

Chapter 21

Motivation in Coaching: Promoting Adaptive Psychological Outcomes

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Chapter Overview

The purpose of this chapter is to identify theoretically driven, practical strategies that can be used to support promotion of an adaptive psychological environment for athletes. Given the influence that coaches in sport can have upon the motivational outcomes and well-being of an individual (Cronin & Allen, 2015; 2018; Keegan et al., 2014), the strategies are focused on the actions and interactions of the coaching practitioner. We begin the chapter by providing a brief overview of some of the dominant theoretical frameworks that have underpinned research into psychological environments. Having described the theoretical foundations to the research, we will review that work, and then, based on the implications, discuss strategies that could support the promotion of adaptive psychological environments.

Introduction

Competition lies at the very heart of many sporting endeavours, with its specific nature often dictating that there will be winners and losers as an outcome. While it is clear that these absolutes are less relevant to some (as many engage at least partly to compete against themselves to extend their skills, conditioning, and knowledge, for example), it is the role of the leader, often the coach, to calibrate a positive and healthy definition of success for their athletes, one that will see them enjoy and thrive within the performance arena.

An athlete's motivation sits at the core of their sporting experience, driving them towards their goals while being simultaneously moderated by the environments they act within (Ames, 1992). The specifics of the environment can be a powerful influencer of the athlete's goal-directed behaviour, and when effectively structured, organised, and with appropriate personal support, can promote positive experiences that have meaningful psychological, cognitive, and affective benefits for the individual (Dweck & Leggett, 1988).

Psychological Environments in Sport

According to social-cognitive theories of motivation, in any sport setting, the personal tendencies of an athlete will interact with the situational cues they experience (e.g., the coach, peers, activities, opposition) to prompt a range of both (potentially) positive and negative psychological outcomes (Maehr, 1983). Indeed, it is *how* these cues are subjectively perceived by the athlete that will, in turn, prompt their cognitive and affective responses (Ames, 1992; Maehr, 1983; Roberts, 2012). Coaches positively influence an athletes' perceptions of the achievement environment through using language and behaviours that instil a pattern of adaptive cognitive responses (Ames, 1992, Roberts, 2012). More broadly, and to increase the likelihood of desirable cognitive and affective outcomes, the coach can aim to create an adaptive *psychological climate* for their athletes.

Psychological climate is a term used to describe the motivational features of an achievement setting and the subjective meaning given to those features from the individual participants who experience it (Maehr & Braeskamp, 1986). This general term will be used throughout this chapter to describe the psychological environment within an achievement setting; it is a phrase that will also serve to highlight many of the overlapping principles between theories and provide a coherent summary of knowledge to date. We now turn to address the two dominant theories associated with research into psychological climates within sport: *achievement goal theory* (AGT; Nicholls, 1984) and *self-determination theory* (SDT; Deci & Ryan, 1985; 2002). Each theory has established efficacy in describing and explaining achievement environments, and thus represent appropriate theoretical anchors (Layder, 1998) to help support coaches in the development of adaptive psychological environments.

Achievement Goal Theory

AGT (Nicholls, 1984) is one of the most established theories of motivation within the sport and exercise psychology literature (Roberts, 2012). As a competence-based social-cognitive theory, AGT is grounded through the basic assumption that we, as human beings, are intentional, rational goal-directed organisms, and that achievement goals reflect and guide beliefs and decision-making in achievement contexts (Roberts, 2012). According to Nicholls' theory, it is an individual's perception of what competence means that drives behaviours. For example, those individuals who are primarily concerned with mastering tasks and who construe competence through self-referenced criteria can be regarded as *task-involved*, whereas those whose competence judgements are based on how they perform relative to others are described as *ego-involved* (Jaakkola et al., 2016; Roberts, 2012). At any given moment in an achievement context (e.g., after conceding a try in a rugby game, taking a free-throw shot in basketball) an individual's state of involvement (or *why*) drives their thoughts, feelings,

and behaviours. This is a dynamic state, and these motives sit on a continuum that extends from a strong ego- to a strong task-involvement (Gernigon et al., 2004). A person's goal involvement is based on their moment-to-moment perception of the environment interacting with their predisposed goal involvement; the latter being referred to as a *goal orientation* (Nicholls, 1984; 1989).

As trait-like dispositions, goal orientations are more stable than their state-like goal-involvement (Duda & Whitehead, 1998). Within AGT, there are two orthogonal goal orientations: task- and ego-orientation (Kingston et al., 2020; Roberts & Kristiansen, 2012). The orthogonality of goal-orientations means that, as independent structures, a person can be simultaneously high or low in one or both orientations (Roberts, 2012). Research into these goal orientation *profiles* has indicated that the combination of a high task-, low ego-orientations are associated with a range of positive outcomes, whilst the reverse (low task-, high ego-) is linked to more maladaptive outcomes (Harwood & Thrower, 2020). In contrast, a high task-, high ego-orientation profile has been proposed to be the most beneficial combination, with the greatest motivational outcomes when associated with high levels of perceived competence (see Roberts, 2012). Though dispositional goal orientation(s) are relatively stable, they are moderated by situational cues; if these are particularly salient, then the environment may override the dispositional goal orientations of that individual (Roberts, 2012; Roberts et al., 1997). Consequently, it is possible for coaches to effectively influence and even manipulate goal perspectives through the psychological environment they facilitate. Situational cues are influenced by key social agents, and these impact how competence perceptions are derived within an achievement setting to subsequently create what is known as the motivational climate (Ames, 1992; Keegan et al., 2009).

Recognised as one of the most powerful elements of AGT, the motivational climate refers to the features of an achievement environment that influence how an individual's competence is defined (Ames, 1992, Roberts, 2012). As such, there are two types of motivational climate that can be fostered, a *mastery (task) climate*, or an *ego (performance) climate*, distinguishable by how competence is perceived to be demonstrated (Dweck & Leggett, 1988). A mastery climate will promote learning, effort, persistence, and focus upon self-improvement with participants demonstrating competence through individual skill-development and progress (Roberts, 2012). Studies within sport have reported favourable outcomes from the fostering of mastery climates, for example: increased dedication; increased enjoyment (Balaguer et al., 1999; Jaakkola et al., 2016); improved cohesion (Eys et al., 2013); greater sportspersonship (Gano-Overway et al., 2005); enhanced mental toughness (Nicholls et al., 2016); reduced anxiety (Smith et al., 2007); and improved learning strategies (Treasure & Roberts, 2001). In contrast, an *ego climate* (or performance climate) promotes competence as being norm-referenced, and thus reflects a judgement based on comparison of standing to other participants (Ames, 1992; Dweck & Leggett, 1988). Ego climates are characterised by the public comparison of ability, minimal participant authority, a focus upon a select few (often the more "talented") athletes, and the use of disciplinary mechanisms following mistakes (Hassan & Morgan, 2015). Such environments have been found to have negative implications for participants, for example, in terms of reduced cohesion (Eys et al., 2013) or cheating (Ntoumanis et al., 2012). Although it has been recognised that ego climates can be of value to sport environment (d'Arripe-Longueville et al., 1998; Roberts & Kristiansen, 2012), researchers have espoused that the creation of mastery climates should be the priority for sport organisations and the coaching practitioner (Gill et al., 2017; Keegan et al., 2010).

Self-Determination Theory

Self-determination theory (SDT; Deci & Ryan, 1985) is the second of the two dominant theoretical frameworks that have helped to guide research and subsequently the development of adaptive psychological climates within sport settings (see Occhino et al., 2014). For more on SDT, see Chapter 3 (Quested et al., 2021).

SDT (Deci & Ryan, 1985) is a macro-theory of motivation concerned with the development and functioning of personality within social contexts, and specifically the mechanisms through which self-determined behaviour is nurtured or impeded (Kingston et al., 2006). According to SDT (Deci & Ryan, 1985), the social context, in which the coach is a key agent, is paramount to supporting an individual's basic psychological needs (BPNs). Extending their premise, Deci and Ryan (2000) suggested that the satisfaction of a person's innate psychological needs will provide the necessary conditions for effective motivational functioning and enhanced well-being of that individual; the needs are: *autonomy*, *competence*, and *relatedness*. These fundamental psychological needs are the psychological mediators of the relationship between social/contextual factors and behavioural and affective responses; they are described within basic psychological needs theory (BPNT, Deci & Ryan, 2000), a sub-theory of the broader SDT. Specifically, an individual's need for autonomy is met when they feel authentically responsible for their actions, while competence is promoted through a feeling of effectiveness when interacting with the environment, and relatedness refers to the extent that a person feels a sense of closeness, connectedness, and being cared for within a given social environment (Bartholomew et al., 2011; Ryan & Deci, 2020). As a consequence of the ease of application across contexts, attention has turned to the promotion of these three BPNs within sport settings (e.g., Sarrazin et al., 2002), with a burgeoning amount of research seeking to address the coaching behaviours that can influence them (e.g., Matosic et al., 2016; Reinboth et al., 2004; Stebbings et al., 2015).

Researchers have robustly supported the central tenet of SDT that environmental factors that can promote or thwart the development of the BPN (e.g., Bartholomew et al., 2011; Matosic et al., 2016). An environment that has been found to support the BPN of an individual is termed an *autonomy-supportive* environment, while an environment antagonistic toward developing positive developmental tendencies is commonly known as a *controlling-coach environment* (Adie et al., 2008; Deci & Ryan, 1985; Ntoumanis, 2012). Mageau and Vallerand (2003) outlined seven key features of an autonomy-supportive coaching environment, these included: provision of choice, providing a rationale for decisions, acknowledgment of feelings and perspectives, opportunities for problem solving, giving non-controlling feedback, avoiding controlling behaviours, and focusing on self-referenced rather than norm-referenced criteria. These pedagogical behaviours are also supported by providing structure and an empathetic and caring attitude towards athletes as people (Mageau & Vallerand, 2003).

Reflecting on the consequences of such environments, Occhino et al. (2014) argued that a coach who can foster an autonomy-supportive environment can: (a) satisfy participant's psychological needs; (b) maintain intrinsic motivation; (c) promote engagement in sport; and (d) enhance individual performance. More recently, Cronin and Allen (2018) suggested that the creation of autonomy-supportive climates is also positively associated with the promotion of life skill development in sport. The transfer of life skills is recognised as a crucial element of positive youth development, whereby young athletes will learn life skills and psychological competencies that will facilitate success in both sport and life (Bowley et al., 2018). In contrast, a controlling-coach environment is fostered when coaches use tangible rewards, controlling feedback, employ excessive control, engage in intimidating behaviours, encourage ego-involvement, and have conditional regard for individuals (Bartholomew et al., 2011). Similar to the widespread endorsement of mastery motivational climate through AGT (Nicholls, 1984), the promotion of autonomy-supportive climates (along with the de-emphasis of controlling behaviours) has been widely endorsed and thus appears an important objective (Stebbing et al., 2015). From a SDT perspective, methods to guide the creation of such adaptive psychological climates are of critical value to coaches and their athletes.

Frameworks Used to Support Adaptive Psychological Climates

For the last few decades, researchers have provided guiding principles and frameworks to support the coaching practitioner in promoting adaptive psychological climates. With a variation of theoretical approaches taken (e.g., AGT, Nicholls, 1984; SDT, Deci & Ryan, 1985; or a composition of both) different frameworks have been espoused. Indeed, a growing recognition of the overlapping and complimentary features of AGT and SDT has led to an understanding that the theories are not mutually exclusive (Duda, 2013; Duda et al., 2018; Keegan et al., 2009; Ntoumanis, 2001). For example, using regression analysis, Ntoumanis (2001) indicated that the task orientation of university athletes positively predicted their self-determined motivation, which in turn was positively associated to their competence (SDT's conceptualisation of competence). This section of the chapter will consider strategies that are informed by overlapping and sometime analogous principles of both theoretical frameworks to influence the psychological climate of sport environments, drawing attention to the most salient themes. Three frameworks will be reviewed: TARGET (Ames, 1992; Epstein, 1989), MAC (Smoll & Smith, 2009), and Empowering Coaching™ (Duda, 2013); theoretical and practical implications discussed for each framework.

TARGET

Initially conceived by Epstein (1989), and then later developed by Ames (1992), TARGET is an acronym used to identify salient features of teaching environments: *task, authority, recognition, grouping, evaluation, and time*. Underpinned by AGT (Nicholls, 1984), TARGET has been used successfully within classroom, physical education, and more recently in sport settings as a framework to understand the development of mastery motivational climates (e.g., Kingston et al., 2020). Each of the TARGET structures can be influenced by the leader of that given achievement environment to promote an adaptive psychological climate for the participants within it. Briefly, *task* refers to the design of activities (e.g., organisation of tasks) with the coach ensuring that they are varied, challenging, promote self-referenced goals, and differentiated for all participants (Ames, 1992; Morgan, 2017). *Authority* pertains to participants being active agents in their own development, with the coach creating the opportunity for them to make meaningful decisions within the environment (Roberts, 2001). *Recognition* relates to the focus of feedback; in a mastery climate, a coach would provide equitable feedback for individual progress, effort, and persistence (Morgan, 2017). The *grouping* structure refers to the sorting of participants into heterogenous groups, where overt perceptions of competence may diminish (Ames, 1992). Linked closely to recognition is *evaluation*, which refers to the manner in which feedback is provided. In a mastery-involving evaluation structure, a coach would provide meaningful, individualised, positive, and one to one feedback to players (Morgan, 2017). Finally, affording players flexibility to master the task at hand, catering for all levels of abilities in managing time are encapsulated within the *time* structure (Ames, 1992). It is important to note, converse behaviours (to those identified) may promote an ego climate (see Morgan & Kingston, 2010; Morgan et al., 2005).

Within sport settings, Cecchini et al. (2014) conducted a 12-week intervention study with student-athletes, examining the impact that the manipulation of the motivational climate could have upon their motivation, behaviours, and the social and psychological moderators of this relationship. The intervention programme, which was based upon the TARGET framework, was executed by trained coaches. Participants engaged in 20 hours of theoretical training, and 10 hours of practical training. As part of the training, one coaching session was video recorded each week with feedback being given to the coaches during the next training seminar. Their findings showed TARGET to be a useful mechanism to manipulate the motivational climate and to promote adaptive outcomes amongst their high-school sport participants, for example: performance improvement, decision making, competence, autonomy, self-determined motivation, social relations, persistence, effort, cooperative learning, and reduced

boredom. Where Cecchini and colleagues explored the psychosocial impact upon participants, Hassan and Morgan (2015) shifted focus to the coaches in evaluating if a mastery climate coach education programme (based upon the TARGET structures) would modify coach behaviours and this be perceived by their athletes. Through guided video self-analysis, Hassan and Morgan (2015) found that over time, not only did coaches increase their mastery-involving behaviours across each of the TARGET structures, but that their athletes also perceived an increase in mastery and decrease in ego-involving features of the motivational climate.

Applying the TARGET framework into elite youth sport contexts, Kingston et al. (2020) conducted a longitudinal observational study with a Premier League soccer academy. Observing elite youth soccer coaches over a seven-month period they found that mastery climates dominated within the youth development phase of the academy (under 12–16 years), but ego climates were still prevalent. Kingston et al. suggested that features of the motivational climate demonstrated additive characteristics and surmised that some mastery-involving TARGET features (i.e., task, authority, recognition, and evaluation) could compensate for features aligned with promotion of social comparison (e.g., grouping and time elements). Although this assertion was also made by Ames (1992), more research is required to confirm compensatory effects as this could have significant practical implications. For example, in competitive situations (e.g., small-sided games) the coach could emphasise mastery criteria (e.g., cooperation, problem-solving, and providing opportunities for meaningful input by players). Given the challenge that some coaches have in promoting mastery or autonomy supportive climates during competition, knowledge of features that can compensate for ego-involving components may help them to effectively manage the climate even during the most “heated” of competitions (Delrue et al., 2017; Smith et al., 2017).

Mastery Approach to Coaching (MAC)

Originating from coaching effectiveness training (CET; Smith et al., 1979), MAC (Smoll & Smith, 2009) is a program that incorporates the mastery principles of AGT (Nicholls, 1984). MAC places an emphasis on two key themes: *coaching behaviours*; and *maximal effort* as the key criteria for defining success (Smith et al., 2007; Smoll & Smith, 2020). Firstly, MAC distinguishes between positive and aversive coaching behaviours, and provides a user-friendly list of coaching “dos and don’ts” to guide practitioners. Positive behaviours (the dos) include: positive reinforcement, mistake-contingent encouragement, corrective instruction delivered in an encouraging fashion, and technical instruction. Conversely, aversive coach behaviours (the don’ts) include: a lack of reinforcement of positive behaviours, punishing mistakes, and punitive technical instructions (Smith & Smoll, 2012; Smith et al., 2007; Smoll & Smith, 2020). The second key theme is the emphasis placed upon defining success around employing maximal effort. This theme is consistent with Epstein (1989) and Ames’ (1992) guidance within the TARGET framework (i.e., recognition), whereby the coach will recognise and reward athletes for high effort rather than their ability (Morgan, 2017). Therefore, both models promote competence as reflective of individual effort (Ames, 1992), highlighting the shared philosophies of each framework.

The MAC (Smoll & Smith, 2009) and CET (Smith et al., 1979) programmes have been successfully employed within different sport settings (e.g., basketball, soccer, swimming), reportedly enhancing the psychological climate and promoting adaptive motivational outcomes of participating athletes (e.g., McLaren et al., 2015; Smoll et al., 2007). McLaren et al. (2015) used the MAC programme as a coaching intervention with the aim of exploring how a mastery climate would impact perceptions of task and social cohesion within their youth soccer teams. Twenty youth coaches were educated on the principles of MAC, while a further six coaches were spoken to about optimizing the athletic experience (but not about MAC). Players who participated under the MAC-trained coaches reported elevated perceptions of team cohesion by the end of the season in comparison to those who had participated under the non-MAC trained coaches, whose perceptions of cohesion declined significantly. In a similar study with

basketball coaches, Smith et al. (2007) explored the effects of MAC on players' somatic and cognitive anxiety. Twenty participating coaches received the MAC training whilst the remaining seventeen did not (no-treatment control condition). Basketball players of the MAC-trained coaches reported a reduction in both dimensions of anxiety and perceived higher levels of coach-initiated mastery climates than the control group.

Although MAC and TARGET are both grounded within AGT (Nicholls, 1984), and indeed MAC was designed in-part with Ames' (1992) TARGET principles in mind (Smith et al., 2007), MAC differs in its aim to distinguish between positive and aversive coach behaviours (see Smoll & Smith, 2012), and thus arguably helps coaches to better calibrate their mastery actions. Moreover, the emphasis placed upon *knowing* aversive behaviours draws parallels to researchers of SDT who have examined the controlling-coach behaviours that thwart individual's satisfaction of their basic psychological needs (e.g., Bartholomew et al., 2011).

Despite the user-friendly qualities of the MAC programme it is not readily available to coaches outside of research projects (e.g., Smith et al., 2007; Smoll et al., 2007). Participants were given a manual entitled *Coaches Who Never Lose* (Smoll & Smith, 2005) to support their employment of mastery approaches to coaching. This situation is by no means unique, and the availability of sport psychology resources for coaches has been raised previously (e.g., Bissett et al., 2020; Pope et al., 2015). Indeed, Empowering Coaching™, to which the section will shortly turn to, shares similar issues to the MAC programme in this sense. Limited access to resources carries practical implications with coaches unable to acquire or apply knowledge; a situation that broadens the theory to practice gap and risks the topic of psychological climates becoming more esoteric.

Empowering Coaching™

Empowering Coaching™ is a programme designed to enrich the experiences of participants and maintain their long-term participation in sport through the creation of adaptive motivational climates (Duda, 2013; Larsen et al., 2015). Utilising analogous concepts across AGT and SDT (see Ntoumanis, 2001), Duda (2013) designed the programme to help coach practitioners create empowering climates and discourage behaviours that disempower. An empowering climate is characterised as high in autonomy support, relatedness support, and task-involving, whereas a disempowering climate is recognised as controlling, relatedness compromising, and containing ego-involving coach behaviours (Duda, 2013; Tessier et al., 2013). In their sample of Finnish athletes, Into et al. (2020) found that disempowering coaching environments were positively associated with burnout, supporting previous research by Appleton and Duda (2016). They also examined the implications of coaching climates on school burnout amongst their participants; their findings indicated that student-athletes who experienced disempowering climates also suffered burnout in school. Given the drive towards early specialisation in some sports (e.g., association football in the UK; see Wixey et al., 2021), and the low odds that specialising early will lead to a professional career (Callender, 2010), the risk of a young adolescent suffering from burnout in both their sport and studies is a major concern as both have potentially serious ramifications for their well-being and future endeavours.

A key premise of the Empowering Coaching™ programme is that the psychological climate can be more-or-less empowering and disempowering. This has been demonstrated in recent research (e.g., Into et al., 2020; Smith et al., 2016), highlighting that features of the motivational climate may be neutral in their empowering or disempowering effect. Indeed, Into et al.'s (2020) study found that climates possessing both empowering and disempowering features were experienced by 42% of participants. Given that adaptive motivational and psychosocial outcomes are assumed to evolve as a result of empowering environments, the *intermediate* climates identified in Into et al.'s (2020) and Smith et al.'s (2016) studies highlight the importance of coaches possessing the knowledge and

capabilities to effectively promote strong features of an empowering climate in order to positively influence the overall psychological climate.

Duda (2013) distinguishes the Empowering Coaching™ programme from other frameworks in its intention to educate coaches and increase their awareness of the *what*, *why*, and *how* of motivation, motivational processes, and their consequences with respect to the psychological climate they foster. This is important when considering the dynamic nature of the psychological climate (e.g., training versus competition; Delrue et al., 2017; Smith et al., 2017), and the premise that the extent to which an environment is autonomy-supportive or disempowering depends on the salient (yet changeable) features of that environment (Duda, 2013).

The Empowering Coaching™ program was used by Larsen et al. (2015) to explore how grassroots coaches from France and Norway reflected upon their coaching practices. Eighteen participant coaches were led through a six-hour workshop that focused on *being* an empowering coach. The workshop provided strategies for creating an empowering environment structured around the acronym CLIMATE (cooperative contribution, learning emphasised, intrinsic focus, mastery orientated, authority with autonomy, taking others' perspective, evaluation of effort and improvement). Participant interviews revealed positive perceptions of the Empowering Coaching™ programme and its role in supporting them foster empowering environments for their players. The merits of the creating such empowering environments does not just stop with the players. For example, Solstad et al. (2018) found that coaches who promoted higher levels of empowering climates had higher levels of well-being at the end of the season than the disempowering coaches. This suggests that creating empowering environments is mutually beneficial for both the players and the coaches.

The frameworks discussed in this section have several overlapping features. Firstly, they all place an emphasis on recognising “effort” as a key mechanism for improving; TARGET and MAC are underpinned by AGT where effort is inextricably linked to learning in conceiving of ability in achievement setting (Nicholls, 1984; Ames, 1992). Although competence is described as a basic human need in SDT (Ntoumanis, 2001), the importance of effort still features as a characteristic of autonomy supportive coaching (Conroy & Coatsworth, 2007), and is utilised within the CLIMATE framework, which is a component of the Empowering Coaching™ programme (see Larsen et al., 2015). Second, and aligned closely to the promotion of effort, is the intention to shift participants' view of *how* competence is defined from norm-referenced (social comparison-based) to self-referenced. To help do this, TARGET, MAC, and Empowering Coaching™ all advocate the employment of task-involving coach behaviours. Third, all frameworks prioritise athlete autonomy, with each providing similar means to enable athletes to have a sense of ownership and capital within their development. Fourth, Empowering Coaching™ and MAC present both adaptive and aversive coach behaviours; illustrating the acknowledgement that an environment can be more-or-less empowering based upon the coach's actions (Duda, 2013, Into et al., 2020). Although not presented originally by Ames (1992), more recent TARGET literature has provided descriptors for ego involving features (e.g., Morgan & Kingston, 2010; Morgan et al., 2005), information that can help coaches to better predict the implications of their behaviours. Fifth, the interpersonal style of the coach was recognised as a key moderator of fostering autonomy supportive and mastery climates, a feature that was more recently suggested by Morgan (2017) as an important component that was missing from the TARGET framework. Finally, each approach gives a perspective on the content and manner of feedback with the frameworks recommending the use of positive and instructional feedback, and where possible, in a one-on-one situation.

Further Considerations When Creating Adaptive Psychological Climates

These frameworks each provide parameters for creating adaptive psychological climates. There are, however, several moderating factors that may need to be considered when trying to foster

desirable climates and thus their athlete's motivational outcomes. Emerging from the literature to date, a number have evolved, each of which should be considered and these include: coach's capabilities, athlete level of participation, incongruence between coach and player perceptions, intervention approaches, and the role of reflective practice.

Coach's Capabilities to Foster Adaptive Psychological Climates

Coaches are well-positioned to significantly impact changes to an athlete's motivation through their influence on the psychological environment. Pritchard and Deutsch (2015) suggested that "the motivational climate is remarkably controllable" (p. 210), and research indicates that across sports, through their organisation and behaviours, many coaches are already acting to foster positive psychological climates for their players (Smith et al., 2006; Tessier et al., 2013). Within soccer, Tessier et al. (2013) analysed the psychological climates created during training by coaches ($n = 57$) from England, Greece, and France; they noted that coaches fostered more autonomy supportive climates than controlling ones. However, despite the positive evidence, and Pritchard and Deutsch's (2015) optimistic assertions, many coaches have described difficulties in managing the psychological climate during competition, where there is a tendency to promote (sometimes inadvertently) more controlling environments (e.g., Delrue et al., 2017; Smith et al., 2017). For example, Smith and colleagues analysed the coaching climates of 17 grassroots soccer coaches across both training and competition environments. Their analysis suggested that the coaches engaged in greater need-thwarting than autonomy-supportive behaviours during competition. Delrue et al. (2017), focusing on game-to-game variations in autonomy support and need-thwarting coaching behaviours, identified substantial differences across games indicating that coaches may promote both autonomy-supportive and need-thwarting behaviours; the latter leading to antisocial behaviours amongst the participants. In addition to supporting previous research (e.g., Hodge & Gucciardi, 2015) that portrayed the psychological climate as dynamic, Delrue et al. reasoned that this variation could be due to personal (e.g., coach's need satisfaction) or situational factors (e.g., opponents). This emphasises some of the challenges to maintaining an autonomy-supportive climate within competition settings when there are often more significant consequences to the outcome.



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Level of Participation

Although winning is often no less important in non-elite sport, additional pressures (e.g., financial gain, media, rewards, career longevity) within the elite echelons creates a natural necessity to be the best. However, given the maladaptive motivational outcomes of norm-referenced criterion (Harwood & Thrower, 2020), which may occur readily (given the competitive nature of elite sport), it is important that the psychological climate of these environments are carefully considered.

Within some elite youth sport settings (e.g., academies and other professional development organizations), the sole aim might be to produce professional athletes (e.g., elite youth soccer, Adams & Carr, 2019). However, it is important to note that early-specialisation settings where individuals engage in focused training in a single sport from a young age (Baker et al., 2009) has been associated with reduced levels of intrinsic motivation and enjoyment, and a reduced likelihood of ongoing participation in sport (Russell & Symonds, 2015). Therefore, the psychological climates of early specialisation settings need be carefully considered and designed.

Within some organisations there is a belief that experience of ego-involving climates are necessary to increase the likelihood of progressing to elite adult sport (d'Arippe-Longueville et al., 1998; Ommundsen & Roberts, 1999). Despite this perceived need to expose young players to ego-involving, controlling, or disempowering structures (e.g., soccer, see Cushion & Jones, 2006; Manley et al., 2012), research within professional sport has maintained that mastery climates and autonomy supportive coaching are favoured (by athletes), and result in positive motivational and behavioural outcomes (e.g., Hoigaard et al., 2008; Keegan et al., 2014; Pensgaard & Roberts, 2002). Keegan et al. (2014) interviewed 28 elite athletes to discuss the behaviours from significant social agents that were regarded as being motivationally relevant. They found that all social agents (coaches, peers, and parents) provided feedback and pre-performance motivating behaviours, whilst coaches and peers provided relationships and social interactions. Keegan et al.'s participants also reported that their respective coaches further influenced motivation through one-to-one coaching, task design, equal treatment, selection (processes), and the criteria through which they were evaluated. Despite these findings, the authors highlighted that motivational outcomes are likely to be moderated by both contextual and interpersonal factors. It is, therefore, of considerable importance for the coach to know their athletes when determining the value and efficacy of exposure to arguably less constructive motivational climates (Becker, 2013; Keegan et al., 2014).

The value of positive coach-athlete relationships, and transparency in decision-making appears a similarly influential factor within elite sport settings. In one of the most successful international sport teams in recent history (the New Zealand All Blacks), an autonomy supportive environment was credited as being a central to their success in the lead up to their 2011 rugby union World Cup victory (Hodge et al., 2014). Hodge et al. (2014) examined the motivational climate of the All Blacks following a critical turning point (i.e., an incident at a social event) which led to players and coaches agreeing upon a dual-management leadership model; players were given more accountability, ownership, and became greater stakeholders in management responsibilities. Drawing parallels between their dual-management model and the principles of SDT (Ryan & Deci, 2020), Hodge et al. (2014) suggested that the offering of choice, encouraging of initiative, and empowering performance feedback supported the transformation of the team and its culture, while simultaneously supporting of the player's BPN. Despite the necessity to win, the research endorses the integration of autonomy supportive features within competitive elite sport settings (Hodges et al., 2014; Keegan et al., 2014).

Incongruence Between Coach and Athlete Perceptions of the Psychological Environment

One key tenet of AGT is that the subjective perceptions of the participants will determine their motivational outcomes (Ames, 1992); a premise that has been supported recently in literature (e.g., Gjesdal et al., 2018; Møllerløkken et al., 2017). Incongruence between coach and athlete perceptions

can have a deleterious impact on motivational outcomes (Gjesdal et al., 2018), highlighting the value of congruence between the intended climate of the coach and how the climate is perceived by athletes. Møllerløkken et al. (2017), for example, found that grass-root soccer players (from 17 different teams in Norway) regarded the motivational climates they experienced to be more ego orientated and less mastery orientated than their respective coaches. Similarly, Gjesdal et al. (2018) examined the disparity in coach and soccer players' perceptions of the climate, enjoyment, goal orientations, and anxiety and found that when perceptual agreement existed for mastery climates there was positive correlation to enjoyment and team-rated task goal orientation, whilst perceptual agreement on ego climates demonstrated a positive relationship with ego goal orientation and anxiety and negatively correlated with enjoyment. Crucially, Gjesdal et al. (2018) reported that when the coach perceived the climate to be more mastery involved than their players, it also led to deleterious psychological effects for the participants. Given that incongruence appears common (i.e., Møllerløkken et al., 2017), and that there are potentially maladaptive consequences for such incongruency (Gjesdal et al., 2018), it is imperative that the coach not only employs mastery involving behaviours, but also reflects upon the strength of these features (Ames, 1992) ensuring that task involving features of the environment are not undermined by ego involving discourse (see Kingston et al., 2020).

Intervention Approaches

It has been argued that approaches to ongoing support following education on creating adaptive motivational climates is crucial to promote change within coaching practices (Stodter & Cushion, 2019), and should, therefore, be integral to education around the psychological climate within sport settings. Traditional coaching orthodoxies (e.g., soccer, see Champ et al., 2020), may, however, create some inertia to change, with coaches potentially opting for the safer and more tested methods of coaching (Cushion et al., 2012). As alluded to previously, coaches have a primary influence upon the psychological climate, and the consequential cognitive, affective, and behavioural outcomes for athletes. Consequently, for acquired knowledge to be applied effectively, coaches should be fully supported through this process.

Most commonly, interventions in motivational climate are based around educational workshops; these communicate to coaches the principles and strategies for creating adaptive psychological climates. For example, the studies using the MAC (Smith & Smoll, 2009) frameworks utilised a one-off workshop that lasted for 75 minutes with a supporting piece of literature designed specifically to reinforce the workshop and encourage coaches to apply their knowledge to practice (*Coaches Who Never Lose*, Smoll & Smith, 2005). Research evaluating this approach reported successful outcomes from the intervention, indicating the efficacy of including educational workshops (e.g., McLaren et al., 2015; Smith et al., 2007). In contrast, Langdon et al. (2015) reported that the participating coaches in their study were not able to significantly modify their autonomy supportive behaviours. In this case, their approach was to conduct a one-hour workshop to youth soccer coaches on the principles of creating a mastery climate, supplemented by weekly online modules for the coaches to complete. Reflecting on their lack of impact, the authors suggested a number of potential reasons for this (e.g., coaches demonstrated moderate autonomy supportive behaviours anyway, data collection during competitive time of the season), but primarily they felt that the intervention was too short-lived. Langdon et al. (2015) suggested that an intervention over an extended period may have further supported the volunteer coaches to modify their autonomy-supportive behaviours, echoing sentiments from Thompson and Pascal (2012) who suggested prolonged interaction helps to embed changes within practice.

Video analysis of coaching sessions has also been widely, and successfully, employed in conjunction with educational workshops to support coaches and help embed principles in fostering adaptive psychological climates (e.g., Conde et al., 2009). Partington et al. (2015) advocated the use of

video feedback after their longitudinal study with five coaches in an English Premier League soccer academy. Their systematic analysis of video footage using the coach analysis and intervention system (CAIS, Cushion et al., 2012) was not only well-received by the coaches, but also led to positive changes in coaching practices (e.g., use of questioning, decrease in concurrent instructing). In their intervention study, Cecchini et al. (2014) also used video analysis as part of a combination of intervention strategies (e.g., workshops, pre-designed sessions, and video analysis) to successfully train the coaches on the principles and application of TARGET structures. The utilisation of video analysis aligns well with the day-to-day experiences of many coaches, and hence is likely to be an appealing approach. Regardless of the specific training model adopted, it appears that prolonged engagement, reviewing coaching in action, and ongoing support are important to embed the integration of autonomy-supportive behaviours into a coaching environment.

Reflective Practice

Reflective practice is an examination of self which transforms experiences into learning (Knowles et al., 2014). It can be defined temporally as *reflection-in-action* (reflecting during live coaching episodes), *reflection-for-action* (the critical consideration of prior learning and future targets to effectively plan for action), *reflection-on-action* (reflections that occur after a time the situation can be affected), and *retrospective reflection-on-action* (reflections on a specific period of multiple incidents such as a sporting season; see Cropley et al., 2018). As highlighted in the previous section on incongruence, when reflecting on the impact they have, coaches need to be aware that the climate they intend to foster may not transfer to the reality of the climate once they are in it (i.e., “the map is not the territory”; Andersen, 2006). Therefore, given the dynamic nature of psychological climates, coaches should be active (and reactive, see Smith & Smoll, 2012) to the evolving environment, and willing to shape the climate that they have agency to change (see Cropley et al., 2018). To support a coach’s readiness to adapt the psychological climate during training or competition, coaches can consider developing their reflective practice capabilities. For example, although challenging (Cropley et al., 2016), reflection-in-action is a valuable mechanism for a coach to be able to utilise and is integral to the contextualisation and application of knowledge *in action*, which may help to bridge the theory to practice gap. A mechanism to support reflection-in-action that has received recent attention is the Think Aloud protocol (for a more extensive overview, see Whitehead et al., 2016). Think Aloud is a method that promotes reflection whilst coaches are within live coaching sessions and will be discussed, briefly, later in the chapter. Reflection-on or -for-action can be supported through a range of approaches that occur outside of the performance environment, and methods may include journals, mind-maps, visual cues, recordings, critical friends, or use of online blogs (Knowles et al., 2014). According to Andersen et al. (2004), if a coach has a positive attitude towards engaging in reflective practice (e.g., open-mindedness; whole-heartedness; commitment to engage in a formal process of experiential learning), they will in turn develop as a reflective practitioner. Further, this ability to utilise reflection as a mode of practice will undoubtedly assist the coach in fostering the desired psychological climates for their athletes (Bowley et al., 2018).

Strategies to Develop Adaptive Psychological Climates

The coach has significant influence over an athlete’s motivational outcomes (Cronin & Allen, 2018) and thus it is imperative that they can create adaptive psychological climates for individuals to thrive. This chapter has considered two theories that have underpinned much of our knowledge on psychological climates to date (i.e., AGT and SDT), and in doing so examined the application of three espoused frameworks designed to support the promotion of adaptive psychological environments (i.e., TARGET, MAC, and Empowering Coaching™). Although they adopt different approaches, several

common themes became evident, and it is these that we will scrutinise. They include: (a) task-involving features of the environment; (b) promoting autonomy for participants; (c) a focus upon effort; (d) coach behaviours; and (e) interpersonal coaching style. Moreover, based upon research to date, it was deemed important for coaches to be aware of the factors that can moderate their ability to foster a desired psychological climate (i.e., coach capabilities, elite level of participation, incongruence of perceptions, intervention approaches, and reflective practice). These considerations, along with the overlapping concepts, will help to inform the strategies presented in Table 21.1, with each being described in further detail to support their application to practice.

Strategies have been organised around three general themes: *design; coach-athlete interactions; and monitoring*. The strategies and guiding principles are informed by the most salient, and overlapping implications resulting from an interrogation of the literature. Our objective is to provide informed guidance on how to promote psychological climates that are associated with positive motivational outcomes for participants at any level of sport. One key feature of Table 21.1 is the inclusion of associated aversive behaviours (i.e., controlling coach behaviours, need-thwarting behaviours, ego-involving criteria). These characteristics are highlighted to increase awareness and facilitate understanding of the behaviours that may create a disempowering climate, such that coaches can more effectively gauge and recalibrate their psychological climate if required. Within the MAC (Smith & Smoll, 2006) and Empowering Coaching™ (Duda, 2013) programmes, emphasis is placed upon the coaches being self-aware, but also as Bartholomew et al. (2011, p.1469) highlighted, such aversive coach behaviours are not necessarily the “opposite side of the same coin” but rather they can co-occur alongside autonomy-supportive criteria. Further, knowledge of the potentially aversive behaviours alongside the associated strategies to promote autonomy supportive environments may help coaches in more competitive environments (e.g., elite youth sport) manage the psychological climate effectively.



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Design

When designing the psychological climate, coaches need to have a clear destination in mind (i.e., “what I am seeking to achieve for these athletes?”). The coach can start by considering what some of the key features that they believe, over time, will be most effective for development of their athletes and achievement of this goal (e.g., “how is success represented?”, “what key skills are we working on?”). This “curriculum” can consider level of participation, stage of development (see, Wylleman et al., 2004), and type of talent pathway (e.g., early specialisation). In planning individual sessions, coaches can then reflect on *where* their athletes are, *what* they currently require, and *how* the individual session fits into their overall curriculum. These steps may combat an *ad-hoc* approach to designing psychological climates, with the coach able to provide a structure that consistently promotes patterns of adaptive behaviours (Ames, 1992).

Embedded within the design of individual sessions should be a consideration for the personal goals of participants, and how to provide each athlete with the opportunity to develop towards or achieving their personal goals. While their goals may not be explicit within the session, as part of their development plans, players should be made aware of how they may facilitate goal achievement through session content and aims. Personal goals accompanied by a rationale from the coach (demonstrating greater involvement from the coach), may serve to enhance the relatedness for an athlete and give them a sense of belonging (Gilchrist & Mallett, 2017; Reinboth et al., 2004). It is, therefore, important to consider athlete goals at the design stage, rather than “shoehorning” them in after by only including the players as an afterthought. One final consideration for design relates to the structure of tasks or activities. Given their nuanced motivational impact, it is important that coaches reflect on the tasks they intend to prescribe to their athletes, ensuring activities are as far as practicable, challenging, varied, differentiated, and promote problem solving.

Table 21.1*Strategies to Support the Development of Adaptive Psychological Climates Within Sport*

	Autonomy-Supportive Strategies	Guiding Principles	Associated Aversive Coach Behaviours	Literature Informing Espoused strategy
Design	Planning	Consider: the stage of the athletes' development, personalities, personal goals, and the experiences they require Map the intended psychological environments that athletes will experience over time Decide which features are going to be emphasised to support the intended climate Provision of stable and consistent autonomy supportive climates Plan how athlete's BPN will be satisfied	Ego-involving structures emphasised A (default) disempowering environment	Delrue et al. (2017); Into et al. (2019); Kingston et al. (2020); Ommundsen & Roberts (1999); Smith & Smoll (2012)
	Goals	Task objectives and rationale (for learning) communicated, notably when tasks promote social comparison. Emphasis on individual skills & roles, with ongoing guidance relative to personal goals. Reflective thinking re: goals and skill development is encouraged and supported through monitoring of goals.	Goals are norm-referenced Focus solely on the outcome No individualised goals	Ames (1992); Kingston et al. (2020); Mageau & Vallerand (2003)
	Structure	Task-focused and cooperative Sessions/tasks should be varied and challenging, promoting problem-solving Instructions – clear, with expectations of learning included. Defined progressions with creativity encouraged where possible.	Monotonous activities with little challenge Coach has dominant presence during activity Learning or progress is not communicated or clear	Ames (1992); Kingston et al. (2020); Mageau & Vallerand (2003)

Table 21.1 (continued)

Coach-athlete Interactions	Relationships	Get to know your athletes Afford time to communicate equitably with all athletes Use of humour Be empathetic	Use of sarcasm without prior knowledge that it will be positively received by athlete Conditional regard Intimidation Making athletes feel isolated	Bartholomew et al. (2010); Becker (2013); Deci & Ryan (2002); Keegan et al. (2014); Morgan (2017); Mageau & Vallerand (2003)
	Feedback	General encouragement and support throughout group situations/practices Recognition given for effort, persistence and effective problem-solving. Focused on task requirements, with links made to individual roles and personal goals. Feedback should be unconditionally positive, and meaningful.	Public and negative, verbal and non-verbal, feedback Players recognised for outperforming others Select few athletes receive praise Draw attention to mistakes with public and punitive consequences	Ames (1992); Bartholomew et al. (2010); Deci & Ryan (2002); Duda (2013); Mageau & Vallerand (2003); Smith & Smoll (1996); Smith & Smoll (2012); Smoll & Smith (2020)
	Empowerment	Rationale provided for tasks, with opportunity for player input. Authentic opportunities for player decision-making, e.g., timing or nature of progressions. Acknowledgment and value attached to player perspectives.	No opportunity for players to self-regulate their learning Inauthentic/contrived opportunities for athlete input Exerting excessive control	Ames (1992); Bartholomew et al. (2010); Deci and Ryan (2002); Duda (2013); Into et al., (2020); Kingston et al. (2020); Mageau & Vallerand (2003)

Table 21.1 (continued)

Monitoring	Reflection-On-action	Reflect upon the climate created against the desired outcomes, and note any changes to make for the next session Use of video footage to analyse climate created Utilise other coaches or sport psychologists to provide feedback Reflect on individual psychological development of athletes	Duda (2013); Knowles et al. (2014); Stodter & Cushion (2019); Partington et al. (2015); Smith & Smoll (2012); Whitehead et al. (2016)
	Reflection-For-action	Consider the design of the curriculum and how new knowledge can be integrated into that plan Apply what has been learnt from reflecting-on-action	
	Reflection-In-action	Interpret the status of the climate and salient features Continually review ways to emphasise autonomy-supportive features of the climate Remain active and aware of evolving ego climate	

Coach-Athlete Interactions

Given that motivational outcomes are idiosyncratic (Keegan et al., 2014), knowing your athlete becomes an important part of creating an adaptive psychological climate (Becker, 2013; Morgan, 2017). Coaches are advised to work on building and maintaining high quality relationships, communicating equitably with each individual participant. Specifically, Jowett (2017) has highlighted that high quality relationships are founded on closeness (e.g., depth of emotional attachment); commitment (e.g., dedication to maintaining the relationship over time); complementarity (e.g., cooperative and effective interaction); and co-orientation (e.g., shared principles for goal striving). Where possible, coaches should strive to afford time and space to get to know their athletes and to build relationships. For example, age-appropriate humour could facilitate the building of relationships potentially playing a crucial role in making the more “serious” of sport environments more palatable for performers to commit to (Morgan, 2017; Ronglan & Aggerholm, 2013; Ronglan & Aggerholm, 2014). However, despite good intentions, coaches should be aware that humour *at someone* (Ronglan & Aggerholm, 2014) may be counterproductive. Indeed, Owusu-Sekyere and Gervis (2016) found that elite youth soccer coaches used banter as the primary method of developing a players’ mental toughness; a behaviour that the authors suggested to be more aligned to a form of emotional abuse. It is important to recognise that such banter or other forms of ridicule may have deleterious effects, undermining the sense of relatedness an athlete may have towards a group or their coach (Ronglan & Aggerholm, 2013).

A more general principle is that coaches should seek to provide opportunities for individual and positive feedback, while understanding that positive feedback also includes instructional guidance (Becker, 2013). Public feedback relating to mastery behaviours (e.g., high effort levels, ability to overcome mistakes, and problem-solving) can help develop an athlete’s perceptions of competence (Reinboth et al., 2004). In contrast, coaches are discouraged from drawing public attention to mistakes or employing punitive measures (e.g., verbal abuse or physical punishments) as a form of feedback; controlling-behaviours such as these have been reported to undermine (thwart) individual’s basic psychological needs with resultant negative psychological outcomes (Bartholomew et al., 2011).

When interacting with their athletes, coaches are encouraged to facilitate a sense of empowerment within every athlete; this translates to the athlete having a feeling ownership over their own development and choice within the specific achievement environment (Morgan, 2017). Empowerment is a characteristic described in both AGT (Nicholls, 1984) and SDT (i.e., BPNT, Deci & Ryan, 1985; 2000; Ryan & Deci, 2020) literature and represented under the authority structure within the TARGET framework. To help empower, coaches can provide space for athletes to share their thoughts while they actively listen, value, and act (authentically) upon the athlete’s opinions (Duda, 2013; Morgan, 2017). Such opportunities may arise during one-to-one interactions with athletes, for example during feedback or general conversations, or during team discussions such as water breaks, performance analysis sessions, or team talks (see Middlemas & Harwood, 2017). Coaches can also adapt their session design to provide opportunities for athlete ownership. This may come in the form of giving time for athletes to work on a skill of their choice, providing options regarding how to progress the practice, giving opportunity for athletes to feedback to the coach during sessions, or overtly employing suggestions made by athletes.

As much as focusing on empowerment, coaches should be aware of the disempowering climates that competition environments can elicit (Gjesdal et al., 2018; Smith et al., 2017). They should readily employ mastery coaching behaviours that can go some way to buffering against the motivational impact of a situation that naturally focuses upon norm-referenced competence (i.e., winning). In these instances, coaches may wish to orchestrate opportunities to interact individually with athletes (e.g., before competition, during breaks, or post competition) to provide positive and instructional information or feedback. If available, assistant coaches can be deployed to maximise interactions with individual athletes. When opportunities for one-to-one communication are minimal, given the public

nature of competition, coaches are encouraged to only provide positive and general public feedback during events. Considering the challenges of interacting with athletes during competition, peer-interactions become an important feature of the team sport environment. Coaches may want to work with athletes (in training at first) on how to effectively communicate with one another during competition, asking athletes to recognise adaptive behaviours in one another (e.g., effort and overcoming of mistakes), and to give each other task-focused and positive feedback.

Monitoring

The motivational climate is a dynamic component of an achievement environment and therefore requires constant monitoring, appraising, and actioning (Smith et al., 2015). Coaches should try to be active agents within the achievement environment, acting as a bridge between the physical environment they set up (i.e., the drills) and the perceived motivational climate of athletes (i.e., how success is perceived to be determined).

To further support their management of the climate it is recommended that coaches develop their ability to reflect *in-action* (Schön, 1984). The employment of the Think Aloud protocol (Whitehead et al., 2016) may be a useful process to undertake to enhance reflective practice and support the management of the psychological climate. In short, Think Aloud requires coaches to concurrently talk through what they are thinking during a practice (for a full overview of the programme we refer readers to Whitehead et al., 2016). Coaches wishing to monitor their psychological climate might narrate to a microphone, or if unavailable, to an assistant coach or to themselves. Narrations might include the key influencers of the psychological climate, for example: “What are athletes being recognised for?”, “How are the players being evaluated?”, “What autonomy do the athletes currently have?”. Coaches can then review their own action plan, and how they may combat any potential disempowering or need-thwarting features that are present. Indeed, the programme itself may help prevent autonomy or need thwarting coach behaviours. Indeed, participants in Whitehead et al.’s (2016) study reported that the explicit commentary made them pause before they delivered harsh feedback to athletes.

Following reflection-in-action it is suggested coaches engage in *reflection-on-action*, a retrospective type of reflective practice which occurs outside of a situation that can no longer be influenced (Knowles et al., 2014; Whitehead et al., 2016). In relation to the topic of the current chapter, a coach can reflect upon their design, interactions, and monitoring of the psychological climate, considering the extent to which the climate they fostered supported the intended aims (see Gilbourne et al., 2013). The principles outlined in Table 21.1 might serve as a useful starting point, (e.g., “Was my feedback positive throughout that session?”, “Were there any individuals who I gave negative and public feedback to?”). The medium that coaches reflect through is their prerogative, examples include pen and paper notes, journals, social networks, mind-maps, photographs, or recordings (Cropley et al., 2018). Having gone through this reflection-on-action process, coaches can then systematically consider how to action what they have learnt in practice, a process of *reflection-for-action*. This may require coaches to reflect upon their curriculum (perhaps with peers) and appraise how they may integrate what knowledge they have acquired from reflecting-on-action into future psychological climates. Ultimately, just like planning and implementing strategies to support the psychological climate, the development of the climate itself will therefore become an iterative process, it evolving as the coach develops as a reflective practitioner.

Conclusion

The coach has a considerable influence over the psychological environment experienced by athletes, and therefore has significant responsibility to promote adaptive environments that promote positive cognitive, behavioural, and affective outcomes for those involved. This chapter has sought to

provide an overview of the central theories that have underpinned much of the research regarding psychological climates to date, along with a description of the frameworks, and as discussion of their efficacy in promoting adaptive environments. Further considerations were also discussed to provide the coach practitioner with a more rounded view to better support their application of acquired knowledge. The chapter culminated in advocating several strategies, each with guiding principles, to support the creation of autonomy-supportive environments. These strategies were also aligned to disempowering coach behaviours to prompt greater self-awareness amongst coaches, which, it is anticipated, will assist coaches to calibrate and manage their impact on psychological climates.

Coaches are the gatekeepers to the positive psychological outcomes that sport participation can bring to individuals. We would encourage coaches at all level to consider how they might apply the principles outlined in this chapter, not just for the benefit of their players' motivation, performance and psychological well-being, but also for their own.

Learning Exercises

1. How has research, underpinned by AGT and SDT, informed our knowledge of psychological environments to date?
2. What are the commonalities in terms of strategies advocated according to the AGT and SDT approaches to promoting effective coaching environments?
3. What strategies can coaches employ to support their development of an adaptive psychological environment?
4. Within your own coaching practice, which strategies are you going to prioritise to support the promotion of an adaptive psychological environment in training?
5. Which strategies will you aim to emphasise within competition to help foster an adaptive psychological climate for athletes?

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Chapter 21: Motivation in Coaching

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