychopathology and more likely mediators of therapeutic change than specific cognitive changes (Roemer & Orsillo, 2009); and (c) expanding evidence suggests that ABBTs are both efficacious and work by different mechanisms than traditional cognitive-behavioral interventions (Foreman, Herbert, Moitra, Yeomans, & Geller, 2007).

**Theoretical underpinning of acceptance-based behavioral therapies**

The findings noted above led to the development of a new empirically derived theoretical model, which formed the basis for acceptance-based behavioral therapies. ABBTs have a fundamentally different view of the primary mechanisms by which human dysfunction occurs. This theoretical perspective posits that the avoidance of internal processes such as cognitions and emotions (i.e., experiential avoidance) leads to a wide array of problematic behaviors, and that the presence of experiential avoidance and lack of experiential acceptance form the basis of human suffering and dysfunction (Hayes et al., 1999). Rather than seeking to change, reduce, or eliminate internal processes such as cognitions and emotions, as is typical of second-wave cognitive-behavioral interventions, the third wave acceptance-based theoretical model has spawned a number of psychological interventions (including acceptance and commitment therapy [ACT] in the clinical domain, and mindfulness–acceptance–commitment [MAC] in the sport and performance domains) that help develop mindful non-judging awareness of internal experiences, acceptance of internal states, and a willingness to experience these states while engaging in behaviors that are congruent with one’s personal life values. These approaches explicitly suggest that the goal is not necessarily a reduction of subjective distress or an increase in attributes such as confidence, but rather, the enhancement of behaviors directly in the service of personal values (Hayes et al., 1999).

**Sport psychology and the acceptance-based movement**

As the acceptance-based movement took hold in the clinical psychology domain, it generated revolutionary changes in the way scientists and clinicians conceptualized and treated psychopathological conditions. Nearly ten years ago, we (the authors) postulated that the acceptance-based behavioral movement would have direct theoretical and applied relevance to the practice of sport psychology, because research in sport psychology has long
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suggested the importance of maintaining a present-moment task-oriented focus of attention and full absorption in the competitive task to achieve optimal performance states. Drawing upon several clinical models, we developed an ABBT that was directly applicable to the sport-performance context, called MAC (Gardner & Moore, 2007). The development of this approach occurred as a result of the intersection between the emerging acceptance- and mindfulness-related empirical findings within clinical psychology, and the lack of consistent evidence for the efficacy of traditional psychological skills training (PST) procedures that had long dominated the North American sport psychology model. As is the case with ACT and all ABTs, MAC practitioners do not seek to help athletes think more positively or less negatively; to feel better; or to become more confident, less stressed, or more aroused. Rather, MAC professionals help performers develop the skills necessary to engage in moment-to-moment attention (in the present), without becoming entangled in their internal experiences by judging these experiences as good or bad, right or wrong, and/or wishing or attempting to make them different. In this vein, the development of mindfulness can be seen as a core facet of ABT. Mindfulness can be viewed as being with one’s internal processes rather than doing something with those processes (as is the focus within traditional PST interventions). In this way, the development of mindfulness supports and enhances one’s ability to nonjudgmentally accept internal experiences and in so doing promotes enhanced present-moment attention and awareness.

From this foundation, ABT practitioners help clients develop the skills necessary to engage in values-driven behaviors on a day-to-day basis, regardless of internal experiences (e.g., anxiety, anger, frustration, thoughts about possible failure). Rather than engaging in behaviors aimed at reducing the form or frequency of discomfort, known as experiential avoidance, these approaches instead promote experiential acceptance, which is a willingness to approach (rather than avoid) one’s life values no matter how or what one may feel or think (Gardner & Moore, 2007). For example, a primary goal of this model applied to sport would be to help athletes recognize that they can perform while experiencing a wide variety of internal states. So, an attitude of, “I want to perform well, but I’m feeling frustrated, and I don’t feel confident,” is replaced with an attitude represented by, “I want to perform well and I’m feeling frustrated and lacking in confidence.” This conceptual shift allows for a wider range of internal states in which the person is capable of functioning effectively by maintaining a greater capacity to remain task-focused in sport, performance, and overall life contexts.

Developing mindfulness and experiential acceptance

Mindfulness has been defined as an “openhearted, moment-to-moment nonjudgmental awareness” (Kabat-Zinn, 2005, p. 24) that includes two components: (a) the self-regulation of attention so that it is maintained on immediate experience, and (b) adopting an orientation toward one’s experiences in the present moment, which would best be characterized by curiosity, openness, and acceptance (Bishop et al., 2004). In turn, acceptance reflects an active process of taking in an event or situation such that one feels emotions and bodily sensations fully (and without needing to avoid or escape) and notices the presence of associated thoughts without following, resisting, believing, or disbelieving their content. An acceptance approach helps clients alter the function of private events, rather than primarily adjusting their forms or frequencies.

The strategies used in ABT for the promotion of acceptance include numerous exercises and dialogues, most of which convey the ultimate impossibility of eliminating or controlling
normal human processes, and the idea that actions do not ultimately require an ideal state of neutral or positive emotions, cognitions, or bodily sensations. There is a direct relationship between mindfulness and acceptance, and a variety of meditative-type practices (not specifically aimed at relaxation) are core components of ABBT, including those used in sport and performance contexts (see Gardner & Moore, 2007, for a full discussion of sport-related mindfulness exercises and handouts). One of the hallmarks of the ABBT approach includes mindfulness (meditative) exercises (from 10–60 minutes, both in and out of practitioner–client sessions) to help develop the capacity to become both aware of one’s experiences and understand the inherent transient nature of these experiences, and to direct education/discussion about the relative costs and benefits of efforts at control versus acceptance of internal experiences.

One of the core theoretical foundations of ABBT is the empirically derived idea that cognitions can take on the same meaning as the actual events that they represent (transfer of stimulus function), and that humans respond to thoughts and images as though they are real and not simply linguistic or imaginary representations of events. This phenomenon is commonly referred to as cognitive fusion (Hayes, Barnes-Holmes, & Roche, 2001). The strategy/process that is used to help clients recognize that thoughts are internal events that come and go (i.e., they do not have to be interpreted or changed, and do not have to guide or direct behavior) is called cognitive defusion. In essence, the strategy de-fuses the automatic connection people make between their cognitions and their behavioral responses to these cognitions. A classic defusion technique is the “milk” exercise (Hayes et al., 1999) in which clients are asked to think about the word milk (including all of the associations inherent in the word). Then, clients are asked to repeat the word continuously until the word has lost its associative meaning and all that remains is its sound. This technique helps people recognize that the association between a word or phrase and its meaning can be defused, and that particular thoughts do not have to actively and automatically direct a behavioral response.

Sport psychologists unfamiliar with ABBT theory and interventions often ask how cognitive defusion differs from traditional approaches that promote relaxation, restructuring/challenging thoughts, “letting go,” or refocusing. The essential difference is that in second-wave behavioral interventions, a variety of strategies are used to change the content of thoughts or reduce the frequency or intensity of affective responses to promote psychological wellbeing and attention to task. In contrast, ABBT practitioners do not seek to alter the content of clients’ internal experiences, but instead alter the relationships the clients have to the internal experiences. So, whether through mindfulness training or cognitive defusion, the interventions do not alter the form, frequency, or intensity of these internal experiences to promote behavior change, but endorse the idea that one can function optimally while having these experiences. This state, in turn, is the essential meaning of experiential acceptance.

The ultimate purpose of developing experiential acceptance, and the mechanism by which it may promote positive outcomes, is the influence on behavior (Kollman, Brown, & Barlow, 2009). Experiential acceptance allows individuals to live through and tolerate the variety of “negative” thoughts and emotions, yet still act in a consistent and committed manner in the service of those values that mean the most to them. Through numerous experiential exercises, clients learn to view their cognitions and emotions (perceived as positive or negative) as ever-present, naturally occurring events that do not need to be controlled, reduced, or increased for optimal human functioning. ABBT practitioners place a premium on behavioral commitment and accountability for the choices that one makes, regardless of the thoughts and feelings that are present when these choices need to be made.
In the sport context, these behaviors include both on- and off-field actions that inevitably promote enhanced athletic performance, such as practice behavior and disciplined within-competition behavior.

In addition to the ABBT components presented thus far, another critical aspect is the development of commitment to values-driven behaviors. Following (or often along with) the development of experiential acceptance, clients determine the personal values that are most meaningful to their lives. Specifically, they consider how they would like their lives to be remembered, and how they would like to be remembered as individuals (such as being a good teammate, parent, or relationship partner; being known as reliable and hard working). These values can never be fully reached, but rather, require continual effort. Unlike goals, which are either achieved or not, values are always present, are never fully attained, and are available for care and direct attention. It is these personal values that ABBT practitioners help clients purposefully and consistently pursue, and clients actively aim for these values by engaging in what are known as values-driven behaviors. Behaviors congruent with these values are contrasted with behaviors that serve the purpose of fulfilling or avoiding more immediate cognitions or emotions (emotion-driven behaviors). Continuing to practice or exercise even when tired, and walking away from an on-field frustration, are examples of values-driven behaviors; feigning illness when tired, and engaging in an altercation with a resultant penalty, are examples of emotion-driven behaviors.

Both of the values-driven examples above require individuals to: be aware of their cognitions and emotions (mindful awareness), accept and tolerate these internal experiences (experiential acceptance), focus on task-relevant cues and contingencies (mindful attention), and make behavioral choices in congruence with personal values and not immediate internal states (commitment). In sport contexts, the intervention goals of enhanced mindful awareness, mindful attention, and experiential acceptance allow clients to maintain greater attention to task relevant stimuli (as opposed to internal experiences); increase understanding of, and accountability for, events (rather than avoidant behavior); and directly promote those values-driven behaviors necessary for optimal performance (e.g., practice and training intensity, self-disciplined behavior).

The goals described above are achieved through several key steps. First, systematic training and practice in mindfulness meditative exercises such as “body scans” and “mindful breathing” techniques (Gardner & Moore, 2007) allow for enhanced attention and awareness. These exercises are not intended for relaxation, but instead increase the client’s capacity to be focused and aware in the present moment. Second, the use of cognitive defusion techniques reduces the power and influence of specific words, not by challenging the logic or objectivity of the words, but by learning to view thoughts as simply events that come and go, that neither need to be taken as literal truths nor responded to as if they were real-life events. Third, the use of exposure/emotion-focused techniques helps clients disrupt their emotional avoidance by confronting specific emotionally evocative situations and learn to experience, and ultimately accept and tolerate, “difficult” emotions that were previously avoided. Fourth, behavioral activation strategies help clients identify and consistently engage in specific behaviors that are congruent with personal values.

**Empirical support for MAC and ABBT in sport**

Since the development of the MAC approach to performance enhancement (Moore & Gardner, 2001), and its first publication (Gardner & Moore, 2004b), a number of studies...
have been published in support of it and associated ABBTs for the enhancement of overall wellbeing and performance.

The first phase of MAC’s empirical investigation was a series of case studies demonstrating the possible utility of the approach for enhancing performance (Gardner & Moore, 2004b, 2006). Although case studies are a valuable tool in the initial development of a psychological intervention, they certainly, on their own, are not sufficient to demonstrate efficacy. Wolanin (2005) conducted an open trial of MAC within a Division I collegiate athletic department, using two intercollegiate sports. Results indicated that MAC was effective at enhancing athletic performance as judged by both self and coach performance ratings as compared to a no intervention control condition. Also, as predicted by the theory underlying MAC, ratings of attention, practice intensity, and game-related aggressiveness also increased. Of note, even though some athletes are without clinical or subclinical psychological barriers, a large number of referrals to sport psychologists are based upon non-presented subclinical psychological barriers such as worry, rumination, perfectionism, and interpersonal difficulties (Gardner & Moore, 2004a). Results from Wolanin’s open clinical trial suggested that the initial 8-session MAC protocol was more effective for those athletes who manifested no subclinical psychological barriers/issues. This finding, in turn, suggested that a more flexible MAC protocol may be necessary to effectively assist the full range of athletes who come to the practitioner's attention. As a result of the study, the MAC protocol was revised from a fixed 8-session format to a flexible 7-module format, allowing the opportunity to deliver any of the modules over any number of necessary sessions (Gardner & Moore, 2007).

Following the successes of a series of case studies and the open trial, Lutkenhouse, Gardner, and Moore (as cited in Gardner & Moore, 2007) embarked upon a large (N = 118) randomized controlled trial (RCT) comparing MAC and a traditional psychological skills training protocol published by the United States Olympic Committee (USOC, 1999). Results indicated that a significantly greater number of athletes completing the MAC protocol demonstrated a clinically significant increase (at least 20%) in coach ratings of performance from pretest to posttest (32% of MAC participants vs. 10% of PST participants).

Additionally, a number of empirical investigations have used ABBT interventions that are closely related to MAC, both theoretically and procedurally, to enhance athletic performance. Using a sport-adapted version ACT with national level canoeists, Garcia, Villa, Cepea, Cuetto, and Montes (2004) found that the intervention resulted in statistically significant performance improvements on a canoeing training apparatus compared to a matched control of participants receiving a hypnosis intervention. In a more recent randomized controlled trial, Bernier, Theinot, Cuadron, and Fournier (2009) found that a different sport-adapted version of ACT, used with elite golfers at a national training institute, resulted in improved golf performance as defined by increases in national rank, when compared with a control group receiving a traditional PST intervention. Subjective ratings by both golfers and coaches also supported the efficacy of the ACT-based intervention as compared to the PST intervention.

**Conclusion**

In the last decade there has been a major shift in the theoretical and applied landscape in cognitive-behavioral psychology. The theoretical models and intervention packages once considered the gold standard in the field have been challenged by a new approach to studying and treating human behavioral issues. This new generation of behavioral psychology,
often referred to as the third wave of behaviorism, focuses on the development of mindful awareness, mindful attention, acceptance of internal experiences, and commitment to act in accordance with valued life directions. These interventions, referred to as ABBT, have contributed significantly to the clinical and counseling psychology domains, garnering substantial empirical support for a variety of clinical and subclinical concerns. Within sport, the MAC approach to performance enhancement has accumulated evidence to support both its theoretical foundations and its intervention efficacy within sport-performance contexts. Evidence in basic science has supported the underlying processes of MAC and other ABBTs, and a series of outcome studies has supported the efficacy of MAC as an evidence-based intervention for the enhancement of overall psychosocial wellbeing and performance. Although it is inevitable that the process of science will continue to provide reasons to modify and enhance any intervention, ABBTs in general, and MAC in particular, have achieved an empirical level of support sufficient to be considered a first-line intervention strategy for the sport psychologist when working with athletes. See Box 20.1 for a summary of the main key points of this chapter.

**Box 20.1**

**Summary of key points about acceptance-based behavioral therapies**

- Behavioral psychology has evolved from a focus on observable relationships between stimuli, responses, and reinforcing consequences (the first wave); to a focus on reducing, controlling, or eliminating internal processes such as cognitions and emotions (the second wave); to acceptance of internal experiences and an emphasis on enhancing behaviors connected to personal values (the third wave).

- The new class of interventions based on the third wave revolution has been termed acceptance-based behavioral therapies (ABBT). These interventions help people develop mindful non-judging awareness of internal experiences, acceptance of internal states, and a willingness to experience these states while engaging in behaviors that are congruent with one’s personal life values.

- ABBTs such as acceptance and commitment therapy (ACT) and mindfulness–acceptance–commitment (MAC) have demonstrated efficacy for the treatment of a wide variety of clinical problems and for the enhancement of performance and overall psychosocial wellbeing.

- As with clinical ABBTs, MAC professionals promote the development of: (a) mindful awareness, (b) mindful attention, and (c) an acceptance of and willingness to experience a wide range of internal experiences, in the service of (d) consistent committed behavior that is congruent with one’s personal values.

- By being aware of one’s cognitions and emotions (mindful awareness), individuals can maintain an in-the-moment focus on task-relevant cues and contingencies (mindful attention).

- Experiential acceptance is a willingness to approach (rather than avoid) one’s life values no matter how or what one may feel or think.

- Commitment is consistent activation of behavior in the service of one’s personal values.
References


