

Integrating on-pitch conditioning in football with psychological outcomes

By **David McHugh¹**, **Lorcán Mason²** and **Ian Jeffreys¹**,

¹Setanta College, Ireland; ²Atlantic Technological University Donegal, Ireland

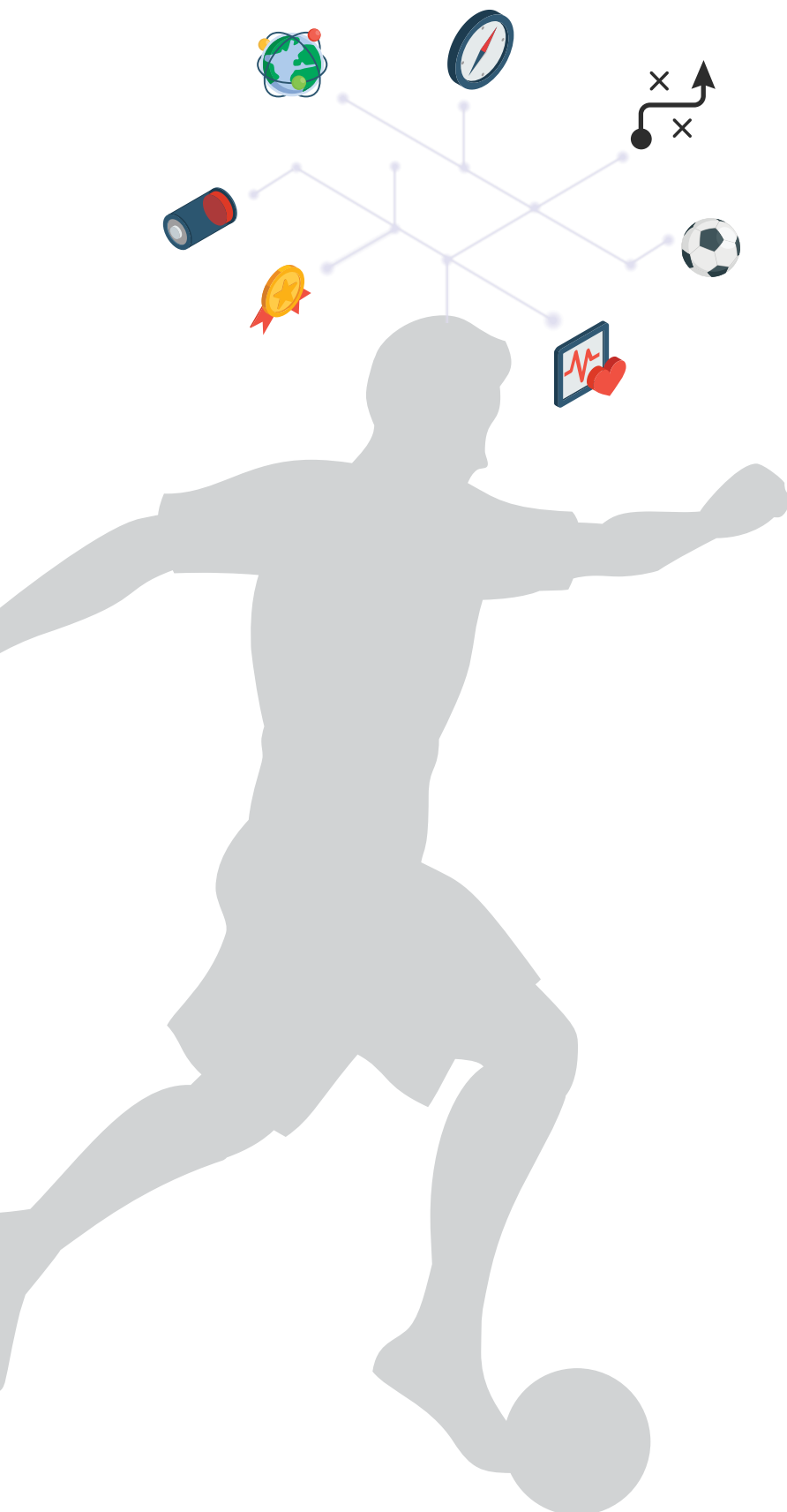
OVERVIEW

Despite the generally accepted importance of psychological processes to performance, it could be argued that the psychological preparation of football players is less systematic than other aspects of performance preparation. However, Pain and Harwood identified that using sports psychology during physical practice could be an important factor in increasing the receptiveness of sports psychology in soccer.³⁸ Integrating psychological preparation within physical practice can also help coaches and athletes to maximise the benefits from the training process. This article will explore the psychological demands of football, consider current frameworks for integrating psychological skills training within physical practice, and examine some of the barriers that have been identified by coaches in football regarding sports psychology support. It will also present a framework for integrating sports psychology within a periodised plan in football, based on the application of Acceptance Commitment Therapy (ACT) to provide a theoretically informed approach to integrating psychological processes within an integrated periodisation approach.

The goals of training

The ultimate aim of the training process in any sport is to progressively develop the required qualities of the sport in order to improve performance.⁵ Performance preparation is often viewed as having four co-actives: the technical, the tactical, the physical and the psychological.⁴ As strength and conditioning coaches, we naturally focus on the physical aspects of performance, eliciting adaptation through the application of targeted training doses, interspersed with periods of recovery, to facilitate supercompensation.^{34,13} This approach has largely viewed training adaptation from a predominantly physiological perspective. However, to fully explain the training-recovery cycle,

practitioners must also account for the multitude of additional internal psychophysiological responses/adaptations that also occur during training, all of which have the impact to directly affect the adaptation process and which dilute the accuracy of quantifying the training response.^{27,23} It is always important to remember that there is a complex relationship between the training dose, performance outcomes, injury and illness;^{44,46} consequently, the adaptation process will never be linear, but will instead be highly variable, depending upon the interaction of multiple factors.^{43,46,24} Clearly, the more of these factors that we are aware of and can feed into our analysis, the more we can increase the likelihood of successful outcomes.



It has become increasingly clear that traditional approaches to periodisation, where planning was approached from purely a physical perspective, were flawed – especially in team sports, where the tactical and technical training doses added significantly to overall training load. Consequently, there has been a marked shift to the deployment of integrated periodisation approaches, which seek to adopt a holistic view to planning in sport through combining all the training components into a unified whole. The technical and tactical demands of the sport are matched with the biomotor abilities required to perform, which in turn influence psychological skills training and nutrition requirements.¹

Yet, despite this shift, the concept of a fully integrated periodisation approach has still not fully developed beyond the periodisation of biomotor abilities; the integration of psychological skills is still a significant omission.³⁵ One potential reason for this is that psychological preparation is often positioned outside of the training process, considered as something to be ‘delivered’ by a sport psychologist.¹ This type of thinking can throw up challenges from both sides: on the one side, coaches may have insufficient knowledge about psychological preparation and fail to fully deploy its tools; they may even be intimidated by a sport psychologist, again resulting in insufficient integration of psychological approaches.¹ On the other side, psychologists also have to understand that they are part of a team in which the athlete and coach are key, and that they have to adapt and integrate their work into the functioning of the team environment. If this is to improve, then workable frameworks have to be developed that facilitate the integration of psychological skills into the integrated periodisation approach. The first step in this process has to be to develop an understanding of the psychological demands of the sport.

Psychological demands of football

The quality of the psychological support provided depends upon how well the application reflects the needs of the players and the sport.²⁹ Research into the psychological demands on footballers has identified that the practice environment provides opportunities to improve performance,²² to remain focused and consistent,³⁰ to influence the athlete’s ability to implement pre-performance routines, to prepare tactically for games,²² and to be able

to visualise the performance prior to the game.⁸ Reviewing this research, it becomes clear that the practice environment is an important element which influences the overall performance of each individual player and thus presents itself as an important opportunity to develop the psychological skills required to perform effectively and consistently. Ultimately, the practice environment influences the development of the flexible coping strategies required in response to stressors;¹⁸ developing flexible coping strategies can therefore help facilitate a process-focused approach to performance which facilitates short- and long-term performance as a footballer.^{22,8,20}

When performing at their best, research has shown that footballers are focused on the task at hand and disconnected from everything else.⁴⁶ This is coupled with a feeling of excitement about the game that facilitates task-focused attention.² To develop these capabilities, the importance of the practice environment becomes self-evident. An effective training environment directly influences all of the following: the players' preparation for performance, the development of coping strategies, the ability to perform with a feeling of excitement and focusing the players' attention. The key, then, is to manipulate the practice environment in order to develop these capacities. An effective way of integrating psychological skills development into training is to take a process-focused approach: this can be defined as the extent to which a person attends to aspects of the goal that are related to the means of achieving the goal.⁹ A process focus can be facilitated through the individual developing and utilising a range of coping mechanisms such as emotion-focused coping, problem-focused coping and avoidance coping while undertaking practice.^{30,31,20,8,26,32}

With the practice environment being an important variable in psychological preparation in football, all staff working within this need to understand the importance of psychological processes, to build these into their practice plans and to be able to provide psychological support within this environment. To some extent this requires a different approach for sports psychology practitioners; rather than focusing solely on delivering direct interventions they become 'facilitators', working with a wider coaching team to develop practice strategies and flexible coping strategies within the practice environment. This requires the practitioner

to focus on building the relationships and skills necessary to intervene within the training process.⁴⁴ Coaches are potentially unaware of what sports psychology is and its potential impact on multiple aspects of coaching and it can take a lot of time and energy from the sports psychologist to get people to understand and to buy into the process of psychological application.¹¹

Developing a professional identity and a way of working provides the practitioner with the psychological, sport-specific, and contextual knowledge needed to assist clients despite any lack of 'buy-in' at the beginning.¹¹ The practitioner needs to have a clear framework for developing psychological skills, as well as the ability to articulate this within the context in which he/she is operating: he or she must also be able to deliver across a wide performance team.

Frameworks for implementing psychological skills in football

Periodising psychological skills can be a useful starting point for the sport psychologist. Just as with physical capacities, psychological skills are also suited to periodisation approaches where planned variation and intensity can be deployed throughout the season,²¹ and where these approaches can be integrated into the overall performance plan. Often, the sports and exercise psychologist is brought in with a team or to work with an athlete or team when there is a problem to 'fix'. Although this can help an athlete or team with short-term issues, it does not address the long-term needs of the athlete or the coach.

A well-planned psychological skills training programme can help a team and athlete to be proactive in developing their psychological skills throughout a season. During the preparation phase for the season, the team might focus on understanding the role psychological skills can play in their performance: this is known as the education phase. As the athlete progresses through a mesocycle, there will be less focus on understanding the skill and more focus on using the skill: this is known as the acquisition phase. Finally, in the peaking phase, the aim would be for the psychological skills to be refined to be used in competition.²¹

An example of a framework which has been integrated within technical and tactical training in football is the 5 Cs model.¹⁵ This programme was delivered to the players and

'if coaches are to implement psychology within training sessions it is important that there is a framework around which to facilitate its application'

‘psychological skills should ideally be integrated within the daily training environment’

parents within an academy environment, and then followed up with an education and behavioural programme implemented by the coaches within training sessions which helped to facilitate a shared understanding within the performance environment. The 5 Cs programme focused on the development of players’ communication, emotional control, commitment, concentration and confidence, with the coach integrating each C within training sessions. The programme began with a focus on commitment which was seen as a foundation for the rest of the programme. This was then followed up by communication, with effective communication being central to teamwork. Concentration and control were the focus for workshops 3 and 4, as they were seen as being important for performance management. In workshop 5, confidence was the main focus to help the coaches continue this work after the programme had finished. A weakness identified in the literature has been that periodisation of psychological skills training has not followed a logical sequence.³⁵ The 5 Cs framework addressed this weakness. However, this approach was designed for youth sport with a focus on life skills; it did not examine how psychological skills can be integrated with biomotor abilities in a periodised plan.³⁵ Research conducted by Harwood¹⁵ provides practitioners with an insight into how coaches can be supported in facilitating psychological outcomes within a youth sport environment.

To further the development of psychological skills within physical practice, Diment⁷ developed a number of principles coaches should consider, including the timing of psychological skills development, the context, the processes and the people involved in developing psychological skills. The timing of psychological skills development highlights the importance of psychological skills being developed in a sequence over time.³³ In terms of context, psychological skills should ideally be integrated within the daily training environment.¹⁹ The process involved in developing psychological skills requires the skills to be trained in competitive match situations.⁶ Finally, coaches and athletes need to be actively involved in the process of developing psychological skills.³

Despite the advances in approaches to integrating sports psychology within physical practice, barriers still exist to successful implementation within football environments at the professional level. A study interviewed 13 UEFA Pro Licence

Coaches and identified a lack of knowledge and a lack of time as the two main barriers for coaches in developing the psychological skills of players.⁸ In addition, the results showed that the coaches did not feel prepared to develop psychological skills during training. Although they perceived psychological skills to be important, a barrier to using a sport psychologist was the practitioners’ ‘understanding of the sport’. This finding has been replicated across sports.¹²

The sports psychology practitioner needs to implement a psychological support programme which can help address the coaches’ lack of knowledge in a simple to understand format, explain how psychological skills interlink and overlap with the style of play of the coach, and also maximise the limited time available to develop psychological skills. To do this, the practitioner needs to understand the coach’s training methods in order to be able to integrate sports psychology knowledge within the organisation’s periodised approach to training. Where practitioners impose the methodology that they want to use, rather than adapting to the needs of the client, the results have typically been poor.³⁷

In the sports psychology literature, the relationship between the helper and how the goals of the intervention are chosen has been identified as an important factor in service delivery.^{42,43} Although each sports psychologist will have different personal core beliefs and values, they may utilise the same theoretical paradigm concerning behaviour change and models of practice. Having a theoretical paradigm concerning behaviour change from a psychological perspective enables a practitioner to describe and explain human behaviour and allow for successful attempts to predict and control behaviour change.⁴³ Where a psychologically informed approach can be implemented within the periodised plan with the objective of facilitating performance and well-being, this can help develop the necessary application by coaches and sport science and medicine staff. One such psychologically informed approach that can be integrated within the training environment is acceptance commitment therapy (ACT). With the psychological demands of football highlighting the importance of coping strategies, playing with excitement and focus of attention, ACT can provide a framework to inform the development of these psychological processes within an integrated periodisation model.

ACT as a framework within integrated periodisation

ACT is a psychological approach to therapy which aims to modify a person's relationship with thoughts and emotions, instead of trying to eliminate or reduce cognitions or emotions. Specifically, ACT aims to help clients develop psychological flexibility, which is the 'ability to contact the present moment more fully as a conscious human being and to change or persist in behaviour when doing so serves value ends'.¹⁷ ACT is based on the philosophical view of functional contextualism,¹⁸ which examines how a person's past and current context influences external behaviour and internal experiences.¹⁶ All behaviour is viewed as serving a function in the environment in which it occurs. Reductionism is resisted within this approach, as the removal of context is thought to remove the nature of the problem and its potential solutions.¹⁶

Functional contextualism is philosophically underpinned by relational frame theory (RFT), which is the theoretical basis of ACT. According to RFT, human language and cognition operates through a process called relational framing, the process through which stimuli within the environment, cognition, emotion, and physiology become related to one another.² With ACT being underpinned by RFT, it can provide a theoretical explanation for how the environment, thoughts, emotions and physiology all become related to each other.

The general clinical goal of ACT is to undermine the verbal content of cognition that can facilitate experiential avoidance and to construct an alternative context where behaviour is aligned to one's values.¹⁶ Experiential avoidance is the attempt to escape or avoid feelings and experiences, even if it causes psychological harm to the individual. In a sporting context, an example would be an athlete avoiding behaviours such as engaging with the preparation required to train with an intensity required to improve. This provides short term relief through not having to put in the time and effort required. However, long term they are moving away from the type of athlete they want to be and the potential goals they have set for themselves. The overarching aim of this framework is to develop psychological flexibility which is developed through six overlapping processes: 1) acceptance is the active embracing of all human experiences without trying to change or control them; 2) cognitive diffusion is the ability to

observe one's thoughts, detach from them and let them come and go; 3) contact with the present moment is a non-judgemental awareness of what is going on and being able to engage with what is happening in that moment; 4) viewing the self as context refers to viewing the self with ongoing awareness; 5) identifying values that are personally important; and 6) commitment to action that brings us closer to our values.¹⁷ ACT is not a programme with a specified series of steps but requires decisions to be made by the practitioner on what processes to target and in what order.

Gardner and Moore¹⁰ developed the mindfulness-acceptance-commitment (MAC), which is specifically designed for athletes and underpinned by the ACT approach. In contrast to cognitive control-based approaches of performance enhancement in sports psychology, the MAC approach does not focus on reducing or controlling negative internal experiences. Instead, it views athletic performance as being underpinned by: 1) a present moment focus on the sports task with an external attentional focus; 2) being open to and accepting of thoughts, feelings and experiences; and 3) committing to behaviours that are line with an individual's personal values and goals.¹⁰

Developing a present moment focus is underpinned by the ACT processes of self as context and present moment awareness. Being open to, and accepting of, thoughts, feelings and experiences is underpinned by the ACT processes of acceptance and cognitive defusion. Commitment to behaviours in line with values is underpinned by values and committed action.

Figure 1. Acceptance commitment therapy model

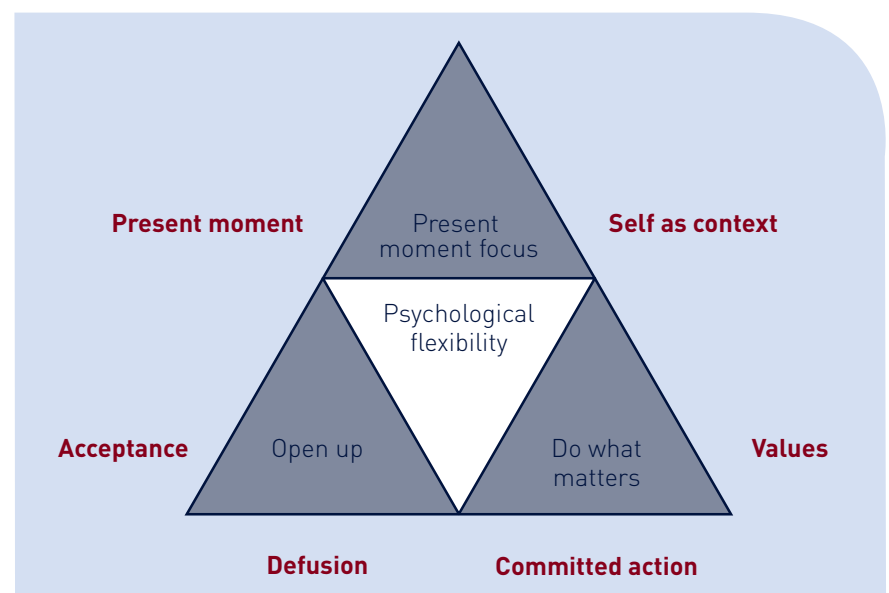


Figure 1 highlights how the six-core process of ACT helps to develop the core underpinnings of the MAC approach to facilitate psychological flexibility and performance. One of the criticisms of psychology is that there is no clear framework for implementing sports psychology in practice. The processes identified in the MAC approach can be integrated within the training process and planned in a way that they are developed over time.

An example of ACT within integrated periodisation in football

Although theory provides background information, if coaches are to implement psychology within training sessions it is important that there is a framework around which to facilitate its application. Zakrajsek, Lauder and Bodey⁴⁷ developed a tool for coaches when integrating psychological skills within training. The first step involves the coach identifying an activity on which they will focus during practice. From here, the coach reflects on the mental skill that could be developed through the exercise. The second step involves developing a lesson plan and prioritising a mental skill to be developed. This involves defining the mental skill, explaining the activity and describing the connection between the mental skill and the activity. The third step involves reinforcing the mental skill during practice. The coach identifies how they can verbally reinforce the mental skill and uses questions to engage the athlete. The fourth

step is looking at how the mental strategy can be extended to future practice situations. The athlete can be reminded about the strategy they covered in the last session to build on the work from this session.

Using this guide developed by Zakrajsek, Lauder and Bodey,⁴⁷ the MAC approach can be adapted to an integrated periodisation approach. Figure 2 provides an overview of a training week. The first training day after a match is match day (MD) +1, where the primary focus is on recovery. Recovery is a psychological, physiological and social process which aims to re-establish personal resources to their full functional capacity.²⁸ A number of psychological relaxation techniques have been identified, including breathing relaxation, progressive muscle relaxation and biofeedback, all of which promote recovery at the individual level.³⁹ At the social level of the team, after a competitive game, a well-structured review process takes place which can facilitate learning from the previous game. A post-competition analysis process can help the athlete and team develop effective coping resources in response to stress and improve an athlete's future performance.⁴⁰

A review can be conducted using the EICCA – effective, ineffective, continue, change and action – process.⁴¹ The team performance can be reviewed in terms of what was effective and ineffective about the last performance. It can be too easy for athletes and the team to focus too much on the ineffective aspects of performance; it is therefore important, when



engaging in this process, that there is equal balance between the number of points in the effective and ineffective sections. Following this, the coaches, team and athletes identify what they will continue to do and areas they need to change. The final step is to create an action plan for the week ahead and the next game.

MD -4 is the first conditioning day after the previous game. The exercises may have high tension and short duration, with a focus on acceleration, deceleration, jumping and change of direction. The exercises range in numbers from 1v1 to 4v4, with the aim of developing sub-principles and sub-sub-principles of the team's style of play. The aim is to develop the relationships between the team units, and within the team units and individual relationships, while also developing the individual players' technical sport skills.

The psychological processes within MAC to be developed are openness to experiences and acceptance of thoughts, feelings, and experiences.¹⁰ This can be achieved through manipulating the activity to challenge the players' emotional reactions, by making poor referring calls, manipulating the score line or changing the strength of the teams. This enables the coach to reinforce the mental skill of remaining present and the players can be encouraged to register their thought, release it through breathing and refocus on the task at hand through utilising breathing exercises.¹⁴ A useful strategy for this type of training session can be to practise breathing exercises with the players before the beginning of the training session to prepare them to use the psychological process in the session. This might involve asking the players to anticipate the emotions and thoughts they will have in the upcoming training session based on the session plan. This can enable them to identify functional responses to the challenges that will be imposed in the training session. The support staff can then support the players throughout the session in responding to the challenges imposed in a functional way.

On MD -3 day, the players should be fully recovered from the previous game and the objective from a conditioning perspective could be on endurance, with large spaces, long durations and player numbers involved ranging from 9v9 - 11v11. The aim is to make this training day as close to the competition demands as possible. At a technical and tactical level, the focus is on the team's main principles of play. The collective focus

involves all players on the team, whereas the psychological focus now progresses to the MAC process of committing to behaviours that are in line with an individual's personal values, as well as the team's values and goals.¹⁰ This could be achieved by the coach focusing on the behaviour of the players and the team in relation to the tactical focus for the training session. The coach could manipulate the activity to challenge the players by not allowing them to speak, or allowing only certain players to speak, or only allowing one team to speak.¹⁵ All this will challenge the players in terms of their behaviours and commitment to actions in line with the team's values. This enables the coach to reinforce the mental process of committing to action through feedback on body language and the quality of verbal communication.

The focus on match day -2 is on speed with medium-sized numbers and short duration of exercises. As the next game is 48 hours away, only a part of the session is focused on the development of speed. The rest of the session is focused on recovery in preparation for the next game. From a tactical perspective, there is an emphasis placed on the team's sub-principles and sub-sub-principles of play at the unit, inter-unit and individual level. There is a focus on the interactions between players in terms of their roles and responsibilities in relation to the upcoming game. The psychological focus is on developing a present moment focus.¹⁰ If the focus for the session is on the sub principles associated with transition from attack to defence, the coach could record the number of passes the opposition are able to make when the ball is lost or the length of time it takes for the team to get back into a defensive position from an attacking shape. This would challenge the players in terms of the speed of their actions and their ability to remain in the present moment while doing what matters in that moment. The coach could reinforce the mental skill of remaining present by encouraging players to reflect on their focus of attention in different moments using Nideffer's attentional control model.³⁶ The player could be asked to reflect on whether their focus of attention was broad (taking in lots of information) or narrow (focused on a specific piece of information) and whether it was internal (focused on self) or external (focused on what was going on around him or her). Based on the situation and the players' response to the coach's questions, the coach can provide feedback on the attention channel the player was using in the moment.

'The psychological processes within MAC to be developed are openness to experiences and acceptance of thoughts, feelings, and experiences'

Table 1. Integrated periodised plan in football

DAY	MD +1		MD +2	MD -4	MD -3	MD -2	MD -1	MD	
Participants	Players > 60 minutes	Players < 60 minutes	Full squad	Full squad	Full squad	Full squad	Full squad	Reserve squad	
Session type	Recovery	Top ups	Day off	Strength – Power – Small spaces – Gym	Endurance – Football conditioning – Large spaces	Velocity – Power – Sprinting – Gym	Activation - Reactive	Activation – Reactive – Top ups	Match
Loading	Low	Moderate		Moderate - High	High	Moderate	Low	Low-Moderate	Very high
Session organisation	Sectoral Group Individual	Collective Sectoral Group		Inter-sectoral Sectoral Group Individual	Individual Inter-sectional	Inter-sectoral Sectoral Group Individual	Collective Inter-sectoral	Collective Sectoral Group	Collective
Technical and tactical demands	Sub-principles Sub-sub	Principles Sub-principles		Sub-principles Sub-sub principles	Principles Sub-principles	Sub-principles Sub-sub principles	Principles Sub-principles	Main-principles Sub-principles	Game Model
Mental emotional demands	Low	Moderate		Moderate-high	High	Moderate	Low	Low-moderate	Very high
Psychological	Recovery – debrief	Mental		Open up	Do what matters	Be present	Mental	Mental	Mental
Psychological	NA			Poor referee calls Score or strength of the teams	Nobody can speak 1 player can talk	Timing of change in position Number of passes	Cues relevant to the upcoming opponent	Match specific cues	NA
Psychological coaching	NA			Register – release – refocus	Body language, verbal communication	Internal <-> external Narrow <-> broad	NA		NA
Physiological demand	Endurance and football conditioning specific			Strength and power specific	Endurance and football conditioning specific	Velocity and power specific	Activation and reaction specific	Activation and reaction specific	
	Energy system development			Overload	Energy system development	Overload	Overload	Overload	
	Aerobic and anaerobic			Explosive distance Accelerations Decelerations Change of directions	Aerobic and anaerobic	Sprint distance > 95% max velocity Repeated sprint efforts	Accelerations High intensity efforts	Accelerations High intensity efforts	
	Overload			Gym	Volume distance [Z4-Z6]	Number of sprints Very high-speed running (Z6)		Endurance and football conditioning specific	
	Volume distance [Z4-Z6]			Horizontal push and pull	High metabolic load	Gym		Energy system development	
	High metabolic load distance			Vertical push and pull	distance	Horizontal push and pull		Aerobic and anaerobic	
	High speed running distance			Squat and lunge Hinge Rotation and anti-rotation	High speed running distance	Vertical push and pull Squat and lunge Hinge Rotation and anti-rotation		Overload	
								Sprint distance > 95% max velocity Volume distance [Z4-Z6]	
								High metabolic load distance	
								High speed running distance	
Work interval duration	Long ->3 minutes			Short <3 minutes	Long >3 minutes	Very short <1.5 minutes	Short <3 minutes	Long >3 minutes	High
Rest interval duration	N/A	Short - <3 minutes		Long - >3 minutes	Short - <3 minutes	Long - >3 minutes	Long - >3 minutes	Short - <3 minutes	Low-Moderate
Player numbers per exercise	MD +2/-5	Moderate 6-8		Low <5	Moderate-high >6	Moderate-high >6	High 9-11	Moderate 6-8	High
Spaces per exercise	NA	Moderate - large		Small	Large	Moderate-large	Moderate	Moderate-Large	Large

‘To successfully implement psychology with the coaching staff it is important that the practitioner has a good working relationship with the coaches’

MD -1 is the day before the upcoming game. The focus is typically on ensuring the players are prepared for the upcoming game. Large numbers of players ranging from 9v9 - 11v11 are used in medium-sized areas. This promotes a focus on reactions and effective movement from a physical perspective, due to the reduced space that is available compared to a normal 11v11 game. At the psychological level it is important not to overload the players with new information ahead of the game. The focus can be on bringing the previous day's psychological processes to life the day before the game. The aim on this day is to promote psychological flexibility, which has been defined as 'the ability to contact the present moment more fully as a conscious human being and to either change or persist when doing so serves valued ends'.¹⁷ In the pre-match preparation process, being present, doing what matters and accepting emotions that occur, can facilitate a focus on performance-related cues.²⁵ The sport psychologist working with the coach can help condition the training session to facilitate the performance-related cues specific to the game plan for the upcoming opposition.

Practical considerations for the practitioner

Although the previous section has presented a method which practitioners can use to integrate psychological preparation within an integrated periodisation approach, there are a number of considerations for practitioners. These include the relationship with the coaching staff, staffing levels within the organisation, the practitioner's understanding of periodisation and the coach's games model.

To successfully implement psychology with the coaching staff it is important that the practitioner has a good working relationship with the coaches. When a practitioner initially begins working with a coach or team, they may not be given permission to intervene with the coach or within the training process. This is where the practitioner gaining the trust of the coaching staff becomes important.⁴⁴ As

outlined by a coach in Sharp and Hodges,⁴⁴ developing the trust of the coach enables the sports psychologist to explore other areas and potentially intervene within the training process. Getting the permission to work at this level is further facilitated by the practitioner possessing an understanding of the sport, fitting in with the team culture and being flexible in delivering the service.^{44,8}

A second consideration for the practitioner is the staffing levels within the coaching team. To support the integration of sports psychology within practice sessions, a number of staff are required. With integrated periodisation focusing on developing capabilities across all co-actives, it is extremely challenging for a coach or practitioner to be able to plan and deliver a fully integrated approach. There would be too much for one person to focus on, possibly compromising the quality of the programme being delivered. If there are a number of coaching staff available, then it is possible for the sport psychologist to work with one member of the coaching staff to help them to integrate psychological outcomes within the training programme. Planning how the delivery would work in a simple and flexible way can enable the practitioner to understand the demands on the coaches within their role.⁴⁵

As highlighted by Freitas, Dias and Fonseca,⁸ the sports psychology practitioner's lack of understanding of the sport and culture of a football environment can be a barrier to the coach engaging with the support service. Poorly rated sports psychology practitioners have been found to lack flexibility and impose the methodology they want to use rather than adapting to the needs of the client.³⁵ Therefore, the psychology practitioner needs to be able to develop an understanding of the coach's game model and an understanding of the periodisation model being used in a football context. This understanding of what the coach is trying to achieve – and how they are trying to achieve it – should enable the practitioner to adapt his or her service delivery to the coach's objectives and processes.

AUTHORS' BIOGRAPHIES



DAVID MCHUGH,
MSc, PSYD, C PSYCHOL

David is the programme director for the MSc in applied sport and exercise psychology at Setanta College. He is a consultant providing sports psychology support to athletes, teams and coaches while also holding the UEFA A Youth Elite licence football coaching award.



LORCÁN MASON, BSc

Lorcán is a qualified sports scientist and S&C coach from Kildare, Ireland. Lorcán has vast experience of working with youth and senior athletes across Gaelic Games, professional football and athletics. He has a degree in sports science with exercise physiology and is currently conducting research in the area of 'Sleep, nutrition and injury risk in elite adolescent athletes'.



IAN JEFFREYS,
PHD, ASCC, CSCS*D, RSCC*E, FUKSCA, FNSCA

Ian, a coach, author and educator, is academic director of Setanta College. A former professional rugby player, he is the author of ten books, a former board member and Vice Chair of the UKSCA, and a former board member and Vice President of the NSCA. He is a fellow of both organisations and the Editor of *Professional Strength and Conditioning*.

References

1. Bompa, T, Blumenstein, B, Hoffmann, J, Howell, S and Orbach, I. Integrated periodization in sports training & athletic development: Combining training methodology, sports psychology, and nutrition to optimize performance. *Meyer & Meyer Sport*. 2019.
2. Bricker, JB, and Tollison, SJ. Comparison of motivational interviewing with acceptance and commitment therapy: a conceptual and clinical review. *Behavioural and Cognitive Psychotherapy*, 39(5): 541-559. 2011.
3. Bronfenbrenner, U. Environments in developmental perspective: theoretical and operational models. In: SL Friedmann & TD Wachs (Eds.). *Measuring environments across life span: Emerging methods and concepts* (3-28). Washington DC: American Psychological Association. 1999.
4. Connolly, F. *Gamechanger - The Art of Sport Science*. Canada: Victory Belt. 2017.
5. Coutts, A, Crowcroft, S and Kempton, T. Developing athlete monitoring systems: theoretical basis and practical applications. *Sport, Recovery, and Performance: Interdisciplinary Insights*. 2017.
6. Davids, K., Araujo, D, Vilar, L., Renshaw, I., and Pinder, R. An ecological dynamics approach to skill acquisition: Implications for development of talent in sport. *Talent Development and Excellence*, 5(1): 21-347. 2013.
7. Diment, G M. Mental Skills Training in Soccer: A Drill-based Approach. *Journal of Sport Psychology in Action*, 5: 14-27. 2014.
8. Freitas, SP, Dias, CS, and Fonseca, AM. Elite Portuguese soccer players use of psychological techniques. *Journal of Human Sport and Exercise*, 8(3): 847-860. 2013.
9. Freund, AM and Hennecke, M. 'On Means and Ends: The Role of Goal Focus in Successful Goal Pursuit'. *Current Directions in Psychological Science*, 24(2): 149-153. 2015.
10. Gardner, FL, and Moore, ZE. The psychology of enhancing human performance: the mindfulness-acceptance-commitment (MAC) Approach. New York: Springer Publishing. 2007.
11. Gilmore, S., Wagstaff, C., and Smith, J. Sports Psychology in the English Premier League: 'It Feels Precarious and is Precarious.' *Work, Employment and Society*, 32(2): 426-435. 2018.
12. Gould, D, Tammen, VV, Murphy, SM, and May, JR. An evaluation of US Olympic sport psychology consultant effectiveness. *Sport Psychologist*, 5: 111-127. 1991.
13. Halson, SL and Jeukendrup, AE. 'Does overtraining exist? An analysis of overreaching and overtraining research'. *Sports Med*, 34(14): 967-81. 2004.
14. Hansen, J, and Haberl, P. Helping athletes be present when performing under pressure. In Henriksen, K, Hansen, J, & Hvid Larsen, C. (Eds). *Mindfulness and Acceptance in Sport*. Routledge: New York. 2019.
15. Harwood, C. Developmental Consulting in a Professional Football Academy: The 5Cs Coaching Efficacy Program, *The Sport Psychologist*, 22(1): 109-133. 2008.
16. Hayes, S. Acceptance and Commitment Therapy, Relational Frame Theory, and the third wave of behavioural and cognitive therapies. *Behaviour Therapy*, 35: 639-665. 2004.
17. Hayes, SC, Luoma, JB, Bond, FW, Masuda, A, and Lillis, J. Acceptance and Commitment therapy: Model, process and outcomes. *Behaviour Research and Therapy*, 44(1): 1-25. 2006.
18. Hayes, SC, Strosahl, K, and Wilson, K G. Acceptance and commitment therapy: *An Experiential approach to behaviour change*. New York: Guilford Press. 1999.
19. Henriksen, K, Stambulova, N and Roessler, K. Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise*, 11: 212-222. 2010.
20. Holt, NL, and Hogg, JM. Perceptions of stress and coping during preparations for the 1999 Women's Soccer World Cup Finals. *The Sport Psychologist*, 16(3): 251-271. 2002.
21. Holliday, B, Burton, D, Sun, G, Hammermeister, J, Naylor, S, and Freigang, D. Building the better mental training mousetrap: Is periodization a more systematic approach to promoting performance excellence? *Journal of Applied Sport Psychology*, 20(2): 199-219. 2008.
22. Horrocks, DE, McKenna, J, Whitehead, AE, Taylor, PJ, Morley, AM, and Lawrence, I. Preparation, structured deliberate practice and decision making in elite level football: The case study of Gary Neville (Manchester United FC and England). *International Journal of Sports Science & Coaching*, 11(5): 673-682. 2016.
23. Impellizzeri, FM, Marcora, SM and Coutts, AJ. 'Internal and External Training Load: 15 Years On'. *Int J Sports Physiol Perform*, 14(2): 270-273. 2019.

References

24. Jeffreys, I. *Effective Coaching in Strength and Conditioning. Pathways to Superior Performance.* Abingdon Oxon: Routledge. 2019.
 25. Johles, L, Gustafsson, H, Jansson-Fröjmark, M, Classon, C, Hasselqvist, J and Lundgren, T. Psychological flexibility among competitive athletes: a psychometric investigation of a new scale. *Frontiers in Sports and Active Living*, 2: 1-9. 2020.
 26. Jordet, G, and Elferink-Gemser, M. Stress, Coping, and Emotions on the World Stage: The Experience of Participating in a Major Soccer Tournament Penalty Shootout. *Journal of Applied Sport Psychology*, 24(1): 73-91. 2012.
 27. Kalkhoven, JT, Watsford, ML, Coutts, AJ, Edwards, WB and Impellizzeri, FM. (2021) 'Training Load and Injury: Causal Pathways and Future Directions', *Sports Med*, 51(6): 1137-1150. 2021.
 28. Kallus, KW. Stress and recovery: An overview. In: KW. Kallus & M. Kellmann (Eds.). *The Recovery-Stress Questionnaires: User Manual* (pp. 27-48). Frankfurt, Germany: Pearson Assessment & Information GmbH. 2016.
 29. Keegan, R. *Being a sport psychologist.* Palgrave 2016.
 30. Kristiansen, E, Ivarsson, A, Solstad, B. and Roberts, G. Motivational processes affecting the perception of organizational and media stressors among professional football players: A longitudinal mixed methods research study. *Psychology of Sport and Exercise*, 43: 172-182. 2019.
 31. Kristiansen, E, Murphy, D, and Roberts, G. Organizational Stress and Coping in US Professional Soccer. *Journal of Applied Sport Psychology*, 24(2): 207-233. 2012.
 32. Kristiansen, E., Roberts, G, and Sisjord, MK. Coping with negative media content: The experiences of professional football goalkeepers. *International Journal of Sport and Exercise Psychology*, 9(4): 295-307. 2011.
 33. Larsen, HC, Alfermann, D and Christensen, KM. Psychosocial Skills in a Youth Soccer Academy: A Holistic Ecological Perspective. *Sport Science Review*, 3(3-4): 51-74. 2012.
 34. Matveev, LP and Zdorniy, AP. Fundamentals of sports training. *Progress*. 1981.
 35. Mujika, I, Halson, S, Burke, LM, Balagué, G, and Farrow, D. An integrated, multifactorial approach to periodization for optimal performance in individual and (SOMETHING MISSING HERE). 2018.
 36. Nideffer, RM. Test of attentional and interpersonal style. *Journal of Personality and Social Psychology*, 34: 394-404. 1976.
 37. Orlick, T, and Partington, J. The sport psychology consultant: Analysis of critical components as viewed by Canadian Olympic athletes. *The Sport Psychologist*, 1(1): 4-17. 1987.
 38. Pain, M, and Harwood, CG. Knowledge and perceptions of sport psychology within English soccer. *Journal of Sports Sciences*, 22: 813-826. 2004.
 39. Pelka, M, Heidari, J, Ferrauti, A, Meyer, T, Pfeiffer, M, and Kellmann, M. Relaxation techniques in sports: a systematic review on acute effects on performance. *Performance Enhancement & Health*, 5: 47-59. 2016.
 40. Pensgaard, AM, and Duda, JL. Sydney 2000: The interplay between emotions, coping, and the performance of Olympic-level athletes. *The Sport Psychologist*, 17(3):253-267. 2003.
 41. Perry, J. *Performing Under Pressure: Psychological Strategies for Sport Success.* Routledge: New York. 2020.
 42. Poczwadowski, A, Sherman, CP and Ravizza, K. Professional philosophy in the sport psychology service delivery: building on theory and practice. *The Sport Psychologist*, 18(4): 445-463. 2004.
 43. Schwellnus, M, Soligard, T, Alonso, J-M, Bahr, R, Clarsen, B, Dijkstra, H P, Gabbett, TJ, Gleeson, M, Häggglund, M and Hutchinson, MR. 'How much is too much? (Part 2). International Olympic Committee consensus statement on load in sport and risk of illness'. *British Journal of Sports Medicine*, 50 (17): 1043-1052. 2016.
 44. Sharp, L-A., and Hodge, K. Effective sport psychology consulting relationships: Two coach case studies. *The Sport Psychologist*, 27(4): 313-324. 2013.
 45. Soligard, T, Schwellnus, M, Alonso, J-M, Bahr, R, Clarsen, B, Dijkstra, HP, Gabbett, T, Gleeson, M, Häggglund, M and Hutchinson, MR. 'How much is too much? (Part 1). International Olympic Committee consensus statement on load in sport and risk of injury'. *British Journal of Sports Medicine*, 50 (17): 1030-1041. 2016.
 46. Tedeschi, R and Orlick, T. Brazilian elite soccer players: exploring attentional focus in performance tasks and soccer positions. *The Sport Psychologist*, 29 (1): 41-50. 2014.
 47. Zakrajsek, RA, Lauer, EE, and Bodey, KJ. Integrating mental skills and strategies into youth sport training: a tool for coaches. *International Sport Coaching Journal*, 4: 76-89. 2017.
- 

