



How important is the coach-created motivational climate on player longevity?

Kylie Moulds 

Faculty of Health, University of Canberra/Tennis Australia.

ABSTRACT

Coaches are considered the architects of sustained participation and performance in sport, often responsible for implementing the structure and content of training and competition over short- and long-term periods. Further, coaches can also influence the design and nature of social interactions and experiences. Appleton et al. (2016) refers to such coaching environments, created intentionally or unintentionally, as 'coach-created motivational climates,' given their impact on player motivation (or lack of). This article initially describes the research that supports empowering coach-created motivational climates, an evidence-based approach to developing and sustaining player motivation. An empowering climate is characterised by coach behaviours of high task involvement, autonomy and social support and low ego control. The article then highlights how tennis coaches can implement and review empowering coaching principles, promoting positive health development and player longevity.

Key words: Coach-athlete relationships, athlete development, long-term motivation, sustained participation.

Received: 09 September 2023

Accepted: 08 November 2023

Corresponding author: Kylie Moulds. Email: kylie.moulds@canberra.edu.au

INTRODUCTION

Previous research has identified several coach-driven factors that are important to sustained participation and performance, including the coach-created motivational climate (Appleton et al., 2016). The motivational climate created by the coach can influence the quality of training and competition in short and long-term contexts, as well as the potential to facilitate positive health development including the accrual of physical, psychological, and social benefits (Duda & Appleton, 2016). More specifically, what the coach says and does, and how they structure the environment, can influence an athlete's interpretation and responses to training and competition (Duda, 2001).

Duda (2013) presented a dualistic framework of the motivational climate, known as a coach-created Empowering or Disempowering climate. Duda (2013) defines the coach-created motivational climates, as either: optimising athlete development and participation (i.e., empowering) or dysfunctional psychological and social responses/outcomes (i.e., suboptimal or disempowering). An empowering climate is characterised by coaching behaviours of high task-involvement, autonomy-support, and social support (Appleton et al., 2016; Mageau & Vallerand, 2003; Reinboth & Duda, 2004), with low ego control. More specifically, task-involving refers to coaches implementing, encouraging, and reinforcing values related to personal task effort and a work ethic toward individual skill improvement and self-betterment. The coach may implement skill activities aligned with task-involving values or may encourage these values during activities where individuals are focused on skill mastery and problem solving. Autonomy-supportive coaching



is evident when the coach takes the athletes' perspective into account. The coach encourages athlete choice and voice (i.e., during problem-solving or learning), as well as acknowledging athlete emotions or feelings (Mageau & Vallerand, 2003). Socially supportive coaching refers to a genuine interest in athlete welfare. The coach demonstrates care and concern for athlete well-being and provides social encouragement and support during learning/training activities. A socially supportive coach respects his or her athletes and does not demand respect in return (Reinboth et al., 2004).

To differentiate between the motivational climates, disempowering climates are commonly characterised by features of ego-involving (e.g., result focussed) and controlling (e.g., authoritarian) instruction, social interaction designs, and behaviours (Duda, 2013; Duda & Appleton, 2016).

Ego-involving coaching often refers to different treatment based on an athlete's (perceived) capability or competency differences. In this climate, the coach may create an excessively competitive rivalry between all participants (e.g., athletes, support staff, other coaches, parents, significant others) with the focus on outperforming others (Newton et al., 2000), and create inequity in participation and social engagement opportunities. Finally, the controlling dimension refers to how a coach will dictate all participant behaviours, social interaction, and performance within training and competition settings. Controlling behaviour includes pressuring, coercing, intimidation, and threatening behaviours during interactions. Such coaches may more likely use extrinsic rewards/reinforcements to manipulate participant behaviour (Bartholomew et al., 2010). Previous research on former club to national-level Australian swimmers (aged 8 -18 years) identified the association between sport discontinuation and a coach-created disempowering climate when compared to continuing swimmers (Moulds et al., 2023).

As coach-created climates convey information and meaning for participating individuals and those in close social proximity (e.g., support staff, other coaches, parents, significant others), logic suggests that promoting and implementing favourable empowering coaching characteristics could be beneficial to sustained performance and longevity in tennis.

EVIDENCE BASED COACH-CREATED MOTIVATIONAL CLIMATES

Previous coach education intervention studies include the Promoting Adolescent Physical Activity (PAPA) project (Duda et al., 2013; Duda, 2013) and isolated studies in North American youth sport contexts. The PAPA project examined soccer as a platform to endorse youth mental, emotional, and physical health. Within the project, interventions aimed to increase the knowledge and awareness of 'grassroots' coaches to foster youth (males and females, aged 10-14 years) experiences, motivations, and enjoyment (The PAPA project, 2023). For instance, working with French and Norwegian youth soccer coaches (N = 18) at the grassroots level, a six-hour pre-season intervention qualitatively examined the implementation of empowering motivational climate principles in coaching instruction and behaviours. In support, findings from a recent intervention pilot study conducted with Australian swimming coaches (N = 19) provided preliminary evidence suggesting coach motivational climates can be positively modified via a short-course coach education intervention. Incorporating empowering characteristics, while concomitantly reducing disempowering associated characteristics could benefit youth swimmer experiences and sport longevity (Moulds et al., 2023).

Similarly, in a United States community-based youth basketball program involving 37 coaches (n = 4 females, n = 33 males; $M_{age} = 45.0$, $SD = 6.17$) and N = 216 junior players (n = 99 females, n = 117 males; $M_{age} = 11.50$, $SD = 1.63$), Smith et al. (2007) examined the influence of a motivational climate intervention upon athlete anxiety over a 12-week basketball season. Statistical analyses identified athletes in the intervention group perceived their coaches as being more mastery-involving on the MCSYS, when compared to athletes in the control group. Analyses of time differences (time point 2 - time point 1) revealed that athletes in the control condition had increased anxiety levels according to the Sport Anxiety Scale-2 (SAS-2; Smith et al., 2006).

WHY CONSIDER THE MOTIVATIONAL CLIMATE AND TENNIS PLAYER LONGEVITY?

Previous findings considering age-related factors of the top 100 ranked men and women over the last few decades have reported a shift towards older ages and longer playing careers. Ages of top 100 male tennis players examined from 1984 - 2013 (Gallo-Salazar, 2015) increased significantly from ($M_{age} = 24.6$, $SD = 3.9$ to $M_{age} = 27.6$, $SD = 3.2$ yr; $P < 0.01$). In female tennis players, data examined from 1998 - 2013 also suggested an increased age ($M_{age} = 23.5$, $SD = 3.5$ to $M_{age} = 24.8$, $SD = 4.2$ yr; $P < 0.01$). When comparing males and females, a top 100 ranking was reached earlier in females than males ($M_{age} = 21.6$, $SD = 3.4$ vs $M_{age} = 22.8$, $SD = 3.1$ yr; $P < 0.05$) and peak performance was also attained significantly earlier in females than males ($M_{age} = 23.6$, $SD = 3.5$ vs $M_{age} = 24.8$, $SD = 2.9$ yr; $P < 0.01$). Men remained in the top 100 for a slightly longer period than women ($M_{age} = 4.1$, $SD = 3.1$ and $M_{age} = 4.6$, $SD = 3.8$ yr; $P < 0.01$). Analysing thirty years of longitudinal data, Li et al., (2018) implied the developmental time course and career trajectory of top-level players in professional tennis took approximately two decades. Top 10 players spent approximately 10 years from the age they first began playing tennis ($M_{age} =$ males 5.5, $SD = 1.6$ yr, females $M_{age} = 5.6$, $SD = 1.9$ yr) to reaching an international junior level and another 10 years to reach their best career senior ranking. Age-related trends have remained similar over time. In 2022 the age of the top 100 ranked men was ($M_{age} = 27.3$ $SD = 4.5$ yr) and women ($M_{age} = 27.2$ $SD = 4.8$ yr). Therefore, if it takes approximately 20 years for players to reach peak performance, the role of the coach and other stakeholders in close social proximity with the athlete (e.g., support staff, other coaches, parents, and significant others) is paramount.

COACH-CREATED EMPOWERING CLIMATES TO ENHANCE PLAYER LONGEVITY

Given their frequent interactions with athletes, coaches should consider how coach-created motivational climates can impact vital factors (i.e., technical, tactical, physical) for positive long-term psychosocial development. Whilst acknowledging complexity in coach-created motivational climates, there are guiding principles that can be used to help motivate athletes using known indicators of motivation such as attention, energy, effort, and enjoyment. Examples of empowering and disempowering coaching behaviours for tennis are provided in Figure 1. By considering and satisfying empowering climate dimensions, coaches can positively contribute to the long-term tennis experience and influence healthy and sustained performance outcomes. Armed with the knowledge of evidence-based research and self-awareness, combined with the expectation that coaches are only steering/influencing and not definitively determining motivation, coaches and (support staff, parents) may be able to navigate the complexity that is inherent in motivational climates, enhancing empowering climates and avoid suboptimal, disempowering climates.

COACHING STRATEGIES FOR IMPLEMENTATION - MOTIVATIONAL CLIMATE REFLECTION

An immediate strategy to consider is empowering motivational climate training and awareness for coaches. As athletes' mental health issues are becoming increasingly apparent, key stakeholders (coaches, support staff, parents) must aim to create positive (empowering) environments

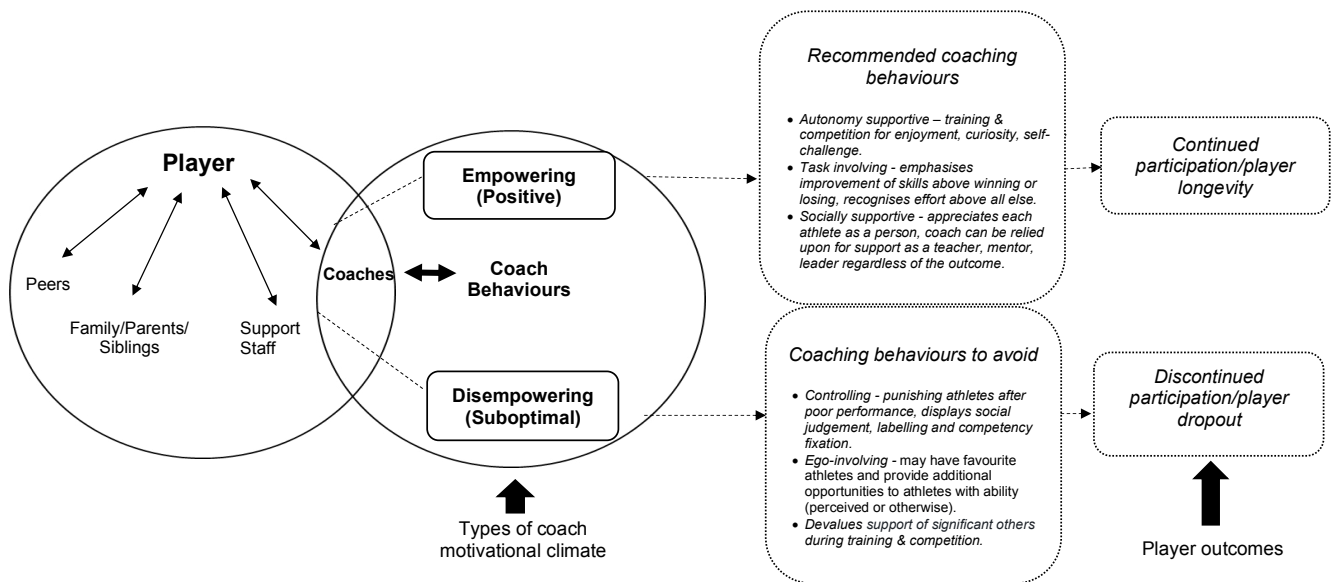


Figure 1. Visual summary of how interactions and coaching climate behaviours may associate with discontinuation and long-term development outcomes of empowering and disempowering coaching behaviours for tennis.

for athletes. In addition, coach education training could be valuable for reducing dropout rates and increasing the likelihood of attaining functional longer-term developmental and performance benefits from sustained participation (Moulds et al., 2023). Individual coaches should aim to increase self-awareness through constant self-reflection and evaluation of coaching climate behaviours. Multiple assessments (e.g., with athletes, support staff, colleagues, national sporting organisations, other sporting organisations) and conducting periodic reviews could enhance player longevity. The importance of interactions with other coaches, group education and coach mentoring may also help pinpoint when and where changes/alternative factors within a coaching climate may need to occur. Several types of reflection can take place at various times of the coaching process, the following recommendations could help to assess the motivational climate and inform coaching practice:

- Retrospective reflection-on-action (Gilbert and Trudel, 2001) assessing empowering/disempowering coaching principles 'after the fact'. Notes, reflective journaling, informal discussions/interviews with others, to reflect on motivational climates from a training and competitive context.
- Reflection-in-action (Schön, 1983) assessing empowering/disempowering coaching principles during training or competition with a colleague/mentor/critical friend to examine aspects of delivery in terms of the coach-created motivational climate, and to formulate goals for improvement.
- Reflection-on-action (Gilbert and Trudel, 2001) assessing empowering/disempowering coaching principles immediately after a coaching session or days later, but before the next coaching session. Video analysis can be an effective strategy to assist the coach in making sense of their coaching climate to improve future action.

Coaches will differ in terms of when the most appropriate and effective time for motivational climate reflection is. Coaches should also consider the value of including other stakeholders (e.g., athletes, support staff, mentors, colleagues, and parents) in the process.

CONCLUSION

Key recommendations from this article are for coaches to specifically implement coaching behaviours, aligned to an empowering motivational climate for player longevity. Coaches' relational skills, the implicit message meaning (empowering and disempowering) from instructional behaviours can shape athlete behavioural responses (e.g., anxiety levels) and outcomes (e.g., sport dropout or longevity). A coach-created motivational climate combining autonomy-supportive, task-involving, and socially supportive relational exchanges between individuals (e.g., athletes, coaches, support staff, parents, and significant others) may increase the likelihood of athletes attaining positive outcomes from longer-term participation and ultimately performance. Avoiding suboptimal climates in the form of controlling coach behaviours, such as pressurising, coercing and intimidation, and using extrinsic rewards/reinforcements to reward behaviour should be of utmost importance. Developing a robust motivational climate reflective practice throughout the coaching process can benefit coaches in many ways. As well as session planning, coaches can use reflection strategies to help further develop self-awareness and emotional regulation.

CONFLICT OF INTEREST AND FUNDING.

There was no financial assistance associated with this study. The author reports no perceived conflict of interest.

REFERENCES

Appleton, P. R., Ntoumanis, N., Quedsted, E., Viladrich, C., & Duda, J. L. (2016). Initial validation of the coach-created Empowering and Disempowering Motivational Climate Questionnaire (EDMCQ-C). *Psychology of sport and exercise*, 22, 53-65.

Appleton, P. R., & Duda, J. L. (2016). Examining the interactive effects of coach-created empowering and disempowering climate dimensions on athletes' health and functioning. *Psychology of sport and exercise*, 26, 61-70.

Bartholomew, K. J., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2010). The controlling interpersonal style in a coaching context: Development and initial validation of a psychometric scale. *Journal of sport and exercise psychology*, 32(2), 193-216.

Cobley, S., & Moulds, K. (2023). The Child and Adolescent Sport Dropout Problem: Could Modifying the Coaching Micro-System Climate Help? In *Routledge Handbook of Coaching Children in Sport* (pp. 260-273). Routledge.

- Duda, J. (2001). Goal perspectives research in sport: Pushing the boundaries and clarifying some misunderstandings. In *Advances in motivation in sport and exercise*. Human Kinetics, (pp. 129–182).
- Duda, J. L. (2013). The conceptual and empirical foundations of Empowering Coaching™: Setting the stage for the PAPA project. *International Journal of Sport and Exercise Psychology*, 11(4), 311-318.
- Duda, J.L. and Appleton, P.R. (2016). Empowering and disempowering coaching climates: Conceptualisation, measurement considerations, and intervention implications. In: M. Raab, et al., eds. *Sport and exercise psychology research: From theory to practise*. London: Academic Press, 373–388.
- Gallo-Salazar, C., Salinero, J. J., Sanz, D., Areces, F., & del Coso, J. (2015). Professional tennis is getting older: Age for the top 100 ranked tennis players. *International Journal of Performance analysis in sport*, 15(3), 873-883.
- Gilbert W. and Trudel, P. (2001) Learning to coach through experience: Reflection in model youth sport coaches, *Journal of teaching in physical education*, 21, 16–34
- Li, P., De Bosscher, V., & Weissensteiner, J. R. (2018). The journey to elite success: a thirty-year longitudinal study of the career trajectories of top professional tennis players. *International Journal of Performance analysis in sport*, 18(6), 961-972.
- Mageau, G.A. and Vallerand, R.J. (2003). The coach athlete relationship: A motivational model. *Journal of sports sciences*, 21 (11), 883–904.
- Moulds, K., Fraser, K. K., Karp, J., Kapocius, O., Heathcote, M., Appleton, P. R., & Coble, S. (2023). Coach-created motivational climate ratings differentiate between dropout and continuation in Australian youth swimming. *International Journal of Sports Science & Coaching*, 18(5), 1395-1404. <https://doi.org/10.1177/17479541231174806>
- Moulds, K. (2023). Investigating child and adolescent sport dropout from a bio-ecological perspective in Australian swimming: How important is the coaching climate? (unpublished doctoral dissertation). The University of Sydney, Australia.
- Newton, M., Duda, J.L., and Yin, Z., (2000). Examination of the psychometric properties of the perceived motivational climate in sport questionnaire-2 in a sample of female athletes. *Journal of sports sciences*, 18 (4), 275–290.
- Nicholls, J.G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological review*, 91 (3), 328.
- The PAPA Project. (2023). <http://www.projectpapa.org/>
- Reinboth, M. and Duda, J.L., 2004. The motivational climate, perceived ability, and athletes' psychological and physical well-being. *The Sport psychologist*, 18 (3), 237–251.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action* (p. 1983). New York: Basic Books.
- Smith, R. E., Smoll, F. L. & Cumming, S. P. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of sport and exercise psychology*, 29(1), 39–59.
- 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.

Copyright © 2023 Kylie Moulds



This text is under a [Creative Commons BY 4.0 license](https://creativecommons.org/licenses/by/4.0/)

You are free to Share - copy and redistribute the material in any medium or format – and Adapt the content - remix, transform, and build upon the material for any purpose, even commercially under the following terms:

Attribution: You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

[CC BY 4.0 license terms summary](https://creativecommons.org/licenses/by/4.0/). [CC BY 4.0 license terms](https://creativecommons.org/licenses/by/4.0/)

[RECOMMENDED ITF TENNIS ACADEMY CONTENT \(CLICK BELOW\)](#)

