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Beyond Mental Toughness: Psychological Competence as a Curriculum Problem in Elite Football Academies, A Convergent Mixed-Methods Study and the Integrated Athlete Development Curriculum Framework

وراء الصلابة الذهنية: الكفاءة النفسية بوصفها إشكالية في تصميم المناهج بأكاديميات كرة القدم النخبوية، دراسة بالمنهج المختلط المتقارب وإطار المنهج المتكامل لتطوير الرياض

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Abstract:

Football academies and clubs invest systematically in physical, technical, and tactical preparation, yet mental toughness is typically transmitted as an implicit cultural expectation rather than delivered as designed curriculum. This study reframes psychological competence in elite football as a curriculum-design problem rather than a psychological-skills deficit. A convergent mixed-methods design with complementary samples was employed. The quantitative strand comprised the validated 20-item Sport Mental Training Questionnaire administered to 47 respondents across seven sports (athletes $n = 40$; coaches and club or academy leaders $n = 7$), of whom 19 were affiliated with football. The qualitative strand comprised semi-structured interviews with 10 under-21 academy footballers and 3 coaches ($N = 13$) at an international academy championship in Dubai in May 2024. Quantitative data were analysed descriptively, interviews through reflexive thematic analysis, and strands integrated through a joint display. Total psychological competence was moderately high ($M = 4.04$, $SD = 0.48$, $\alpha = .87$) but systematically asymmetric. Organisational and interpersonal competencies were rated highest, rule adherence ($M = 4.70$), self-appraisal ($M = 4.53$), role acceptance ($M = 4.47$), team communication ($M = 4.21$), while trainable performance-enhancement skills were rated lowest: relaxation under pressure ($M = 3.64$), imagery for emotional control ($M = 3.74$), rapid adaptation ($M = 3.77$), self-talk under adversity ($M = 3.79$). Provision and demand were misaligned: 44.7% reported no programme and only 25.5% had accessed professional support, yet 87.2% expressed willingness to participate. Six themes emerged, centred on error recovery, controllability appraisal, emotional channelling, routinised preparation, scaffolded challenge, and a universally reported absence of professional psychological provision in whose place players assembled self-sourced substitutes including study of inspiring role models. Participants located the decisive competencies precisely in the domains the survey identified as weakest, describing them as learnable but not taught. The profile is more parsimoniously explained by what academies teach explicitly than by athletes' psychological capacity. The study proposes the Integrated Athlete Development Curriculum Framework (IADCF).

Keywords: Athlete Development, Curriculum Design, Mental Toughness, Football Academies, Mixed Methods Research, Dual Career, Psychological Skills Training, Educational Leadership.

المخلص:

تستثمر أكاديميات ونوادي كرة القدم بشكل منهجي في الإعداد البدني والفني والتكتيكي، وتقرّ بشكل متزايد بأن الكفاءة النفسية هي ما يميز اللاعبين عند الحدود الفاصلة للأداء النخبوي. غير أن الصلابة الذهنية تُنقل عادةً بوصفها توقعاً ثقافياً ضمناً لا منهجاً تعليمياً مصمماً. تعيد هذه الدراسة تأطير الكفاءة النفسية في كرة القدم النخبوية بوصفها مشكلة تصميم مناهج لا قصوراً في المهارات النفسية. استُخدم تصميم مختلط متقارب بعينيتين متكاملتين لا متداخلتين. شمل المسار الكمي أداة من عشرين فقرة أعدتها الباحثة حول الصلابة الذهنية والمهارات النفسية، طُبِّقت على 47 مستجيباً من سبع رياضات (رياضيون = 40؛ مدربون وقادة أندية وأكاديميات = 7)، منهم 19 مرتبطون بكرة القدم. وشمل المسار النوعي مقابلات شبه مقننة مصوّرة مع 10 لاعبين دون 21 عاماً وثلاثة مدربين (المجموع = 13) من أكاديميات مرتبطة بالإمارات العربية المتحدة وأفريقيا وأوروبا، أُجريت خلال بطولة لأكاديميات النخبة في دبي في أيار/مايو 2024. حُلِّلت البيانات الكمية وصفيّاً، وحُلِّلت المقابلات بالتحليل الموضوعي التأملّي، ودمج المساران عبر عرض مشترك وتقييم منهجي للتقارب والتكامل والتباين. جاءت الكفاءة النفسية الكلية مرتفعة نسبياً ($M = 4.04$ ، $SD = 0.48$ ، $\alpha = .87$) لكنها غير متكافئة بصورة منهجية. فقد حصلت الفقرات الدالة على الكفاءة التنظيمية والتفاعلية على أعلى التقديرات: الالتزام بقواعد التدريب ($M = 4.70$)، وتقييم الذات ($M = 4.53$)، وتقبل الدور ($M = 4.47$)، والتواصل مع الفريق ($M = 4.21$). في المقابل حصلت المهارات النفسية القابلة للتدريب على أدنى التقديرات: الاسترخاء تحت ضغط المنافسة ($M = 3.64$)، واستخدام التخيل لضبط الانفعالات ($M = 3.74$)، والتكيف السريع أثناء المنافسة ($M = 3.77$)، وحديث الذات عند الشدائد ($M = 3.79$). كما ظهر عدم توافق بين العرض والطلب: أفاد 44.7% بغياب أي برنامج للأداء

النفسية، ولم يلجأ إلى الدعم النفسي المتخصص سوى 25.5%، بينما أبدى 87.2% استعدادهم للمشاركة. وأسفر التحليل الموضوعي عن ستة محاور تتمحور حول التعافي من الخطأ، وتقدير ما يمكن التحكم فيه، وتوجيه الانفعالات، والإعداد الروتيني، والتعرض المُساند للتحدي، وغياب الدعم النفسي المتخصص بشكل عام مع لجوء بعض اللاعبين إلى الاقتداء بنماذج كروية ملهمة كبديل ذاتي. وكشف الدمج أن المشاركين يحدّدون الكفاءات الحاسمة في المجالات ذاتها التي أظهر الاستبيان ضعفها، ويصفونها بأنها قابلة للتعلّم لكنها غير مُدرّسة. وعليه يُفسّر هذا التفاوت بما تُعلّمه الأكاديميات صراحةً أكثر مما يُفسّر بقدرات اللاعبين النفسية. وتقدّر الدراسة إطار المنهج المتكامل لتطوير الرياضي (IADCF) متضمناً اثني عشر مدخلاً منهجياً، وخمس آليات نفسية، وأربع مخرجات تنموية تُتّوَج بالانتقال الناجح إلى ما بعد الرياضة.

الكلمات المفتاحية : تطوير الرياضيين، تصميم المناهج، الصلابة الذهنية، أكاديميات كرة القدم، البحث المختلط، المسار المزدوج، التدريب على المهارات النفسية، القيادة التربوية.

Introduction

Competitive margins at the elite level of football have narrowed to the point where physical, technical, and tactical attributes are insufficient to explain variation in performance among selected players. This premise is now largely uncontested. Practitioners and researchers alike accept that psychological factors carry substantial explanatory weight in high-performance contexts, and mental toughness has become the most visible shorthand for that claim (Gucciardi et al., 2015; Weinberg & Gould, 2023). What remains contested, and comparatively under-examined, is the question that follows: if psychological competence matters, by what pedagogy is it developed?

The distinction is not semantic. A substantial body of work has established that mental toughness is multidimensional, measurable, and associated with performance and adaptive functioning across sporting populations (Lin et al., 2017; Mahoney et al., 2014; Nicholls et al., 2009). Considerably less work has asked whether the instructional architecture of academy environments is designed to produce it. Football academies operate as intensive educational institutions: they schedule, sequence, assess, and certify learning across technical, tactical, and physical domains with considerable sophistication (Larkin & O'Connor, 2017; Mills et al., 2012). In the psychological domain, by contrast, provision is frequently ad hoc, reactive, or delegated to organisational culture on the assumption that exposure to demanding environments is itself sufficient developmental treatment. Where structured programmes have been implemented and evaluated, the evidence indicates that psychosocial competencies respond to deliberate instruction (Harwood et al., 2015), which raises the question of why such instruction remains inconsistently applied.

Three considerations make this inquiry timely. First, the mental health of elite and youth athletes has moved from a peripheral welfare concern to a central governance question, with international sporting bodies issuing consensus positions that explicitly link psychological functioning to both performance and duty of care (Bergeron et al., 2024; Reardon et al., 2019; Schinke et al., 2018). Second, evidence continues to accumulate that structural features of professional football, workload, selection uncertainty, and career precarity, impose psychosocial costs that individual resilience training cannot offset (FIFPRO, 2025). Third, the overwhelming majority of academy players will not sustain a professional career, which makes the quality of their preparation for life beyond sport a legitimate criterion for evaluating academy curriculum rather than an afterthought.

This study accordingly examines the distribution of psychological competencies among competitive athletes and sport personnel, and the ways coaches and academy players account for those competencies in practice, in order to establish whether the observed profile is better explained by psychological capacity or by instructional design.

1. Statement of the Problem

Academies possess sophisticated curricula for the physical, technical, and tactical domains and comparatively undeveloped curricula for the psychological, educational, and career domains. The consequence is a structural asymmetry that is rarely examined directly because the two bodies of literature that would examine it operate separately: sport psychology has established that psychological competencies matter and can be measured, while educational and curriculum research, which possesses the tools to specify how competencies are taught, sequenced, and assessed, has seldom been applied to academy settings.

The resulting gap has three components. Conceptually, mental toughness has been modelled at a level of abstraction adequate for measurement but inadequate for instruction; dimensional models such as the 4C framework specify what to assess, not what to teach. Empirically, the distribution of psychological competencies within competitive populations has not been examined as evidence about instructional provision, with low scores routinely interpreted as indicating a need for more psychological *support* rather than as evidence of absent *instruction*. Practically, academies report expanding psychological provision while utilisation remains low, a pattern conventionally attributed to stigma without the alternative explanation, that the form of provision does not match the form of demand, being tested.

The problem this study addresses is therefore whether the psychological competency profile observed in competitive sport populations is diagnostic of a curriculum-design deficit, and if so, what curricular architecture is warranted in response.

2. Research Questions

3. How are self-reported psychological competencies distributed across a competitive sport sample, and does that distribution vary systematically by competency type?
4. What relationship exists between organisational provision of psychological support, athlete utilisation of that support, and expressed demand for it?
5. How do elite academy footballers and their coaches account for the psychological competencies that differentiate performance, and how do they explain their development?
6. What is revealed by the integration of these strands about the instructional treatment of psychological competence in academy settings?
7. What curricular architecture is warranted by the resulting evidence?

8. Significance of the Study

The study contributes at four levels.

Theoretically, it repositions mental toughness from a terminal outcome of athlete development to one taught competency within an integrated developmental system, and it introduces curriculum theory as an analytic lens in a field where psychological and physiological framings predominate. This cross-disciplinary move allows a question that neither field asks alone: not whether psychological competence matters, but whether it is taught.

Empirically, it demonstrates that variance structure, not only mean scores, carries diagnostic information about instructional provision, and that the demand–utilisation gap in psychological

services may reflect a mismatch of framing rather than stigma. Both observations are testable and both have direct practical consequence.

Practically, it identifies a defensible priority set for academy intervention derived from converging quantitative and qualitative evidence, and specifies a three-tier delivery model that reconciles curricular ambition with realistic staffing.

Regionally, it contributes evidence from Lebanese, Emirati, African, and European participants to a literature in which Arab sport contexts remain substantially underrepresented, at a moment when Gulf football systems are undergoing rapid capability development and retain the opportunity to design psychological and educational curriculum rather than retrofit it. The qualitative setting itself illustrates that development: a Dubai academy league that has grown into a FIFA Talent Development Scheme member staging Arab and international academy competition (Dubai Sports Council & UAE Football Association, 2024), precisely the kind of maturing institutional infrastructure into which a designed psychological and career curriculum can still be built rather than retrofitted.

9. Objectives of the Study

10. To characterise the distribution of self-reported psychological competencies across a competitive sport sample at item, dimension, and total-scale level.
11. To document organisational provision of psychological programmes alongside personal utilisation and expressed demand.
12. To examine how elite academy footballers and coaches conceptualise the psychological competencies that differentiate performance, and the conditions under which they believe those competencies develop.
13. To integrate the quantitative and qualitative strands through a formal joint display in order to generate meta-inferences about instructional provision.
14. To propose a theoretically grounded and empirically warranted curriculum framework, the Integrated Athlete Development Curriculum Framework, for psychological, educational, and career development in football academies.

15. Methodology

16. Design

A convergent mixed-methods design was employed, with quantitative and qualitative data collected during an overlapping period and integrated at the interpretation stage (Creswell & Plano Clark, 2018; Fetters et al., 2013). One design feature requires explicit statement at the outset because it constrains the inferences the study can support: the two strands drew on **complementary rather than nested samples**. The quantitative strand sampled broadly across sports and roles in order to characterise competency distribution and provision across competitive sport contexts; the qualitative strand sampled narrowly within elite academy football in order to examine how those competencies are understood and developed in practice. The strands therefore stand in a relationship of *complementarity*, each addressing a facet of the same phenomenon, rather than *triangulation*, which would require convergent measurement of the same construct in the same population. The

integration procedure was specified accordingly, and no claim of methodological triangulation is made.

The rationale for this design is that the research problem is itself multi-level. Establishing that a competency asymmetry exists requires breadth; explaining why it exists requires depth within the instructional setting where the explanation resides.

17. Participants

18. Quantitative Strand

Forty-seven respondents completed the survey, which was hosted on Google Forms and distributed by shareable link to athletes and sport personnel through the author's professional and academy networks between March and December 2024. Recruitment was by convenience and onward sharing; because the link could be forwarded, the number of individuals who received it is unknown and a response rate cannot be computed. Responses arrived in three distinct clusters, 14 March to 4 April 2024 ($n = 22$), 1 June 2024 ($n = 8$), and 15 to 24 December 2024 ($n = 17$), consistent with successive distribution waves rather than continuous accrual. Composition by role was athletes ($n = 40$, 85.1%), coaches ($n = 3$, 6.4%), club leaders ($n = 3$, 6.4%), and academy leaders ($n = 1$, 2.1%). The sample is therefore described throughout as a *sport participant* sample rather than an athlete sample, and role-related heterogeneity is treated as a limitation rather than a design feature.

Sports represented were football ($n = 19$, 40.4%), athletics ($n = 12$, 25.5%), tennis ($n = 9$, 19.1%), swimming ($n = 3$, 6.4%), triathlon ($n = 2$, 4.3%), beach volleyball ($n = 1$, 2.1%), and weightlifting ($n = 1$, 2.1%). Respondents were aged 13 to 58 years ($M = 27.7$, $SD = 13.0$; age not reported by one respondent) and identified as male ($n = 29$, 61.7%), female ($n = 17$, 36.2%), or preferred not to disclose ($n = 1$, 2.1%). Fourteen countries were represented, with concentration in Lebanon ($n = 22$, 46.8%) and the United Arab Emirates ($n = 8$, 17.0%), followed by Canada ($n = 4$), the Philippines ($n = 3$), and single respondents from ten further countries. Self-reported competitive level was competitive ($n = 18$, 38.3%), intermediate ($n = 15$, 31.9%), Olympic ($n = 10$, 21.3%), and recreational or amateur ($n = 4$, 8.5%).

A football subsample ($n = 19$) is reported descriptively to support context-aligned interpretation. This subsample comprised athletes ($n = 16$), coaches ($n = 2$), and one club leader; was younger than the full sample ($M = 22.2$ years, $SD = 12.4$); and included males ($n = 12$) and females ($n = 7$). Competitive level was reported as Olympic ($n = 9$), competitive ($n = 7$), recreational or amateur ($n = 2$), and intermediate ($n = 1$). Geographic composition was predominantly Lebanese ($n = 16$), with single respondents from Serbia, Pakistan, and the Philippines.

Two features of this subsample warrant caution and are carried forward into the interpretation. First, the football subsample and the qualitative sample are drawn from substantially different populations: the former is predominantly Lebanese and mixed-gender, the latter comprises male academy players affiliated with UAE, African, and European academies. The subsample therefore contextualises but does not represent the interviewed population. Second, self-reported competitive level should be read as a subjective self-classification rather than a verified categorisation; the proportion selecting "Olympic" is high relative to the objective competitive structure of the sports and territories represented, and level is consequently not used as an analytic variable.

19. Qualitative Strand

Thirteen participants were purposively sampled: 10 male under-21 academy footballers and 3 football coaches. Interviews were conducted in May 2024 during an international academy championship in Dubai, United Arab Emirates, staged within the competition ecosystem of the Dubai Open for Football Academies (DOFA), the official football academies league of Dubai, organised by the Dubai Sports Council and the UAE Football Association and, since 2023, part of the FIFA Talent Development Scheme (Dubai Sports Council & UAE Football Association, 2024). The event drew academies from across the UAE and the wider Arab region together with African clubs, including Dubai-based academies affiliated with European clubs, and participants were drawn from academies linked to the UAE, Africa, and Europe. Inclusion criteria were active involvement in elite academy football, player age below 21 years at interview, consent to video recording, and sufficient English proficiency for reflective discussion. Sampling sought variation in competitive experience and cultural context while maintaining football specificity. Recruitment continued until the research team judged that additional interviews were yielding limited new conceptual content relative to the study's focus; given the fixed duration of the competition, this judgement was constrained by fieldwork conditions and is reported as such rather than as achieved saturation.

20. Ethical Considerations

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and with institutional research ethics requirements. Consent procedures for each strand are described below.

For the survey strand, consent was obtained through a mandatory opening item presenting the study purpose, confidentiality terms, and voluntary nature of participation, which all 47 respondents endorsed before proceeding. Name, email address, and telephone number were requested as optional fields; 36 respondents supplied a name and 28 an email address, so the dataset as collected is identifiable rather than anonymous and was handled accordingly. Thirteen survey respondents, a group entirely separate from the interview participants, reported an age below 18 years. Distribution of the survey link to these respondents was mediated through academy and club staff, who held parental consent obtained at the point of the player's registration with the academy, under which parents or guardians authorise staff to act on the player's behalf in academy-related activities. No under-18 respondent was recruited directly by the researcher. This mediated-consent mechanism was the procedure under which the survey strand was conducted. It should be noted as a limitation that registration-stage parental authorisation is broader in scope than study-specific informed consent; future research in this setting would be strengthened by a dedicated guardian consent step for each study, and by an age-gated survey routing that makes the mechanism auditable.

For the interview strand, participation was approved at three levels before any interview took place: by academy management, by the responsible coaching staff accompanying each squad at the competition, and by the players themselves, who gave informed consent to participate and to video recording. All player participants were under 21 years of age; for those below 18, academy staff acted as the responsible adults authorising participation under the duty-of-care arrangements governing the squads' attendance at the competition. Participants were advised of their right to withdraw without penalty. Video recordings and data files were stored on encrypted media accessible only to the research team. Pseudonyms replaced identifiers, and academy affiliations are reported at regional rather than institutional level to prevent deductive disclosure.

21. Procedure

The survey was self-administered online without supervision. Respondents accessed the instrument through a distributed link, completed it in a setting of their own choosing, and required approximately 8 to 10 minutes. Instructions emphasised candour and confidentiality. No responses were recorded during May 2024, and the survey was therefore not administered at the Dubai competition; the two strands are separated in time as well as in population.

Interviews were conducted individually in quiet locations during the Dubai competition in May 2024, video recorded with consent, and lasted approximately 35 to 60 minutes.

22. Analysis

23. Quantitative

Data were analysed in SPSS Version 28 and independently verified. Analyses were descriptive: means, standard deviations, and ranges at item, subscale, and total-scale level; frequencies for categorical items. Internal consistency was assessed using Cronbach's alpha. Given the sample size and the descriptive aims of this strand, no inferential comparisons between groups were conducted, and no causal or predictive claims are advanced. Descriptive analysis is the appropriate ceiling for these data, and the study's inferential weight rests on integration rather than on the quantitative strand alone.

24. Qualitative

Video recordings were reviewed and transcribed for analysis. Participant accounts are reported in indirect speech where the analytic point rests on the substance of what was said rather than on its exact phrasing; direct quotation is reserved for formulations whose specific wording carries the analytic weight. Reflexive thematic analysis followed the six-phase approach of Braun and Clarke (2006), conducted from a critical realist position: participant accounts were treated as evidence about real developmental processes while remaining interpretations produced within specific cultural and institutional contexts. Coding proceeded inductively through familiarisation, initial code generation, theme construction, review against coded extracts and the full dataset, definition, and reporting. Multiple analysts coded independently, with discrepancies resolved through discussion; consistent with reflexive thematic analysis, agreement was pursued through interpretive dialogue rather than quantified through inter-rater statistics.

Trustworthiness was addressed through four procedures. *Credibility* was supported by prolonged engagement in the competition setting, analyst triangulation, and the deliberate search for disconfirming instances. *Transferability* was supported by thick description of the setting and participant characteristics sufficient for readers to judge applicability. *Dependability* was supported by an audit trail documenting coding decisions and theme revisions. *Confirmability* was supported by a reflexive journal in which the author recorded positionality as an education and leadership researcher external to professional football, a position affording analytic distance from coaching orthodoxy while limiting tacit familiarity with academy practice, alongside its potential influence on interpretation.

25. Integration

Integration followed a specified three-stage procedure. First, quantitative item-level results were arrayed against qualitative themes in a **joint display** (Table 4) organised by competency domain. Second, each pairing was classified as *convergent* (strands indicate the same conclusion), *complementary* (strands address different facets that jointly extend understanding), or *dissonant*

(strands indicate conflicting conclusions), with dissonance treated as analytically informative rather than as error to be resolved. Third, **meta-inferences** were generated at the level of the integrated dataset and evaluated against the sampling constraint described above; inferences requiring population equivalence between strands were not drawn.

26. Research Tool

27. Survey Instrument

Psychological competencies were assessed using the **Sport Mental Training Questionnaire (SMTQ)**, a 20-item validated instrument developed and psychometrically evaluated by Behnke et al. (2017) across five studies with a combined sample of 2,015 participants. The SMTQ was selected because it measures mental skills as trainable competencies associated with the training process and competition rather than as dispositional traits, which aligns directly with this study's instructional framing. Items were administered in their published English form without modification. Responses were recorded on the instrument's five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The full item set is reproduced in Appendix A with attribution.

The SMTQ comprises five subscales organised under two higher-order scales. Mental skills comprise **foundational skills** (4 items: self-confidence, self-appraisal, belief in ability, recovery from failure), **performance skills** (6 items: emotional control under pressure, relaxation, adaptation to changing demands, regaining composure, arousal reduction, concentration and refocusing), and **interpersonal skills** (4 items: adherence to training rules, role acceptance, role comprehension within the team system, in-competition communication). Mental techniques comprise **self-talk** (3 items) and **mental imagery** (3 items). All 20 items contribute to the total score.

Because the published subscale composition is reported at the level of item content rather than as a numbered key in the source article, item-to-subscale assignment was reconstructed from the published descriptions. Assignments for performance skills, self-talk, and mental imagery are unambiguous on item content; assignments for foundational and interpersonal skills are the authors' reconstruction and are identified as such in the reporting of results.

A separate researcher-developed section captured organisational and behavioural context: whether the academy or club had offered mental and emotional performance programmes; whether the respondent had accessed counsellors, psychologists, or specialists; willingness to integrate a mental toughness and emotional resilience programme; willingness to participate personally; and preferences relating to delivery and cost. These items were written for this study and carry no validation history.

28. Instrument Administration Note

One item as administered through the online form ("I am able to 'bounce back' and overcome any failure. It does not discourage me from further action.") displayed appended text from the preceding item, an artefact of form construction rather than a property of the published instrument, whose wording for this item is a two-sentence stem as shown above. The item was not corrected post hoc and all reported statistics derive from responses as collected. Several published SMTQ items combine two elements within a single stem, for example relaxation "physically and mentally," a characteristic of the instrument as validated rather than a defect introduced here.

29. Interview Protocol

A semi-structured guide addressed participants' working definitions of mental toughness; its perceived function in competitive football; specific episodes in which it proved decisive; strategies for its development and maintenance; perceived differences between more and less mentally tough players; and organisational approaches to psychological development. Probes elicited elaboration, concrete instances, and disconfirming cases.

30. Terms of the Study

Psychological competence. The set of learnable cognitive, emotional, and behavioural capacities that enable an athlete to perform, adapt, and sustain wellbeing under competitive demand. Used in this study as a superordinate term encompassing mental toughness, psychological skills, and emotional regulation. *Operationally:* the total score across the twenty survey items.

Mental toughness. A multidimensional capacity to produce consistently high levels of performance despite ongoing challenge and stress (Gucciardi et al., 2015). In this study it is positioned as one competency within psychological competence rather than as its totality. *Operationally:* the combined SMTQ subscales, with performance skills, self-talk, and mental imagery carrying the regulatory content most often associated with the construct.

Psychological skills training. The systematic instruction and rehearsal of specific techniques, imagery, self-talk, arousal regulation, goal setting, attentional control, intended to enhance performance and self-regulation. Distinguished in this study from *psychological support*, which denotes responsive provision to identified need.

Curriculum. A planned sequence of intended learning outcomes together with the instructional activities and assessment procedures aligned to them. The study distinguishes the *intended* curriculum (what is specified), the *enacted* curriculum (what is delivered), the *experienced* curriculum (what learners take up), the *hidden* curriculum (what environments teach implicitly), and the *null* curriculum (what is systematically omitted).

Holistic athlete development. An approach treating the athlete as a whole person developing across multiple life domains concurrently, in which performance, wellbeing, education, and career preparation are co-equal rather than hierarchical concerns.

Career development learning. The deliberate cultivation of self-awareness, opportunity awareness, decision-making capability, and transition management in preparation for anticipated and unanticipated career change, including de-selection, injury, and retirement from sport.

Psychological readiness. The proximal integrative state in which acquired competencies are available for deployment under competitive load. Distinguished from competence, since an athlete may possess a skill in training and be unable to access it in competition.

Elite academy football. Structured, full-time or near-full-time youth development programmes affiliated with professional clubs or specialised academies, operating selective entry and competitive participation at national or international level.

31. Theoretical Framework and Previous Studies

The literature bearing on this study spans several traditions that are rarely brought into contact. Rather than reviewing each in turn, this section organises them around four anchors that jointly structure the argument: holistic athlete development as the overarching frame, self-determination and self-regulation as motivational and mechanistic accounts, career development and transition as

the longitudinal dimension, and curriculum theory as the translational bridge. A deliberate synthesis is preferred here over comprehensive coverage; the aim is to establish where the traditions converge, where they conflict, and where the present study intervenes.

32. Mental Toughness: A Mature Construct with an Immature Pedagogy

Mental toughness has undergone substantial conceptual refinement over three decades, moving from an intuitive descriptor of athletic character toward a measurable multidimensional construct (Crust, 2008; Gucciardi & Gordon, 2011). Two measurement traditions dominate: the 4C model operationalised in the Mental Toughness Questionnaire, specifying control, commitment, challenge, and confidence (Clough et al., 2002; Kawabata et al., 2021; Perry et al., 2013), and sport-specific instrumentation, most prominently the Sports Mental Toughness Questionnaire, specifying confidence, constancy, and control (Sheard et al., 2009; Sheard, 2010). The traditions overlap substantially without being interchangeable, and the field has not resolved whether mental toughness is best modelled as a trait, a state-like capacity, or a behavioural repertoire, a question with direct pedagogical implications that the measurement literature has bracketed rather than answered (Gucciardi et al., 2015; Hardy et al., 2014).

The performance literature is more settled. Positive associations with performance-related outcomes are reported consistently across sports and competitive levels (Lin et al., 2017; Mahoney et al., 2014), and within football specifically, mental toughness has been linked to coping with competitive stress and to the profile of players who progress (Coulter et al., 2010; Saward et al., 2020; Thelwell et al., 2005). Proposed mechanisms include enhanced self-regulation, adaptive coping, attentional control, and greater deployment of psychological skills such as imagery, self-talk, and goal setting (Hardy et al., 2014; Nicholls et al., 2012).

This mechanistic account exposes the field's principal gap. If mental toughness operates *through* imagery, self-talk, appraisal, and attentional control, these are the trainable units of instruction, and the practical question becomes how they are taught, sequenced, and assessed. The literature on developing mental toughness has addressed this largely through coach influence and environmental design (Crust & Clough, 2011; Gucciardi et al., 2009), which stops short of curriculum: coaches are identified as influential without their instructional competence being specified, environments described as facilitative without the learning sequence being articulated. A systematic review of psychological functioning in male youth team-sport academies identified self-regulation, resilience, commitment, and discipline as most influential, and pre-performance routines, self-talk, and social support as key facilitative skills (Whitfield et al., 2024), a de facto curriculum specification that no one has formally written.

33. Holistic Athlete Development and the Limits of the Performance Frame

The holistic development tradition holds that athletes are best understood as whole persons developing across multiple life domains simultaneously, and that interventions targeting performance in isolation are both ethically incomplete and practically self-limiting. International consensus positions have converged on this view, affirming that mental health symptoms are prevalent among elite athletes, that they impair performance, and that their management requires biopsychosocial rather than narrowly performance-focused strategies (Reardon et al., 2019; Schinke et al., 2018). Attention to youth populations has sharpened the argument, with consensus work documenting that the physical and psychological demands placed on elite youth athletes impose distinctive psychosocial strain (Bergeron et al., 2024). Governance and player-representative bodies

have made parallel arguments from the structural side, identifying workload and career precarity as institutional rather than individual problems (FIFPRO, 2025), and mounting awareness initiatives directed at normalising help-seeking (FIFA, 2022).

A tension runs through this literature that is worth stating plainly. Holistic development is now institutionally endorsed but organisationally under-implemented, and the endorsement itself can function as a substitute for implementation. Consensus statements specify what ought to be true of athlete environments; they do not specify what should be taught, to whom, in what order, by whom, or against what assessed standard. The gap between policy affirmation and instructional design is where the present study locates its contribution.

34. Motivation, Regulation, and the Mechanism Question

Self-determination theory provides the most widely applied motivational account in this domain, proposing that satisfaction of needs for autonomy, competence, and relatedness supports adaptive functioning, while thwarting of those needs predicts maladaptive outcomes (Ryan & Deci, 2017), a proposition now supported at the level of accumulated meta-analytic evidence across domains including sport (Ryan et al., 2022). Applied to academy environments, the theory generates a specific and testable proposition: that psychological competence developed under controlling, contingently supportive conditions will be less durable than competence developed under autonomy-supportive conditions, even where short-term performance appears equivalent. Evidence from youth football is consistent with the broader pattern, with adaptive motivational profiles associated with need satisfaction and life satisfaction, and maladaptive profiles associated with burnout (García-Calvo et al., 2025).

Self-regulation offers the complementary process account. If mental toughness manifests as the capacity to sustain performance under adversity, self-regulation describes the mechanism: monitoring internal states, appraising demands against resources, selecting regulatory strategies, and evaluating their effects. Within youth football specifically, self-regulated learning discriminates between elite and non-elite players, with reflection emerging as the strongest single differentiator of international-level status (Toering et al., 2009; Toering et al., 2012). This framing carries a clear pedagogical implication, since self-regulatory competence is well established as responsive to explicit instruction, modelling, and feedback, and meta-analytic evidence indicates that structured psychological skills training produces moderate performance effects in competitive athletes, albeit with sensitivity to trial quality that itself underscores the need for better-designed instructional research (Reinebo et al., 2024). Emotion research in sport has refined the picture further, moving away from control-through-suppression models toward accounts in which emotion is regulated and directed rather than eliminated (Jones, 2003), and positioning emotional intelligence as integral to rather than separate from psychological toughness (Laborde et al., 2016).

35. Career Development, Transition, and the Longitudinal Criterion

The dual career and athlete transition literatures introduce the temporal dimension that performance-focused research typically omits (Park et al., 2013; Stambulova & Wylleman, 2019; Stambulova et al., 2021). Athletic careers are short, selection is uncertain, and the modal outcome of academy participation is non-progression. Career development learning, the deliberate cultivation of self-awareness, opportunity awareness, decision-making, and transition management, is therefore not a supplementary welfare provision but a core developmental requirement. Career adaptability, understood as the resources through which individuals manage anticipated and unanticipated

occupational transitions, offers a construct of direct relevance to athletes facing de-selection, injury, and retirement.

Athletic identity foreclosure represents the central risk this literature identifies: commitment to the athletic role without exploration of alternatives (Brewer & Petitpas, 2017). Where identity is exclusively organised around the athletic role, transition out of sport carries elevated psychological cost, with systematic review evidence linking strong exclusive athletic identity to poorer adjustment across the transition (Park et al., 2013). This produces a genuine and under-acknowledged tension with the performance literature: the total commitment that performance environments reward is the same commitment that identity research associates with transition difficulty. Any credible curriculum framework must hold both, and the resolution proposed here is that identity should be developed as multidimensional rather than commitment being diluted.

36. Curriculum Theory as the Translational Bridge

The final anchor is the one least represented in sport psychology and most necessary to it. Curriculum theory supplies the vocabulary through which the preceding traditions become actionable: intended, enacted, and experienced curriculum; the null curriculum of what is systematically omitted (Eisner, 2002); the hidden curriculum of what environments teach implicitly; constructive alignment between outcomes, activities, and assessment (Biggs, 1996); and spiral sequencing in which competencies are revisited with increasing sophistication across developmental stages (Bruner, 1960).

Applied to academies, these constructs are immediately diagnostic. The intended curriculum in the psychological domain is frequently unwritten. The hidden curriculum, expressed through selection practices, coach language, and the treatment of error, teaches powerfully and often teaches that psychological difficulty is disqualifying. The null curriculum, comprising career development learning, mental health literacy, and transition preparation, communicates by omission that these matter less than technical development. And assessment, the strongest single determinant of what learners attend to, is applied rigorously to physical and technical attributes and rarely to psychological ones.

This is the analytic lens the present study applies to its data. The question it poses is not whether the participants possess mental toughness, but what their competency profile reveals about the curriculum they have been taught.

37. Study Results

38. Quantitative Findings

39. Scale Performance and Distribution

Total psychological competence was moderately high ($M = 4.04$, $SD = 0.48$, range 2.85–5.00) with strong internal consistency ($\alpha = .87$). Subscale statistics are reported in Table 1.

Table 1*Descriptive Statistics and Internal Consistency for SMTQ Subscales (N = 47)*

Subscale	k	M	SD	α (present study)	α (Behnke et al., 2017)
Interpersonal skills	4	4.45	0.47	.53	.75
Foundational skills	4	4.15	0.63	.60	.73
Self-talk	3	3.91	0.88	.84	.72
Mental imagery	3	3.88	0.86	.78	.70
Performance skills	6	3.84	0.65	.85	.79
Total scale	20	4.04	0.48	.87	.83

Note. Items rated 1 (*strongly disagree*) to 5 (*strongly agree*). Published alphas are reported for comparison. Item-to-subscale assignment for foundational and interpersonal skills is the authors' reconstruction from the published item descriptions (see Research Tool).

Total-scale reliability in the present sample ($\alpha = .87$) slightly exceeds the value reported in the validation study ($\alpha = .83$), supporting the instrument's performance in this mixed-sport sample. Three subscales, performance skills, self-talk, and mental imagery, also equalled or exceeded published values. Two fell below them: interpersonal skills ($\alpha = .53$) and foundational skills ($\alpha = .60$). Two explanations are relevant. First, item-to-subscale assignment for exactly these two subscales is reconstructed rather than taken from a published key, so misassignment cannot be excluded. Second, the interpersonal subscale shows a pronounced ceiling effect ($M = 4.45$, $SD = 0.47$), and restricted variance depresses alpha independently of item quality. Given both, subscale scores are reported descriptively and substantive claims rest on total-scale and item-level results.

The ordering of subscales is itself informative and anticipates the central finding. Interpersonal and foundational skills, the competencies most directly instructed and monitored in structured training environments, score highest. Performance skills, comprising the regulatory techniques deployed under competitive load, score lowest, while self-talk and mental imagery, the two subscales the instrument classifies as mental *techniques* rather than skills, sit between them with the widest dispersions in the instrument ($SD = 0.88$ and 0.86). The dimension measuring trainable in-competition technique is the dimension in which respondents report least competence.

40. Item-Level Asymmetry

Item-level results are reported in Table 2, ordered by mean.

Table 2*Item-Level Descriptive Statistics Ordered by Mean (N = 47)*

Rank	Item (abbreviated)	M	SD	Competency type
1	Understands and follows training rules	4.70	0.62	Organisational

Rank	Item (abbreviated)	<i>M</i>	<i>SD</i>	Competency type
2	Knows own value, strengths, weaknesses; plans improvement	4.53	0.58	Metacognitive
3	Accepts and clearly sees own role in the group	4.47	0.72	Organisational
4	Understands own and others' roles within the team system	4.40	0.71	Organisational
5	Communicates effectively with team and staff in competition	4.21	0.86	Interpersonal
6	Bounces back from failure without discouragement	4.15	1.04	Regulatory
7	High self-confidence in achieving what is set out	4.11	1.03	Dispositional
8	Controls emotions under pressure	4.02	0.71	Regulatory
9	Self-talk to focus attention on key performance elements	3.98	0.99	Trainable skill
10	Pre-competition visualisation of desired performance	3.98	1.01	Trainable skill
11	Self-talk to regulate thoughts, emotions, arousal	3.96	0.95	Trainable skill
12	Sustains and rapidly restores concentration	3.91	0.83	Regulatory
13	Creates detailed anticipatory imagery in preparation	3.91	1.06	Trainable skill
14	Regains control after losing self-control in competition	3.85	0.93	Regulatory
15	Can relax and reduce arousal when required	3.85	0.81	Trainable skill
16	Unshakable belief in athletic ability	3.83	1.03	Dispositional
17	Self-talk to overcome difficult periods	3.79	1.10	Trainable skill
18	Adapts quickly to changing demands and distractions	3.77	0.89	Regulatory
19	Uses mental imagery to control emotions	3.74	1.03	Trainable skill
20	Relaxes physically and mentally under competitive pressure	3.64	0.97	Trainable skill

Note. Competency type was assigned by the author following data inspection as an interpretive device; it is not a validated classification and is offered to make the distributional pattern legible. Full item wording appears in Appendix A.

The distribution is not random with respect to competency type. The four highest-rated items are organisational and metacognitive competencies, rule adherence, self-appraisal, role acceptance, and role comprehension, all of which are explicitly instructed, modelled, and monitored within structured academy environments. Interpersonal competence in the form of in-competition communication follows closely. Conversely, seven of the ten lowest-rated items are trainable psychological skills: imagery for emotional regulation, relaxation under pressure, self-talk under adversity, arousal reduction, and anticipatory imagery.

Standard deviations reinforce the pattern. The highest-rated items show the tightest dispersion ($SD = 0.58$ to 0.72), indicating consistent competence across the sample, whereas the trainable-skill items show markedly wider dispersion (SD up to 1.10), indicating that some respondents possess these skills substantially while others do not. This is the signature of competencies acquired idiosyncratically, through individual initiative, chance exposure, or external provision, rather than through systematic instruction. Where a competency is taught to everyone, variance compresses; where it is left to acquisition, variance expands.

41. Provision, Utilisation, and Demand

Responses relating to organisational provision and personal engagement are reported in Table 3.

Table 3

Organisational Provision, Utilisation, and Demand (N = 47)

Item	Yes (%)	<i>n</i>	No (%)	<i>n</i>
Academy or club has offered mental and emotional performance programmes	26 (55.3)		21 (44.7)	
Has personally accessed counsellors, psychologists, or specialists	12 (25.5)		35 (74.5)	
Willing to integrate a mental toughness and emotional resilience programme	38 (80.9)		9 (19.1)	
Willing to personally participate in such programmes	41 (87.2)		6 (12.8)	

Three gaps are evident. The **provision gap** is that nearly half of respondents report no organisational programme at all. The **utilisation gap** is larger and more diagnostic: while 55.3% report available provision, only 25.5% have accessed professional support, indicating that availability does not translate into use. The **demand gap** is the widest: 87.2% express willingness to participate, exceeding actual utilisation by more than sixty percentage points.

The utilisation gap deserves particular attention because the conventional explanation, stigma suppressing help-seeking, sits uneasily with the demand figure. Respondents who report high willingness to participate are not exhibiting a general aversion to psychological support. A more parsimonious interpretation is that the available provision does not match what respondents are willing to engage with: support framed as clinical or remedial (“counsellors, psychologists, experts”) attracts limited uptake, whereas support framed as performance-relevant training attracts broad endorsement. This distinction is developed in the Discussion because it has direct design implications.

In the football subsample, the utilisation figure differs notably (9 of 19 reporting access), though the small subsample size precludes inference and the difference is reported without interpretation.

42. Football Subsample

Descriptive statistics for the football subsample ($n = 19$) are reported in Table 4.

Table 4

Psychological Competence in the Football Subsample ($n = 19$) Compared With the Full Sample ($N = 47$)

Subscale	Football M (SD)	Full sample M (SD)
Interpersonal skills	4.50 (0.46)	4.45 (0.47)
Foundational skills	4.32 (0.48)	4.15 (0.63)
Mental imagery	4.12 (0.54)	3.88 (0.86)
Self-talk	3.96 (0.88)	3.91 (0.88)
Performance skills	3.96 (0.40)	3.84 (0.65)
Total	4.17 (0.33)	4.04 (0.48)

Note. Descriptive comparison only. No significance testing was conducted. The football subsample includes athletes ($n = 16$), coaches ($n = 2$), and one club leader.

Football respondents scored marginally higher on every subscale, with reduced dispersion. Two observations are warranted and no more. First, the relative ordering of dimensions is identical to the full sample: Control remains lowest. The asymmetry is therefore not an artefact of sport mixture. Second, the elevated means and compressed variance are open to multiple explanations, selection into competitive football, the psychological demands of the sport, sport-specific provision, or sampling artefact, and these data cannot distinguish among them. Claims that football participation produces higher mental toughness are not supported by this design and are not made.

43. Qualitative Findings

Reflexive thematic analysis generated six themes. Illustrative extracts are identified by role and regional academy affiliation.

44. Theme 1: Recovery From Error as the Operative Differentiator

Participants converged on error recovery, rather than error avoidance, technical quality, or physical capacity, as the characteristic distinguishing higher from lower performers. A European coach articulated this directly: “The difference between a good player and a great player is what happens after they make a mistake. The great ones, they forget it immediately and move forward. The good ones, they carry it with them.” A UAE-affiliated player located the same capacity temporally within the match: “In the 85th minute when you’re exhausted and the score is tied, that’s when mental strength matters most. Your body wants to stop, but your mind has to push through.”

What is analytically significant is the specificity of the construct. Participants did not describe a global disposition but a bounded competency, attentional disengagement from a completed event

and re-engagement with the immediate task, operating on a timescale of seconds. Participants uniformly characterised this capacity as developable rather than innate.

45. Theme 2: Controllability Appraisal and Pressure Management

Participants described managing competitive pressure through explicit appraisal strategies, most prominently the partition of controllable from uncontrollable elements. A UAE-affiliated coach described this as taught content: “We teach our players to control what they can control, their effort, their attitude, their preparation. The score, the referee, the crowd, these are outside their control.” An African-affiliated player described a preparatory imagery routine: “Before big matches, I visualize exactly what I will do. I see myself making successful passes, winning tackles. This preparation gives me confidence when pressure comes.”

The strategies named, controllability appraisal, imagery, self-talk, present-moment focus, correspond directly to items rated lowest in the survey. Participants also described these strategies as individually assembled rather than institutionally delivered, a point developed in the integration.

46. Theme 3: Emotional Channelling Rather Than Suppression

Participants consistently rejected emotional suppression as a performance strategy. A European coach was explicit: “Emotion is necessary. You need passion, you need intensity. But you cannot let emotion control you. The best players channel their emotions into productive action.” A European player described a specific regulatory sequence: “When I get frustrated, I take a deep breath and remind myself why I’m here. That moment of pause prevents me from making poor decisions out of anger.”

This theme carries theoretical weight disproportionate to its prevalence. Participants articulated a regulatory model, interruption, physiological down-regulation, motivational reorientation, action selection, that is considerably more sophisticated than control-through-suppression conceptions of mental toughness, and that aligns with contemporary emotion regulation and emotional intelligence perspectives (Jones, 2003; Laborde et al., 2016).

47. Theme 4: Routinised Preparation as the Basis of Consistency

Participants attributed performance consistency to systematised preparation rather than to motivational state. An African-affiliated coach drew the distinction sharply: “Talented players have good days and bad days. Professional players have consistent days because they prepare mentally the same way every time.” A UAE-affiliated player described the resulting routine as inviolable: “My pre-match routine is sacred. Same warm-up, same music, same thoughts. This consistency creates mental readiness regardless of the opponent or venue.”

The coach’s formulation reframes professionalism as a procedural rather than dispositional accomplishment. Participants described preparation as including established routines, process-oriented goals, and rehearsal of psychological skills during training rather than reservation of those skills for competition, a description that maps closely onto principles of deliberate practice, well-defined tasks at appropriate difficulty with informative feedback (Ericsson et al., 1993), applied to a domain where such principles are seldom formally invoked.

48. Theme 5: Scaffolded Challenge as the Developmental Mechanism

Participants identified the conditions under which psychological competence develops, and were notably precise about the insufficiency of challenge alone. A UAE-affiliated coach stated the

conditional directly: “Mental toughness develops through experiencing difficult situations with proper support. Players need to face pressure, but they also need coaching on how to handle it.” An African-affiliated player located development in adverse experience: “Every challenge I’ve overcome made me mentally stronger. Injuries, being dropped from the team, losing important matches, these taught me resilience.”

The coach’s second clause is the analytically decisive statement in the dataset. It specifies that challenge exposure without instructional scaffolding is developmentally insufficient, a claim that constitutes, in effect, a pedagogical position articulated from within practice, and one that stands in tension with the “trial by fire” logic that continues to characterise much academy culture. Named developmental conditions included progressive exposure to competitive difficulty, coach relationships oriented toward growth, deliberate rehearsal of psychological skills, and reflective practices including video review focused on psychological rather than technical responses.

49. Theme 6: Absent Provision, Unmet Need, and Self-Sourced Substitutes

Across the full interview corpus, participants reported that their academies and clubs provided no professional psychological support, no sport psychologist, no structured mental performance programme, and no defined pathway to specialist help, and characterised such provision as a need rather than an enhancement. The universality of this account is itself a finding. It was volunteered by players and coaches alike, across UAE, Arab-region, African, and European-affiliated academies, indicating that the provision deficit documented in the survey strand extends to the elite academy populations represented at an international championship, where institutional resources might be presumed strongest.

Participants were correspondingly unanimous in wanting structured provision: every interviewee endorsed the introduction of a mental performance programme within their academy, converging with the 87.2% willingness recorded in the survey strand and indicating that the constraint on uptake lies in supply and framing rather than in demand.

In the absence of formal provision, participants described assembling substitutes from the resources available to them. The most distinctive of these was deliberate role-model following: players reported studying admired professional footballers, their composure, pre-match routines, and visible responses to adversity, as a self-directed source of psychological learning. Named exemplars were elite professionals of global visibility, including Cristiano Ronaldo and Lionel Messi, whose observable self-talk, competitive composure, and media interviews were described as material to study and emulate. That players are learning self-talk technique from televised professionals rather than from qualified instruction within their own academies is a precise illustration of : the null curriculum operating in practice. Alongside the self-assembled imagery and self-talk strategies reported under Theme 2, role-model observation completes the picture of a psychological education undertaken by athletes on their own initiative, using whatever instructional material their environment happens to expose them to.

Two accounts illustrate the substitution clearly. One player reported that psychological guidance in his environment came from his coach, who consistently advised him on maintaining focus and not losing his temper. This was informal counsel delivered within the coaching relationship, not instruction delivered through a programme. A second described learning to manage in-game stress by observing how leading professionals perform and by watching their interviews, naming Messi among the players he studied for this purpose. The two accounts mark the outer boundaries of what

was available: at best, the incidental guidance of an attentive coach; at minimum, the televised conduct of elite professionals studied at a distance.

The first account also refines the theme rather than contradicting it. Coach advice on focus and temper regulation is real psychological input, and its presence indicates that the deficit is not one of concern or intent among coaching staff. What it is not is curriculum: it is unplanned, unsequenced, unassessed, and contingent on which coach a player happens to be assigned. Its very availability makes the absence of designed provision more striking, since it demonstrates both appetite and opportunity within the coaching relationship that no instructional framework has been built to exploit.

50. Integration

Table 5 presents the joint display.

Table 5

Joint Display: Integration of Quantitative and Qualitative Findings by Competency Domain

Competency domain	Quantitative finding	Qualitative finding	Classification	Meta-inference
Arousal regulation and relaxation	Lowest-rated item ($M = 3.64$, $SD = 0.97$); widest dispersion band	Breathing and physiological down-regulation described as decisive in-match (Theme 3); described as self-taught	Convergent	The competency participants identify as decisive is the one they report possessing least; it is not systematically instructed
Imagery	Imagery for emotional control $M = 3.74$; anticipatory imagery $M = 3.91$; pre-competition visualisation $M = 3.98$	Detailed pre-match visualisation described by players as a personally assembled routine (Theme 2)	Complementary	Imagery is unevenly distributed and individually acquired; the quantitative spread is explained by the qualitative account of its provenance
Self-talk	Three self-talk items rated 3.79–3.98, all with	Self-talk named as a pressure-management and	Convergent	A recognised and valued skill lacking systematic delivery

Competency domain	Quantitative finding	Qualitative finding	Classification	Meta-inference
	dispersion above 0.95	reorientation strategy (Themes 2, 3)		
Error recovery and refocusing	Bouncing back $M = 4.15$ ($SD = 1.04$); rapid adaptation $M = 3.77$; concentration restoration $M = 3.91$	Identified as <i>the</i> differentiating competency by coaches and players alike (Theme 1)	Dissonant	Participants rate general failure recovery relatively highly while rating the specific mechanisms enabling it lower; self-report may capture the intention to recover rather than the capacity to execute recovery
Emotional regulation	Emotion control under pressure $M = 4.02$; imagery-based emotional control $M = 3.74$	Sophisticated channelling model articulated, explicitly distinguished from suppression (Theme 3)	Complementary	Participants regulate emotion using available means while lacking the technical repertoire that would extend that capacity
Organisational and role competence	Highest-rated cluster: rule adherence 4.70, role acceptance 4.47, role comprehension 4.40	Not raised spontaneously as a developmental concern in any interview	Convergent	Competencies that are explicitly instructed and monitored are both strong and unremarkable to participants, the signature of

Competency domain	Quantitative finding	Qualitative finding	Classification	Meta-inference
				successful curriculum
Interpersonal communication	Team and staff communication $M = 4.21$	Coach–athlete relationship quality named as a developmental condition (Theme 5)	Complementary	Communication functions as both an outcome and an enabling condition of psychological development
Provision and access	44.7% report no programme; 25.5% utilisation against 87.2% willingness	Universal report of absent professional psychological provision; every interviewee endorsed introducing a mental performance programme (Themes 2, 5, 6)	Convergent	The demand–utilisation gap reflects a mismatch between clinically framed provision and performance-framed demand; at the elite academy level the deficit is reported as total
Vicarious learning and role models	Not measured	Players described studying admired professional footballers, naming globally visible exemplars and citing observable self-talk as a model to emulate (Theme 6)	Qualitative only	Where no curriculum exists, observational learning from televised professionals becomes the default instructional channel, : the null curriculum operating in practice

Competency domain	Quantitative finding	Qualitative finding	Classification	Meta-inference
Developmental mechanism	Not measured	Challenge exposure explicitly stated as insufficient without instructional scaffolding (Theme 5)	Qualitative only	Practitioners articulate a pedagogical requirement that current provision does not meet

Note. Classification: *convergent* = strands support the same conclusion; *complementary* = strands address different facets that jointly extend understanding; *dissonant* = strands support conflicting conclusions. Given the complementary sampling design, meta-inferences are drawn at the level of the phenomenon rather than the population.

Three meta-inferences follow from the display.

First, the competency asymmetry is instructional in origin. The competencies rated highest are precisely those that academies teach explicitly, assess, and enforce, rule adherence, role clarity, self-appraisal, communication. The competencies rated lowest are precisely those left to implicit acculturation. The pattern is more parsimoniously explained by the distribution of instruction than by the distribution of psychological capacity.

Second, participants and instruments identify the same priority targets. Coaches and players independently nominated arousal regulation, imagery, self-talk, and refocusing as decisive; the survey independently identified those competencies as weakest. Convergence on target selection across strands and methods substantially strengthens the case for curricular prioritisation, even though the samples differ.

Third, the dissonance is informative. The single dissonant pairing, high self-rated failure recovery alongside lower-rated enabling mechanisms, is best read as a validity signal rather than a contradiction. Respondents may be reporting the intention or self-concept of resilience while rating the specific executable skills more conservatively. This supports a methodological recommendation, developed below, for behavioural and multi-informant assessment of psychological competence rather than reliance on global self-report.

51. Discussion of the Results

52. The Central Finding Reconsidered

The most consequential result of this study is not the level of psychological competence reported but its shape. A sample reporting moderately high overall competence nonetheless displays a systematic gradient in which organisational and interpersonal competencies are strong and consistent while trainable performance-enhancement skills are weaker and highly variable. Two explanations are available. The first attributes the gradient to construct difficulty: relaxation under pressure and imagery-based emotional regulation may simply be harder to master than rule adherence. The second attributes it to instructional exposure: competencies that are taught, practised, and assessed develop reliably, while competencies left to individual discovery develop unevenly.

The variance data adjudicate between these explanations more effectively than the means do. If difficulty were the operative factor, one would expect low means with relatively contained dispersion, most people finding a hard thing hard. What is observed instead is low means with wide dispersion, indicating that some respondents have acquired these competencies substantially while others have not. That is the distributional signature of unequal exposure, not of uniform difficulty. The qualitative strand supplies the corroborating mechanism: participants described imagery routines, breathing protocols, and self-talk strategies as personally assembled, acquired from particular coaches, modelled on admired professionals, or developed through individual initiative, never as delivered curriculum. The role-model finding makes the mechanism explicit: in the absence of designed instruction, observational learning from available models becomes the default channel of psychological education (Bandura, 1986), productive for the players who thought to use it, and structurally unavailable as a systematic resource to those who did not.

This reframes the practical problem. The field has generally interpreted low psychological-skill scores as indicating a need for more psychological support. The present analysis suggests a different diagnosis: what is missing is not support but *instruction*. The distinction matters because it changes who is responsible, what is delivered, and how success is evaluated. Support is provided by specialists to those who seek it; instruction is delivered to everyone by design and assessed against specified outcomes.

53. Reconciling the Provision–Utilisation–Demand Paradox

The finding that 87.2% of respondents were willing to participate in psychological programmes while only 25.5% had accessed professional support is not readily explained by stigma alone, and the discrepancy is theoretically instructive. Stigma accounts predict suppressed willingness as well as suppressed utilisation; here, willingness is near-universal.

A more coherent account distinguishes the framing of the two constructs. The utilisation item referenced counsellors, psychologists, and experts, a clinical register carrying implications of pathology, remediation, and, in a selection environment, potential disclosure risk. The willingness item referenced mental toughness and emotional resilience programmes, a performance register carrying implications of enhancement and competitive advantage. Respondents may be declining a clinical identity while enthusiastically accepting a developmental one.

If this interpretation holds, it substantially qualifies the prevailing policy emphasis on normalising help-seeking (FIFA, 2022; Reardon et al., 2019). Normalisation initiatives address the willingness constraint, which these data suggest is not the binding constraint. The binding constraint appears to be the availability of psychological development in a form athletes recognise as belonging to performance rather than to medicine. This does not diminish the importance of clinical pathways, which remain essential for athletes experiencing mental health difficulty, but it indicates that clinical provision and developmental curriculum are distinct offerings that cannot substitute for one another. Academies that provide only the former will continue to observe low uptake and will misread it as stigma.

54. Extending Theory: From Trait to Taught Competency

The qualitative accounts extend existing mental toughness theory in three specific directions rather than merely corroborating it.

First, they **decompose the construct into operational units at a finer grain than existing models specify**. The 4C model and its sport-specific counterparts identify dimensions, control, commitment, challenge, confidence, constancy, at a level of abstraction suited to measurement but not to instruction (Clough et al., 2002; Sheard et al., 2009). Participants described something considerably more granular: attentional disengagement from a completed error within seconds; partition of controllable from uncontrollable stimuli during play; a specific interrupt-breathe-reorient-act sequence for frustration; invariant pre-performance routines. These are teachable units. The gap between a dimensional model and an instructional specification is precisely the gap this study identifies, and existing theory has tended to treat measurement adequacy as though it settled pedagogical adequacy.

Second, they **specify a developmental condition that challenge-exposure accounts leave implicit**. The proposition that mental toughness develops through adversity is widely accepted and is consistent with the environmental design literature (Crust & Clough, 2011; Gucciardi et al., 2009). Participants stated a more demanding version: adversity is developmentally productive *only when accompanied by instruction in how to handle it*. This is a conditional claim with clear implications, and it stands in direct tension with the residual “trial by fire” logic that continues to inform selection and development practice in many academies. Adversity without scaffolding is not a development method; it is a selection method, and the two are frequently conflated. A selection method identifies athletes who already possess a competency; a development method produces it. Systems that rely on the former while believing they are practising the latter will predictably reproduce rather than reduce the variance observed in these data.

Third, they **relocate emotional regulation from control to direction**. Participants consistently framed emotion as necessary fuel requiring channelling rather than as interference requiring suppression, echoing contemporary emotion research in sport (Jones, 2003) and emotional intelligence perspectives (Laborde et al., 2016), while adding a practitioner-articulated procedural account. This has curricular consequence: a curriculum built on suppression teaches inhibition, whereas a curriculum built on channelling teaches recognition, appraisal, physiological regulation, and action selection, a substantially larger and more transferable instructional programme.

55. Positioning Against the Existing Literature

These results align with systematic review evidence identifying self-regulation, resilience, and commitment as influential psychological factors in youth academy athletes, and pre-performance routines, self-talk, and social support as key facilitative skills (Whitfield et al., 2024). The present study does not merely replicate that identification: it adds the observation that the very skills identified as facilitative are among the least well developed and most unevenly distributed in the population sampled, reframing a description of what works into a diagnosis of what is missing. The findings are similarly consistent with international consensus positions on athlete mental health and youth welfare (Bergeron et al., 2024; Reardon et al., 2019; Schinke et al., 2018), but enter that conversation from the training ground rather than the policy document, and the gap between affirmation and instruction is not closed by further affirmation. One tension should be registered: much applied work assumes that expanding service provision is the appropriate response to psychological need, whereas these data show provision already reported by 55.3% of respondents against 25.5% utilisation. The constraint is not exclusively supply.

56. Implications for Practice

57. Academies and Clubs

The findings support treating psychological development as curriculum rather than service. Concretely, this means a written scheme of work with specified learning outcomes, sequenced across age phases, timetabled within rather than appended to training, delivered by instructors with defined competence, and assessed formatively. The four lowest-rated competencies in these data, relaxation and arousal regulation, imagery for emotional control, rapid in-competition adaptation, and adversity self-talk, constitute a defensible initial priority set, and the four highest-rated provide the model: academies already know how to produce reliable competence when they treat something as taught content.

Leading European academies are frequently cited as exemplars of holistic development, and several have invested substantially in education and welfare provision. The relevant question this study raises for such institutions is not whether psychological and educational provision exists but whether it is *curricular*, whether it has specified outcomes, sequence, and assessment, or whether it remains a set of valued but structurally peripheral activities. That question is empirical and, to the author's knowledge, largely unexamined in published research; it is offered here as a research priority rather than as a characterisation of any named institution.

For academies in Gulf football systems, including those in Saudi Arabia and the United Arab Emirates operating within ambitious national sport development strategies, the findings carry a specific implication. Systems undergoing rapid capability development have a structural advantage: curriculum can be designed rather than retrofitted. The corresponding risk is that investment concentrates on visible infrastructure and imported technical expertise while the psychological and educational curriculum remains, as elsewhere, implicit. The present data, drawn substantially from Lebanese and Emirati respondents, indicate that the asymmetry is already present in the region and is not confined to any single system.

For grassroots and community football, where specialist provision is least available, the implication is different again. Curricular psychological development at this level is realistically delivered through coach education rather than specialist appointment, which makes the content and quality of coach education the primary policy lever.

58. Coach Education

Participants attributed their psychological development substantially to particular coaches. This is a finding about system design as much as about individuals: where development depends on encountering the right coach, outcomes are distributed by chance. Coach education programmes should therefore treat instruction in psychological skills as core rather than elective content, and should distinguish between three distinct competencies frequently conflated, creating a psychologically safe climate, recognising psychological difficulty and referring appropriately, and actively teaching regulatory skills. The third is the least commonly addressed and the most directly implicated in these findings.

59. Sport Psychologists and Athlete Development Specialists

The provision–utilisation gap suggests a shift in the practitioner role from consultation toward curriculum design, delivery, and coach development. A practitioner working individually reaches those who present; a practitioner who designs the curriculum and trains the coaches who deliver it

reaches the cohort. This reframing is consistent with the scale constraints most academies face and with the finding that willingness to engage is high when the offering is framed developmentally.

60. Policy and Governance

Where governing bodies operate academy licensing or accreditation frameworks, psychological and career development curriculum is a legitimate object of standard-setting alongside facilities, coaching qualifications, and medical provision. The relevant standard is not the presence of a psychologist but the existence of a specified, delivered, and assessed curriculum. Given that the modal outcome of academy participation is non-progression, accreditation criteria that include preparation for transition beyond sport would align institutional incentives with the developmental interests of the majority of participants.

61. The Integrated Athlete Development Curriculum Framework

The preceding analysis warrants a framework that positions mental toughness within a broader developmental architecture rather than as its endpoint. The Integrated Athlete Development Curriculum Framework (IADCF) is proposed for this purpose. It is advanced as a theoretically grounded and empirically warranted proposition; it has not been validated, and its status is explicitly that of a design specification requiring subsequent expert review and implementation testing.

The framework comprises four layers, presented in Figure 1.

Layer 1, Curricular inputs. Twelve competency domains constitute the taught content: mental toughness, psychological skills training, career development learning, leadership development, emotional intelligence, communication skills, mental health literacy, athlete wellbeing, career transition readiness, identity development, artificial intelligence and digital readiness, and lifelong learning. These are treated as instructional domains with specifiable outcomes rather than as attributes to be cultivated by exposure. They operate under enabling conditions, coach instructional competence, psychological safety (Vella et al., 2024), organisational climate, and progressive challenge with scaffolding, without which delivery is unlikely to be effective.

Layer 2, Psychological mechanisms. Curricular inputs do not affect outcomes directly. They operate through five mechanisms: self-regulation, adaptive appraisal, basic psychological need satisfaction, emotional regulation, and identity differentiation. Specifying mechanisms serves two functions. It renders the framework falsifiable, since a curriculum that fails to move these mechanisms should not be expected to move outcomes. And it identifies the appropriate proximal targets for evaluation, which is important given how weakly distal performance outcomes discriminate between curricular quality and selection effects.

Layer 3, Psychological readiness. The mechanisms converge on a proximal integrative state in which competencies are available for deployment under competitive load. Readiness is positioned as distinct from competence: an athlete may possess a skill in training and be unable to access it in competition, and the difference is a legitimate curricular target in its own right.

Layer 4, Developmental outcomes. Four outcomes follow: peak performance, athlete wellbeing, career sustainability, and successful transition beyond sport. The framework treats these as co-equal rather than hierarchical, and takes life beyond sport as the terminal criterion against which academy curriculum should ultimately be evaluated, a position warranted by the base rate of professional progression rather than by welfare sentiment alone. A feedback loop returns outcome data to curricular revision through longitudinal monitoring and alumni tracking.

The framework's principal claim is structural: that psychological, educational, and career competencies form an integrated developmental system rather than a set of parallel provisions, and that they warrant the curricular treatment currently reserved for technical, tactical, and physical preparation.

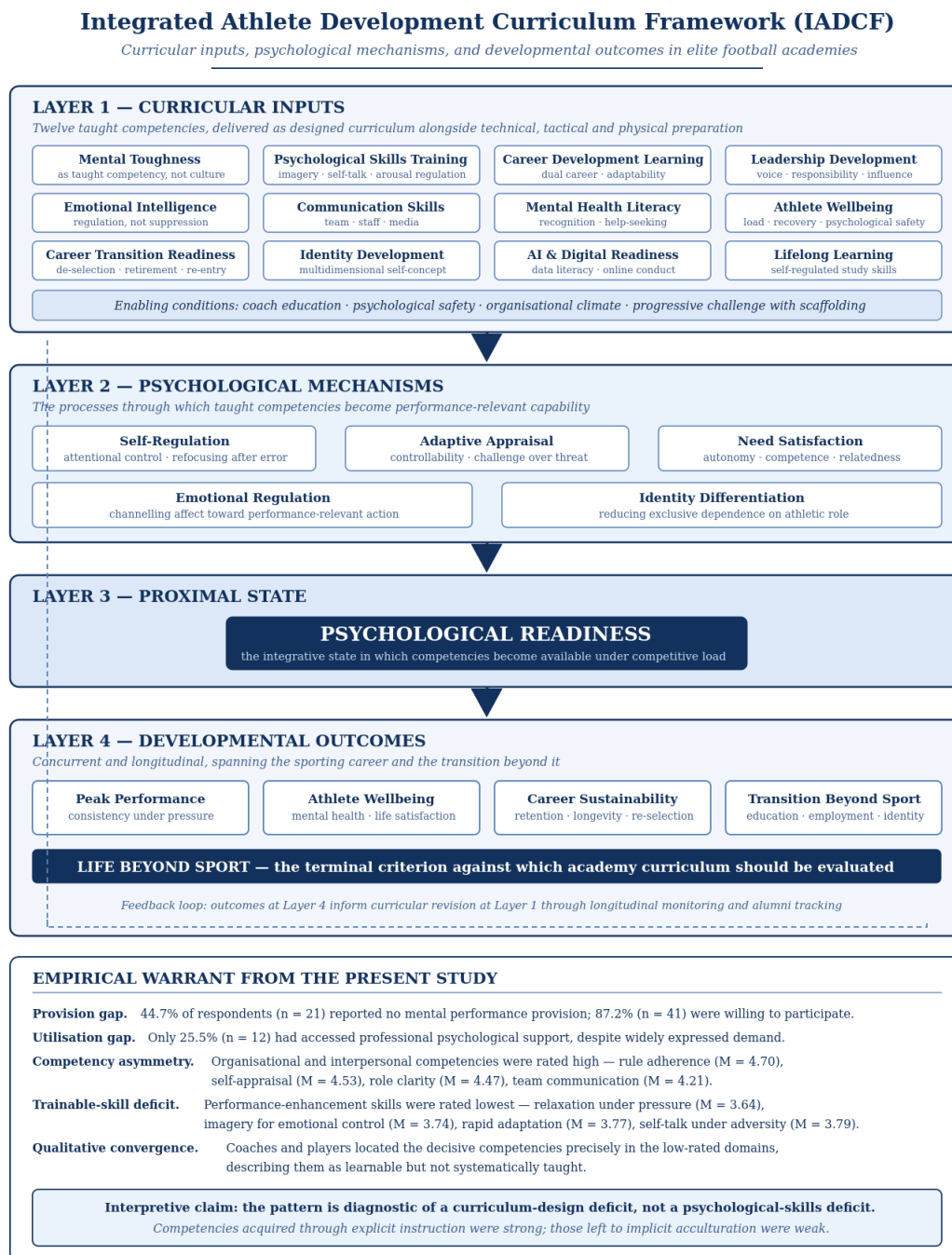


Figure 1

The Integrated Athlete Development Curriculum Framework (IADCF)

62. Limitations

Five limitations constrain the claims of this study.

Sample composition and analytic ceiling. With 47 respondents, analysis is necessarily descriptive; no inferential testing or modelling was conducted or would be defensible. The sample comprised athletes (85.1%) together with coaches and club or academy leaders (14.9%), spanned ages 13 to 58, and mixed competitive levels from recreational to self-reported Olympic, which limits interpretability since responses may index different phenomena across these groups. Self-reported competitive level is a subjective classification and was not verified.

Recruitment and self-selection. The survey was distributed by shareable link rather than to a defined sampling frame. Participation was self-selecting, the source population cannot be specified, no response rate is computable, eligibility was self-declared, and administration was unsupervised. Recruitment of respondents below 18 years was mediated through academy staff holding registration-stage parental authorisation rather than study-specific guardian consent, a broader basis that future work in this setting should narrow. Respondents sufficiently interested in psychological development to complete such a survey are unlikely to represent competitive athletes generally: the 87.2% willingness figure indicates strong demand among those already disposed toward the topic rather than an estimate of population demand. The argument rests instead on the gap between that figure and the 25.5% utilisation reported by the same respondents, which self-selection does not explain.

Strand non-equivalence. The two strands draw on different populations and different time periods, with no survey responses recorded during the month of the interviews. Integration therefore operates at the level of the phenomenon rather than the population, and quantitative results should not be read as characterising the interviewed athletes.

Instrument status and self-report. The survey instrument is a published, validated scale (Behnke et al., 2017), and total-scale reliability here ($\alpha = .87$) exceeded the published value. Two subscales nonetheless fell below conventional thresholds (interpersonal $\alpha = .53$; foundational $\alpha = .60$), and item-to-subscale assignment for exactly those two was reconstructed from published item descriptions rather than taken from a numbered key, so misassignment cannot be excluded. No confirmatory factor analysis was conducted and the sample would not support one. All quantitative data are self-reported at a single time point, exposing results to social desirability, limited self-insight, and common method bias, of which the dissonance identified in the joint display may itself be an artefact.

Design and framework status. All data are cross-sectional and no objective performance indicators were collected; the study therefore cannot test relationships between psychological competence and performance, and makes no such claim. Developmental and causal statements in the Discussion are interpretive propositions warranted by participant accounts and existing theory, not demonstrated relationships. Qualitative data were collected in a single competition setting under time constraint, in English with participants for whom English was frequently an additional language; data adequacy was judged pragmatically rather than through formal saturation, and member checking was not undertaken. The IADCF is a theoretically derived proposition whose components are individually supported in the literature but whose integration has not been empirically tested.

63. Recommendations and Conclusion

64. Toward an Integrated Athlete Development Curriculum

The framework's curricular translation rests on four pillars: self-regulation and performance psychology; emotional and social competence; mental health literacy and wellbeing; and career

development and life design. Delivery should follow spiral principles across developmental phases, with career development learning positioned early rather than deferred to de-selection. A three-tier model reconciles ambition with realistic staffing: universal curriculum delivered by trained coaches and timetabled within the training week (Tier 1), targeted group provision for identified needs (Tier 2), and individual clinical provision through defined referral pathways (Tier 3). The critical design feature is that Tier 1 is curricular and universal, treating psychological development as exclusively Tier 3 activity reproduces the utilisation gap these data document. Psychological skills are best rehearsed within technical and tactical sessions under representative constraint rather than in standalone classroom provision, since skills practised in isolation from performance context transfer poorly to it.

Full specification of modules, learning outcomes, instructional design, assessment instrumentation, expert validation, and implementation trial exceeds the scope of an empirical article and is reserved for a companion study.

65. Implementation, Policy, and Research Priorities

For academies: appoint curricular ownership; audit current provision to identify the null curriculum; begin with the competencies these data identify as weakest rather than attempting comprehensive implementation; build coach capability before expanding content; and establish baseline measurement to enable evaluation. For governing bodies: incorporate psychological and career development curriculum into academy licensing standards; embed psychological instruction in coaching qualification frameworks; and require outcome reporting that includes educational attainment and post-academy destination alongside progression rates.

Priority research includes formal expert validation of the framework; development and psychometric validation of an aligned assessment instrument; controlled evaluation of curricular delivery against active comparison; longitudinal tracking of academy cohorts including non-progressing players; and examination of whether the competency asymmetry documented here replicates across football systems and in women's football, where the evidence base remains substantially thinner.

66. Conclusion

This study set out to reposition a familiar question. Rather than asking whether mental toughness affects performance, it asked what the observable distribution of psychological competencies reveals about how academies teach. The answer is consistent across strands and methods: competencies subject to explicit instruction, rule adherence, role clarity, self-appraisal, communication, are strong and consistently distributed. Trainable performance-enhancement skills, arousal regulation, imagery, adversity self-talk, in-competition adaptation, are weaker and highly variable. Coaches and players independently identify the latter as decisive, and describe them as learnable but not taught.

The parsimonious explanation is not that athletes lack psychological capacity. It is that academies have built sophisticated curricula in some domains and left others to acculturation, and that the resulting profile is the predictable consequence of that design decision. Psychological competence in elite football is, on this evidence, a curriculum problem before it is a psychology problem.

Two implications follow. For practice, the priority is instruction rather than service expansion: specified outcomes, sequenced delivery, capable instructors, and formative assessment, applied to psychological and career competencies with the seriousness currently reserved for physical and technical ones. For theory, mental toughness is more usefully positioned as one taught competency

within an integrated developmental system than as the terminal outcome of athlete development , a repositioning the Integrated Athlete Development Curriculum Framework is proposed to formalise.

The framework advanced here is a proposition, not a validated instrument, and the empirical foundation reported in this article is modest in scale and constrained in composition. What the study establishes is the warrant for the design task, not its completion. That task, specifying, validating, and testing an integrated curriculum for athlete development, is the more consequential work, and it belongs to the intersection of sport psychology and educational leadership rather than to either field alone.

67. Sources and References

Reference type is indicated in brackets after each entry, per journal requirements.

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68. Appendix A

69. Sport Mental Training Questionnaire (SMTQ): 20 Items

Source: Behnke, M., Tomczak, M., Kaczmarek, L. D., Komar, M., & Gracz, J. (2017). *The Sport Mental Training Questionnaire: Development and validation. Current Psychology. Reproduced with attribution; items administered without modification. Response scale: 1 = strongly disagree to 5 = strongly agree.*

70. I understand and follow the rules established in training.
71. I can control my emotions when I am under pressure.
72. I use self-talk to improve my actions, focusing my attention on key elements of performance (technique, tactics, body sensations, etc.).
73. I have a high level of self-confidence that makes me believe I can achieve anything I put my mind to.
74. When I am under pressure during a competition I am able to relax physically and mentally, so that I am ready to perform.
75. I use self-talk to help myself overcome difficult times.
76. I am able to “bounce back” and overcome any failure. It does not discourage me from further action. [Note: as administered, this item carried appended text duplicating item 6, producing a double-barrelled stem. Reported as administered.]
77. During a competition I am able to adapt quickly to changes in performance demands and to distracting factors.
78. During preparation for the competition I create real and accurate “inner films,” planning possible obstacles and feeling sensations associated with the actual situation to come.
79. I know my own value, my strengths and weaknesses, and I plan how to improve them.
80. I accept my role in the group, and I see it clearly.
81. Whenever I lose my self-control during a competition, I can regain control of my own actions in the right moment.
82. I talk to myself to regulate my own thoughts, emotions and arousal.
83. I have an unshakable belief in my athletic ability.
84. I understand my role, and the role of others on my team, and how it all fits into the greater system.

- 85. I can relax and reduce my arousal level during competition if the situation requires so.
- 86. I am able to communicate effectively with my team and staff during the competition.
- 87. Before the start of competition I visualise my performance going exactly the way I want it to look during the real competition.
- 88. I use mental imagery to control my own emotions.
- 89. I am able to concentrate my attention on my performance and maintain it during its duration, and in case of any disruption, I can quickly refocus.

Subscale assignment (item numbers as listed above). Foundational skills: 4, 7, 10, 14. Performance skills: 2, 5, 8, 12, 16, 20. Interpersonal skills: 1, 11, 15, 17. Self-talk: 3, 6, 13. Mental imagery: 9, 18, 19. All 20 items contribute to the total score. Assignments for foundational and interpersonal skills are reconstructed from the published item descriptions and should be verified against the source article before replication.