International Journal of Sports Science & Coaching

Original research

International Journal of Sports Science & Coaching
2024, Vol. 19(3) 988–998


Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/17479541231184022
journals.sagepub.com/home/spo


Facilitators and barriers associated with youth player transition to professional first-team football: A key stakeholder perspective

Mark McGuigan[1], Antonio Dello Iacono[1], Allistair McRobert[2], Daryl Cowan[1] and Viswanath B Unnithan[1]

Abstract

The transition of elite youth footballers through academy systems towards the first team is highly complex, competitive, and often unsuccessful. A myriad of factors including technical competence, physical prowess, and the development environment combine to determine youth player progression. Current research has focused on broad investigations of multiple clubs and stakeholders, providing a valuable overview of the key aspects associated with elite youth player transition. This study aimed to provide an in-depth, context-specific investigation of key stakeholders within an elite level club in the United Kingdom (UK). Seven key stakeholders including the head of the academy ($n = 1$), the head of sports science ($n = 1$), coaches ($n = 3$), and lead sports scientists ($n = 2$) were recruited. Framework analysis led to the development of a practical framework outlining the key facilitators and barriers of youth-to-first-team transition. Facilitators of transition included overcoming adversity, high-level physical prowess, exceptional technical competence, and possessing at least one elite-level attribute. Barriers to transition included a lack of opportunity, lucrative youth player contracts and a lack of development-specific coaching. In addition, the developmental environment and developing individuals within a team environment were key influences on youth-to-first-team transition. This study complements recent broad investigations of the UK and global stakeholders by corroborating many of their findings while providing transferable, context-specific accounts of applied issues related to successful transition to first-team football.

Keywords

Adversity, mental toughness, resilience, soccer, talent development

Introduction

Most youth footballers in the UK fail to transition from the academy level to the first team.[1] Of those who succeed in progressing to the first team environment, even fewer will become established first-team players over a long-term period.[2] The challenges for aspiring footballers are complex given that youth player transition is multifaceted and requires thorough, contextualised investigation.[3] In the context of professional football, a transition event in a youth footballer's career may include key moments such as signing a professional contract, being deselected, or suffering from injury.[4] This complex, multidimensional pathway is closely linked to all aspects of a footballer's life including athletic, academic, and financial well-being.[5]

Following the adoption of systematic performance strategies (e.g. the English FA Elite Player Performance Plan (EPPP)), academics have investigated multidisciplinary approaches to player performance and development. Psycho-social factors,[6] physiological demands,[7] technical ability[8] and tactical understanding[9] have been endorsed as key determinants of an elite youth footballer's journey

Reviewers: James Dugdale (Edinburgh Napier University, UK)
Kathryn Johnston (York University, Canada)

[1]The University of the West of Scotland, School of Health and Life Sciences, Lanarkshire Campus, Scotland, GB
[2]Liverpool John Moore's University, School of Sport and Exercise Sciences, Liverpool, GB, UK

Corresponding author:
Mark McGuigan, The University of the West of Scotland, School of Health and Life Sciences, Lanarkshire Campus, Scotland, GB.
Email: Mark.mcguigan@uws.ac.uk

towards first-team football. Such research provides actionable insights into the key attributes of elite youth player performance and predictors of adult performance.[10,11] However, it is important to consider the multiple facets of talent development as overlapping and intertwined, with each player forging their own unique journey from elite youth prospect to first team professional.[12] The "Locking Wheel Nut Model" developed by Kelly et al.[13] highlights the nuances and individualised nature of player development. This model supports profiling player competence against a range of technical, tactical, sociological physiological, and psychological metrics. Thus, generating individual plans for each player based on their unique development needs from a coaching, sports science, and psychology perspective. In addition, the Athletic Talent Development Environment (ATDE)[14] model and the Athlete Career Transition (ACT) model[15] have been frequently adopted within the scientific literature. The ATDE model[14] provides a framework of environmental factors that influence the transition of youth athletes to the senior level. The ACT model[15] outlines phases within transition events where interventions may provide support to young athletes during key events in their career. These frameworks highlight the multifactorial nature of the youth-to-senior transition in professional sport and, as such, represent the theoretical constructs that this project is based upon.

Contemporary talent development research has mainly focused on younger age groups from the early phase to the development phase (8–15 years of age).[16] Less attention has been given to senior academy players (> 16 y/o) or the "post academy" development phase and the complexities associated with the progression of players towards first-team football.[17] This is problematic given the difficulties associated with transitioning to first-team football from an academy setting.[2] For example, the main objective of first-team football is to deliver results which are in contrast with the aims of development football. In addition, players' experiences, needs, and environments will evolve as they progress through the academy system as they are exposed to greater pressures to perform, demonstrate progress, and secure professional contracts. In addition, external peer group pressures may become prevalent as players mature. Thus, further investigation into the later-stage youth development transition is required given the increased physical, psycho-social, and technical demands.[18,19]

Research into the facilitators and barriers associated with youth transitioning to first-team football is generally scarce. However, there are notable studies within this domain. A global, questionnaire-based study by Lundqvist et al.[20] found that practitioners and stakeholders considered a club-wide playing philosophy, exposure to various playing styles and long-term player development strategies as key factors in youth to senior transition of elite players. As such, it could be argued that clubs should have clear, long-term strategies to facilitate the multifaceted nature of the youth-to-first-team transition. In addition, Mitchell et al.[17] provided insight into the perceptions of key stakeholders within academy systems regarding the barriers associated with this transition. Findings suggested that youth players may struggle to adapt to hyper-competitive, results-driven first-team environments and may experience isolation and loneliness in the early phase of the transition. This is supported by previous literature on the stressors athletes may endure within high-performance sporting environments including an obsession to win and feeling pressure to fit into a new environment,[21] and it suggests that players in the early phase of transitioning from youth to first-team football may require individualised support and resources.[12,19] These studies provide a perspective on youth footballer transition and promote triangulation between players, coaches, and key support staff to elicit best practices within academy systems. However, the general paucity of research in this area may limit practitioners' understanding of this critical phase in a youth footballer's career.[22] Each academy environment is unique and driven by club philosophy and youth development principles.[22] In addition, organisational governance, culture, and geographic location may impact talent development strategies and depend on resources, finance, population density and development philosophy.[18] As such, individual youth player transition and development are inimitable processes and not a "one size fits all" paradigm.[13,20] Therefore, we propose that in-depth, context-specific single-club investigations will enhance and supplement the broad findings of current research.

This study aimed to investigate the perceptions of key stakeholders from an elite youth academy on the facilitators and barriers of youth players (16–21 years of age) transitioning to first-team football. In addition, we aimed to develop a working framework based on the practices of the club involved in this study but with the potential to be implemented or adapted by other elite clubs and practitioners.

Methods

Positioning and design

This project is framed within a constructionist ontology while adopting an interpretivist epistemology.[23] This philosophical position aligns with the research team's belief that knowledge is constructed based on individual notions and interpretations of reality and experience.[24] In addition, the research team agreed that to deliver a rich, in-depth project, the lead researcher should play an active role in the research process.[25] As such, a qualitative, investigative approach to research design was applied.

The first author was embedded within the club's B Team (U21 s) as a sports scientist as part of his PhD. He has ten years of professional football experience as a player and was previously part of the youth academy with the football

club involved in this study for 5 years. Each co-author has extensive applied and research experience in elite football. To mitigate potential researcher bias, the co-authors formed a critical friend network to challenge and critique the first author's interpretations at each stage of the data analysis process and subsequent framework development.[26] The use of critical friends is appropriate given the ontological and epistemological positions this study is framed within.[26]

Context and participants

The club involved in the study is an elite-level, Scottish Premiership club and regularly competes in Union of European Football Associations (UEFA) Champions League and UEFA Europa League competitions. Following institutional ethical approval from the University of the West of Scotland ethics committee (ref: 17531), eight key stakeholders currently working within the club's youth academy were identified as prospective participants and provided with an overview of the planned study via email. In total, seven responded and agreed to participate ($m = 7$, $f = 0$). Voluntary informed consent was obtained from each participant prior to commencing data collection. Participant roles included the Head of Academy, the Head of Sports Science, two lead sports scientists and three coaches across the U18s and B Team squads. All coaches (including the Head of Academy) were qualified to or currently working towards their UEFA Pro Licence and had playing experience at professional level. Sports science practitioners were all educated to the MSc level with over forty years' collective experience in elite youth and senior football. To protect confidentiality, participant names are replaced with numbers (P1, P2, etc.) in the "Results" section.

Data collection

Data were collected via semi-structured interviews.[27] Pilot interviews were conducted with a coach and sports scientist from a professional football club in the English Championship. This led to the refinement of the interview schedule and the exclusion of questions which were deemed irrelevant to the study aim.[28] The interviews lasted between 51 and 105 min, with 474 min of interview data collected in total. Data collection was conducted face-to-face, within private rooms at the club's stadium or training complex. All interviews were conducted by the lead author during participant free time with findings discussed at length with co-authors following each interview.

Data analysis

Framework analysis was conducted as it offered a systematic approach to framework development. This method provided researchers with a tool to investigate applied issues from the perspective of participants with firsthand experience of a specific topic.[29] We aimed to produce a working framework for the club as part of this project as opposed to a descriptive narrative that traditional qualitative analytical methods yield.[29] As framework analysis has the potential to create actionable outcomes and has been successfully adopted in medical and psychology domains,[30,31] it was deemed appropriate for this study.

The framework analysis involved a five-stage process resulting in the development of concepts and sub-concepts from the data.[28] The five stages of framework analysis were as follows: (a) familiarisation with the entire data set; (b) identification of a framework; (c) indexing codes; (d) charting and summarising; and (e) mapping and interpretation of the concepts within the framework. Familiarisation with all seven interviews was conducted by reading each transcript and listening to audio files several times. Initial codes, notes, and ideas were recorded at this stage until the lead author felt they had gained a reasonable understanding of the data. These codes and notes were used to form early impressions of the data. From here, initial abstract concepts were identified to create a framework for the analysis and interpretation of the data. The emergent concepts from the familiarisation phase were grouped and ranked to provide a structure which addressed the main aims of the study. Several sub-themes and components were developed and included in this part of the analysis phase. This was an iterative process which involved the lead author tested the initial framework against a test portion of the data set to refine and remove any unnecessary or duplicate concepts.[29] The research team played an active role in this process by challenging the initial concepts generated by the lead author.

Following framework synthesis, it was applied to the entire data set. Linking study data with the framework components was accomplished using Microsoft Excel. The indexing process involved revising and refining the framework by assessing the efficacy of the framework with respect to the raw data. For example, the sub-concepts "*Development Philosophy*" and "*Developing Champions League Players"* were collapsed into "*Environment and Development Approach."* Following the completion of the indexing phase, the data were ordered and abstracted to systematically examine it.

Rigour

To address rigour, several trustworthiness criteria were selected based on their appropriateness for the research design. Accordingly, substantive contribution, credibility, and transparency were all incorporated into the project.[26] This was achieved by (a) conducting novel research in an area of current literature that had not received significant attention; (b) consulting the research team at each phase

of data collection and analysis to obtain feedback and promote reflexivity; and (c) providing clear implications of the findings as well as future research opportunities for academics and practitioners interested in the elite youth player transition.

Results

A framework consisting of three key concepts with multiple sub-concepts has been developed. The key concepts are as follows: (a) facilitators of successful youth player transition (Table 1); (b) perceived barriers and challenges to youth player transition (Table 2); and (c) environmental influences on youth player transition (Table 3). Each section of the framework is presented separately, and the concepts are supported by verbatim quotes from key stakeholders.

Facilitators of successful youth player transition

Players who demonstrated the ability to overcome adversity during their development in the academy were perceived as more likely to transition to first-team football. In this context, adverse events may include recovering from long-term injuries, potential deselection, and experiencing loss of form or motivation. Therefore, resilience was a critical quality that stakeholders perceived to be a key facilitator of successful transitions to first-team football for youth players. Stakeholders considered high-level physical prowess as another key contributing factor to successful transition to first-team football. Commonalities amongst practitioners included the need for players to demonstrate robustness in competing multiple times per week and dominating physical duels with opponents. In addition, the ability to perform repeated actions within a game and

Table 1. Facilitators of successful youth player transition.

Sub-concepts	Representative Quotations
Overcoming Adversity - Resilience - Mental Toughness - Experience of Adverse Events	P4: "Players that overcome an obstacle or a tough challenge in the early part of their careers will always be better off for it… every player that makes it has overcome some sort of hurdle or challenge." P3: "I think it's massive. I think it's massive, you can see that almost every player that's made it in the first team has had, at some point, like [*first team player*], you know, almost come close to leaving the club [*due to potential deselection by coaches*] … so he's used that adversity to kind of drive him on." P1: "They've all had to show resilience, they all know what it takes to fight and get to the top. Those that have it too easy very rarely prevail." P7: "…there has to be that resilience to overcome, there just has to be. It's non-negotiable."
Physical Prowess - Speed is required of all players - Elite-level endurance - Robustness to play multiple games per week - Repeated physical actions	P3: "so you need to be a multidirectional athlete, and you need to be able to produce repeated efforts. And then you have to produce those multiple times a week." P2: "…you need to be able to run, you need to be able to compete… I don't mean you need to be a six-foot giant, but you need to be able to handle yourself physically on the park." P4: "You need to be quick; you need to run, to be able to press, not once, not twice, but three times… that's part of the profile for the first team."
Technical Competence - All players must be competent in possession - Must be able to receive and retain possession under extreme opposition pressure - Elite-level first touch and ball control	P5: "The club has always been known for an attacking style, you know, dominating the ball… technically, I'm clear you have to have an exceptional level of technical ability to play in the first team" P2: "I found out that players come up to B team should be able to handle the ball… if he can't handle the ball, then he shouldn't be here, you know?" P7: "You've got to, as a minimum be able to play football to be here and be at a high level technically… that's why you're here."
The 'x-factor' - Successful youth players will possess at least one exceptional attribute - Something about their game which makes them stand out from their peer group - 10/10 quality that positively impacts their game	P3 – "I think every player needs at least one 9 out of 10 quality … every player needs to have something in there that is a standout quality I would say" P4 – "To break into the first team players will probably need to have at least one 10/10 quality you know? Something that sets them apart from everyone else and that the manager can point and say, 'that's why I'm picking him'." P5 – "They really should have something about them or something about their game that is exceptional". P2 – "All the ones (youth players) who have come through here have had something special, something exceptional about their game… you definitely need that."

Table 2. Barriers to successful youth player transition.

Sub-concepts	Representative Quotations
Opportunity - Opportunity to gain exposure to first-team environment is limited - Large first-team squad makes it difficult for young players to make an impact - Club has financial resources to spend millions of pounds for players	P1 – "Opportunities, you know… at the first team can be limited… there's not a great scope for any manager to take time to bed in young players." P3 – "they're always up against it, it's never a nice smooth transition… to get an opportunity is a massive barrier I would say." P6 - "we have players in the academy squads who are trying to stand out from that crowd, and then trying to battle your way through a 30-man first team squad is a massive ask." P4 – "probably opportunity… we recruit players internationally, recruit players domestically, we recruit from other academies… in 2019, we had signed 11 players in that time, so that was a full squad, that was just brought in for the first team pretty much so it's difficult for young players."
Player Contracts - Players can be rewarded with financially lucrative contracts "too soon" - Long-term contracts potentially risk negatively impacting young player's work ethic and motivation] - Young players may conflate money with success	P3: - "The financial stuff is obviously massive. Because if they get a massive reward really early in their career, then it can obviously take away a lot of that drive and a lot of that hunger." P6: - "Sometimes they can get too much too soon… and that has a negative impact on them, you know?" P2: "they can be extrinsically motivated. So, they want the toppings of life, the good cars, the nice clothes, the good washbag… But I feel now, that, players now become wealthy without actually having made it to the first team, that's a problem."
The "Danger Zone" - Players who transition to first-team squad or B team but do not play competitive matches regularly - Train with advanced squads but risk of missing out on development focussed training - Risk of motivation and focus being negatively impacted	P7: "Players get caught in the trap. They don't get loan deals, they train with the first team and are barely at B team. That becomes a problem because they're, they're not moving, they're standing still. So, that's a real problem for me." P2: "… player's sometimes go up with the first team for a period of time but then they lose out on the development that comes with playing games. They'll benefit from first team exposure for sure but in the long run… they can't develop to the top level by just training."

training consistently was cited as another key physical metric. The physical aspects of performance were important for successful transition and development and there was a consensus that young players would not transition without the ability to handle the physical demands of the game. All players who had made the transition from the academy to the first-team were considered to possess elite technical competence. Players in every position are expected to build attacks, to regularly retain possession and receive the ball in all areas of the pitch whilst under extreme opposition pressure. Developing technical competence is of utmost importance to the philosophy of the club and players are expected to have attained high levels of technical competence by the time they reached B team level. As such, all youth players with aspirations of transitioning to the first team were expected to meet the highest levels of technical competence. All stakeholders agreed that successful transition to the first team required players to possess at least one exceptional attribute or quality. This attribute could be physical, technical, or psychological and should set them apart from other players in their squad. Due to the magnitude of the club and the pressure to deliver results, it was felt that without an exceptional attribute, it would be difficult for youth players to make an impact in the first-team squad.

Barriers to successful youth player transition

Limited opportunities for youth players to gain first-team exposure were a central barrier to their transition. Stakeholders felt that managers did not have the time to allow young players the opportunity to adapt to the increased demands of first-team football. In addition, the size of the first-team squad only increased the difficulty for young players to make a significant impact at the senior level. The club has the resources to sign players from all over the world which further impacts the opportunities for academy prospects experiencing the first-team environment. The financial rewards associated with some of the highly rated youth team players contracts at the club were also cited as potential barriers to successful youth player transition. Stakeholders perceived financially lucrative contracts for young players as negatively impacting their motivation and work ethic. It was deemed

Table 3. Environment and development philosophy.

Sub-concepts	Representative Quotations
Development Approach - Aim to develop Champions League players - Holistic approach to developing player and person - Players encouraged to take responsibility for development needs and training - Cultivate synergy between coaches, support staff and players	P5: "…player development is to put everything a player needs in place in every aspect of their life, and in particular football… when the player signs here at 16 years old I'll ask, 'what's going to stop you getting into the first team? What's stopping you right now? Because it ain't age!" P1: "The first thing with me is the environment, that's a fancy phrase but like the culture and the environment. I'm a massive believer in you can have the best talent but if they aren't in the right environment then they'll struggle to break through." P2: "We want to produce Champions League players because Champion League is the pinnacle of young players as much as it's a real high point to try and achieve for us over the years."
Developing Individuals – Not TEAMS! - Individuals with greatest potential are the priority - The team is the vehicle to support key individual development and growth - Training sessions are designed around key individuals - Players are in direct competition with one another	P1: "Ultimately, the youth players are competing against one another, you know? It's individuals who will make it, not whole teams." P2: "We need to push those players we think have the best chance of making it to the first team and we'll do that within a team setting. Hopefully, within that we'll get one or two surprises and others will step up, but the reality is that only a small number will make the breakthrough." P5: "I've openly said I don't care about the team, but also the team is like a vehicle, you're the guy that's driving it, so you do need each other, you need that environment, so I very, very rarely design a session around just the team."

problematic that young players received such financially lucrative contracts prior to any notable involvement with the first team. This presents a challenge for the club as they have a track record of developing talented young players, and there is an obligation to retain their services or risk losing them to rival competitors. The club may also view lucrative contracts as a long-term investment. The first team has a performance focus and not a development focus. Therefore, players in the early phase of first team transition are at risk of falling into a developmental "Danger Zone". This is due to players not playing competitive matches on a regular basis as well as following training schedules which typically focus on recovery and preparation as opposed to addressing specific developmental needs. As a result, young players in this "danger zone" face the risk of stagnation or regression due to a lack of attention and specific training.

Environment and development philosophy

The impact of developmental practices and the philosophy of the club in relation to supporting the elite youth player transition was another important concept within the framework. The culture created by coaches and sports science staff played a significant role in preparing and educating players about the expectations of being a first team player. In addition, the club's ambition to develop players for the highest level of club football in Europe was also a consistent motivation throughout the development process. Stakeholders believed in the practice of developing individual players within a team environment. This approach acknowledges the reality that select individual players will transition to the first team and not entire squads. Therefore, most team training sessions or matchday instructions are designed around individual players who are perceived to have the best chance of progressing to the first team.

Discussion

This study aimed to investigate the facilitators and barriers associated with the youth footballer transition to first-team football from the perspective of key stakeholders currently working for an elite football club. The analysis led to the development of a working framework which consisted of three key concepts: *attributes associated with successful youth player transition*, *barriers to transition*, and *environment and developmental philosophy*. In this section, each concept and sub-concept are discussed in consideration of the current literature in this field. In addition, potential implications for enhanced practice are offered throughout.

Facilitators of successful youth player transition

Overcoming adversity, physical prowess, technical competence and the "X-Factor" were the sub-concepts in this section of the framework. An athlete's journey to elite-level competence in sport is rarely linear and will likely involve some form of challenge or obstacle.[32] There was broad consensus among participants that players who are successful in progressing to the first team all possessed the ability to overcome adverse events or barriers. For elite youth footballers, adversity is any events or scenarios in their career

that require them to display or develop high levels of resilience and mental toughness[33] There is an argument that talent development provision in football does not cater to player needs beyond performance-based metrics.[34] Consequently, young players are rarely exposed to adverse scenarios to allow them to develop resilience and mental toughness[35,36] which may be detrimental to their progression towards first-team football.

Interestingly, stakeholders suggested manufacturing obstacles and creating barriers for players to overcome during their academy journey. This aligns with the work of Collins, MacNamara and McCarthy[37] who support periodised, progressive challenges preceded by specific skill development interventions as the optimal approach to manufacturing athlete resilience alongside applied competence. Stakeholders suggested creating challenges for players such as having them play in an unfamiliar position or compete in an advanced age group.[38] Furthermore, resilience and stress exposure were key factors in the global youth-to-senior transition study conducted by Lundqvist et al.[20] which highlights transferability between broad survey data and in-depth single club investigations.

Literature supports the notion that players with advanced physical and physiological capabilities are more likely to progress to first-team football.[39] For example, speed is recognised as a discriminating factor between successful and unsuccessful elite youth footballers.[40] Research has corroborated the importance of maximal and repeated sprint ability to performance in elite football.[41,42] Sprint distance in modern football has increased significantly over the last decade[43] due to enhanced player conditioning and the evolution of strategic and tactical principles.[44] Stakeholders highlighted that all outfield players would be required to possess high levels of speed and repeated sprint ability. This is likely due to the aggressive, high-pressing style of football that has been traditionally adopted by first team managers of the club, typically to regain possession.[45] All stakeholders are aware of the importance of speed in the modern game and the tactical style adopted by the club. Therefore, it is unsurprising that stakeholders highlight this as a key aspect of physical performance for aspiring youth footballers.

In addition to speed and strength for central defenders, aerobic and anaerobic endurance for midfielders, and explosiveness in acceleration and deceleration for strikers were cited as desirable position-specific physical attributes. These attributes also reflect the demands of the modern game and are congruent with research in this area.[46,47] Despite the consensus that physical prowess is critical to youth player development, there was a lack of specificity when considering how physical performance would impact the transition to first-team football. For example, for central defenders, it would be beneficial to understand what type of strength may best serve a youth footballer to optimise their development and performance (e.g. isokinetic strength and uni-lateral limb strength). It may be useful for academy staff to examine the specificities of position-specific physical demands to inform and optimise training and development interventions. Although recent literature supports the notion that coaches perceive skill and psychological attributes to be valued higher than physical prowess,[48] longitudinal studies report that players who exhibit superior physical performance are more likely to be successful in transitioning to senior-level football.

Technical competence has been widely researched within talent identification and development domains.[49,50] As previously stated, the club involved in this study implements an attacking, possession-based style of football. Therefore, it is critical that players possess a high level of technical ability. Ensuring continual development of technical and skill-based abilities is the core methodology adopted by academy coaches to develop players. This is also common amongst elite-level academies.[51] Relatedly, there is an expectation from coaches and support staff that players will possess a high level of technical ability by the time they reach U18 or B Team level. It was considered unlikely for players who have not demonstrated exceptional levels of technical ability by this stage to progress to the first team level. Players' technical competence is assessed using "coaches' eye" during training and matches and thereafter reviewed in analysis sessions.[52] This allows coaches to apply their expertise and experience to identify technical strengths and deficiencies within a player's game.[53] This is a typical practice in elite-level youth academies in the UK and is a key aspect of a young players' development in the academy.[54] One method of enhancing judgement of youth players' technical competence may be through skill-based assessment. The literature suggests that skill-based assessment discriminates between elite and sub-elite players.[55] The execution of skill-based actions including dribbling, passing, and shooting is considered important metrics when assessing player performance in competition.[56] However, it is uncertain whether practitioners working with this population would consider such methods beneficial for assessing technical competence.

When referencing past and present players who graduated from the academy to the first team, stakeholders all identified one attribute within each player which was considered at an elite level. These perceptions lack research or academic foundation; however, there is value in subjective, anecdotal testimonies from expert practitioners.[57] Academy staff aim to identify a physical, technical, or psychological trait in a youth player's performance that may give first-team staff cause to include them in their squad. Examples include exceptional top speed, elite-level resilience and exemplary passing ability. Possessing an "x-factor" may also give transitioning players additional time to settle and adapt to the demands of first-team football. Coaches and decision-makers may be more forgiving of performance deficiencies if they have displayed an exceptional aspect of their game.[17]

Further research on this notion would be welcomed to understand whether this perception is shared among other key stakeholders within elite youth academies across the UK. In addition, it would be beneficial to understand what methods practitioners adopt to ascertain what aspects of player performance are judged as elite or exceptional.

Barriers to successful youth player transition

The demand, pressure, and result-driven nature of first-team football is cited as detrimental to youth players' opportunities to join the first team.[17] Research suggests that first-team managers are less likely to trust younger, untested players.[58,59] The club involved in this study is expected to win every domestic game. There is incessant pressure from supporters to win league and cup competitions every season as well as performing well in European competition. This dynamic is fuelled by their rivalry with another club whom they regularly compete with for honours. As a result, it is a significant challenge for young players to gain experience and make a sustained impact at the first-team level. Therefore, it is reasonable to deduce that youth players at higher-level academies may not have the same opportunities to experience first-team football as those who play at a lower level.[60] Limited opportunities to demonstrate competence in a first-team environment can stifle development.[17] There have been attempts by governing bodies (UEFA Technical Report, 2022) to implement criteria requiring clubs to include a minimum number of homegrown or development players within a matchday squad. This aims to provide young players with the opportunity to experience the first-team environment and competitive playing time. However, the efficacy of such interventions is unknown and requires further investigation.

A young player progressing to an advanced squad (e.g., B Team to first team) may initially appear as a progressive event in their development. However, if they are unable to make an impact within an advanced peer group, progression is at risk of plateauing due to reduced game time and individual training.[61] This risk requires careful management by academy staff to safeguard against regression of player development.[35] For context, at the time of this study, the first team squad consisted of thirty players. As a result, regular competitive game time for transitioning players is limited, if not non-existent.[17] Playing consistently is important for players to further their development and understanding of the game.[61] In addition, there may be a lack of post academy specific training to address development needs. This was also highlighted by Mitchell et al.[17] as a barrier to first-team transition for youth players. Therefore, first team and academy practitioners should liaise regularly to minimise the risk of young players entering the "danger zone". A potential solution to this problem could be utilising loans for players at the B Team level who are considered ready to sample first-team football.[61] Alternatively, the creation of a specific youth to first team transition coach or practitioner may protect youth player development within the first-team environment.[17]

Over the past thirty years, elite football has evolved into an industry which generates billions of pounds through sponsorship, player sales, and merchandise.[62] Part of that wealth has trickled down to the players by way of lucrative long-term contracts. Ideally, youth players would sign contracts with a structured pay scale which increases periodically or following key milestones (e.g., international call ups, first team debut).[63] In reality, elite clubs are in direct competition with one another to ensure the best young prospects remain at their clubs.[64] Therefore, clubs mitigate the risk of losing those players to rival competitors by offering lucrative contracts to secure their services. This can be problematic, with financially lucrative contracts being awarded to players without contributions at the first-team level. Stakeholders were concerned that motivation may be negatively impacted and that young players were conflating wealth with success. Mitchell et al.[17] found similar results with key stakeholders perceiving the wealth associated with player contracts prior to reaching the first team as one of the main barriers to youth player transition. This suggests that financially lucrative contracts may impact youth player self-awareness, work ethic and motivation.

Environment and development philosophy

The optimal development environment includes elite-level coaching, player welfare, psychological support, elite facilities for the first team and B team, and an elite culture and mindset towards training and performance by all staff within the academy. As highlighted in the ATDE[14] and ACT[15] models, it is important to consider a wide range of factors within an athlete's transitional environment at both macro and micro levels.[20] Without a supportive environment, the ability of football academies to produce top-level footballers is limited.[65,66] The academy aims to provide a service for the betterment of player development. Sports science staff have highlighted the use of objective methods of assessment for physical and physiological development whilst technical and tactical abilities are typically judged on a more subjective basis.[65] Integrating objective and subjective methods to assess development represents an effective developmental strategy.[56]

Research supports holistic, player-centred approaches to talent development.[67,68] To implement this approach effectively, it is important to consider the key predictors of adult performance as highlighted by Williams, Ford and Drust:[11] technical, tactical, physical and psycho-sociological as complex, intertwined domains. In addition, it is critical that such an approach is not generic or designed to address broad concepts of development.[13] Instead, development should be tailored to address the individual needs of each player. Lundqvist et al.[20] highlighted the importance

of long-term player development plans for a successful transition to senior football. However, there was a lack of consensus among stakeholders regarding the methodologies implemented by the club to ensure long-term development. For example, the desire to produce players to compete in the UEFA Champions League was cited as being the main aim of the club, as it is widely regarded as being the pinnacle of club football.[69] Greater clarity on this philosophy could enhance academy practices and synergy between multidisciplinary teams.

To optimise the development of individual players with the greatest potential of transitioning to first-team football, coaches and support staff must tailor team training sessions accordingly.[70] This is achieved by designing sessions around the development needs of a particular player(s).[71] Ultimately, all players will benefit from the session however, the main objective is to develop one or two select individuals.[70] Adopting this approach allows coaches to nurture and facilitate the development of key individuals.[72] Prioritising individual players over team success aligns with the purpose of academy football, which is to produce players capable of contributing to first-team success.[73]

Dowling et al.[70] investigated the development of individuals by using the team as a vehicle and found that coaches had different perceptions on how to achieve this. There were conflicting opinions between stakeholders on the developmental priorities of late-stage youth players (e.g. winning vs development). In contrast, the stakeholders in this study provided a broad consensus that utilising the team dynamic to optimise select individual development was an appropriate strategy in their pursuit of providing players for the first team.

Limitations

This study represents practitioners from a single elite level soccer club in the Scottish Premiership. As such, the possibility for generalising the findings may be limited. Investigating several clubs across the top tiers of soccer in the UK may yield commonalities that practitioners and researchers can further explore and implement. It should be noted, however, that many of the findings within this study concur with broader investigations in the current literature.[17,20] As every club will have unique challenges, philosophies, playing styles and resources, further investigation of individual club practices in relation to youth to the first team transition is warranted.

Conclusion

We have presented a novel framework of youth to first-team transition from the perspectives of practitioners within an elite-level academy. The importance of overcoming adversity and developing resilience as well as elite-level physical prowess and technical ability were considered as critical for successful youth player transition. Major barriers to this transition include opportunity to gain exposure to first-team football, player contracts, and a lack of developmental focus following progression to the first team. The developmental environment, club philosophy and prioritising individual players within a team environment were also highlighted as key factors that influence successful transition to first-team football. We support the need for research on youth to first-team transition and call for further club-specific investigations to increase our understanding of the multiple challenges and complex issues that clubs experience in their pursuit of developing elite, first-team footballers.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Mark McGuigan https://orcid.org/0000-0001-9320-8588

References

1. Anderson G and Miller RM. The academy system in English professional football: business value or following the herd? *University of Liverpool, Management School Research Paper Series*, 2011.
2. Carpels T, Scobie N, MacFarlane NG, et al. Youth to senior transition in elite European club soccer. *Int J Exe Sci* 2021; 14: 1192–1203.
3. Lundqvist C and Schary DP. Player wellbeing and transitions. In: AM Williams, B Drust and PR Ford (eds) *Science and soccer*. 4th ed. London: Routledge, 2022, pp.168–182.
4. Wylleman P, Lavalle D and Alfermann D (eds). *FEPSAC Monograph Series. Career transitions in competitive sports*. Lund, Sweden: European Federation of Sport Psychology FEPSAC, 1999.
5. Wylleman P, Rosier N. Holistic perspective on the development of elite athletes. In: M Raab, P Wylleman, R Seiler, et al. (eds) *Sport and exercise psychology research: from theory to practice*. San Diego: Elsevier Academic Press, 2016, pp.269–288.
6. Gledhill A, Harwood C and Forsdyke D. Psychosocial factors associated with talent development in football: a systematic review. *Psych Sp Ex* 2017; 31: 93–112.
7. Forsman H, Blomqvist M and Davids K. Identifying technical, physiological, tactical and psychological characteristics that contribute to career progression in soccer. *Int J Sp Sci Coaching* 2016; 11: 505–513.
8. Kelly A, Wilson MR, Jackson DT, et al. Technical testing and match analysis statistics as part of the technical development

process in an English football academy. *Int J Perf Anal Sp* 2021; 20: 1035–1051.
9. Kannekans R, Elferink-Gemser MT and Visscher C. Positioning and deciding: key factors for talent development in soccer. *Scand J Med Sci Sp* 2011; 21: 846–852.
10. Ford PR, Bordonau JLD, Bonanno D, et al. A survey of talent identification and development processes in the youth academies of professional soccer clubs from around the world. *J Sp Sci* 2020; 38: 1269–1278.
11. Williams MA, Ford PR and Drust B. Talent identification and development in soccer since the millennium. *J Sp Sci* 2020; 38: 1199–1210.
12. Morris R, Tod D and Oliver E. An analysis of organisational structure and transition outcomes in the youth-to-senior professional soccer transition. *J Appl Sp Psych* 2015; 27: 216–234.
13. Kelly AL, Williams CA and Wilson M. Developing a football-specific talent identification and development profiling concept – The Locking Wheel Nut Model. *Appl Coach Res J* 2018; 2: 32–41.
14. Henriksen K, Stambulova N and Roessler KR. Holistic approach to athletic talent development environments: a successful sailing milieu. *Psych Sp Ex* 2010; 11: 212–222.
15. Stambulova NB. Theoretical developments in career transition research: contributions of European Sport Psychology. In: M Raab, P Wylleman, R Seiler, et al. (eds) *Sport and exercise psychology research from theory to practice*. London: Elsevier, 2016, pp.251–268.
16. Fenner JSJ, Iga J and Unnithan V. The evaluation of small-sided games as a talent identification tool in highly trained prepubertal soccer players. *J Sp Sci* 2016; 34: 1983–1990.
17. Mitchell T, Gledhill A, Nesti M, et al. Practitioner perspectives on the barriers associated with youth-to-senior transition in elite youth soccer academy players. *Int Sp Coach J* 2020; 7: 273–282.
18. Morris R, Tod D and Eubank M. From youth team to first team: an investigation into the transition experiences of young professional athletes in soccer. *Int J Sp Ex Psych* 2017; 15: 523–539.
19. Dugdale JH, Sanders D and Myres T. Progression from youth to professional soccer: a longitudinal study of successful and unsuccessful academy graduates. *Scand J Med Sci Sp* 2021; 31: 73–84.
20. Lundqvist C, Gregson W, Bonnano D, et al. A worldwide survey of perspectives on demands, resources, and barriers influencing the youth-to-senior transition in academy football players. *Int J Sp Sci Coach* 2022: 1–9. https://doi.org/10.1177/17479541221135626
21. Royensdal O, Toering T and Gustafsson H. Understanding players' transition from youth to senior professional football environments: a coach perspective. *Int J Sp Sci Coach* 2018; 13: 26–37.
22. Drew K, Morris R, Tod D, et al. A meta-study of qualitative research on the junior-to-senior transition in sport. *Psych Sp Ex* 2019; 45: 101556.
23. Smith B, Sparkes AC and Caddick N. Judging qualitative research. In: L Nelson (eds) *Research methods in sports coaching*. London: Routledge, 2014, pp.192–201.
24. Klakegg OJ. Ontology and epistemology. In: *Designs, methods and practices for research*. London: Routledge, 2016, pp.87–96.
25. Sparkes AC and Smith B. *Qualitative research methods in sport, exercise and health: from process to product*. London: Routlegdge, 2013, pp.206–237.
26. Smith B and McGannon KR. Developing rigor in qualitative research: problems and opportunities within sport and exercise psychology. *Int Rev Sp Ex Psych* 2018; 11: 101–121.
27. Kallio H, Lietila AM, Johnson M, et al. Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *J Adv Nurs* 2016; 72: 2954–2965.
28. Anderson K and Jack DC. Learning to listen: interview techniques and analyses. In: R Perks and A Thomson (eds) *The oral history reader*. London: Routledge, 2015, pp.179–192.
29. Ritchie J and Spencer L. Qualitative data analysis for applied policy research. In: A Bryman and R Burgess (eds) *Analyzing qualitative data*. London: Routledge, 1994, pp.305–329.
30. Srivastava A and Thomson SB. Framework analysis: a qualitative methodology for applied policy research. *J Admin Govern* 2009; 4: 72–79.
31. Parkinson S, Eatough V, Stapley E, et al. Framework analysis: a worked example of a study exploring young people's experiences of depression. *Qual Res Psych* 2016; 13: 109–129.
32. Collins D and MacNamara A. The rocky road to the top – why talent needs trauma. *J Sp Med* 2012; 42: 907–914.
33. Sarkar M and Fletcher D. Psychological resilience in sport performers: a review of stressors and protective factors. *J Sp Sci* 2014; 32: 1419–1434.
34. Li C, Martindale R and Sun Y. Relationships between talent development environments and mental toughness: the role of basic psychological need satisfaction. *J Sp Sci* 2019; 37: 2057–2065.
35. Larsen CH, Alfermann D, Henriksen K, et al. Successful talent development in soccer: the characteristics of the environment. *Sp Ex Perf Psych* 2013; 2: 190.
36. Ryom K, Ravn M and During R. Talent development in football – a holistic perspective: the case of KRC genk. *Int Sp Coach J* 2020; 7: 360–369.
37. Collins D, MacNamara A and McCarthy N. Putting the bumps in the rocky road: optimising the pathway to excellence. *Front Psych* 2016; 7: 1482.
38. Kelly A, Wilson MR, Jackson DT, et al. A multidisciplinary investigation into 'playing-up' in academy football according to age phase. *J Sp Sci* 2021; 39: 854–864.
39. Dodd KD and Newans TJ. Talent identification for soccer: physiological aspects. *J Sciand Med Sp* 2018; 21: 1073–1078.
40. Ade J, Fitzpatrick J and Bradley PS. High-intensity efforts in elite soccer matches and associated movement patterns, technical skills and tactical actions. Information for position-specific training drills. *J Sp Sci* 2016; 34: 2205–2214.
41. Carling C, Gregson W, McCall A, et al. Match running performance during fixture congestion in elite soccer: research issues and future directions. *Sp Med* 2015; 45: 605–613.
42. Gaundino P, Iaia FM and Alberti G. Monitoring training in elite soccer players: systematic bias between running speed and metabolic power data. *Int J Sp Med* 2013; 34: 963–968.
43. Minano-Espin J, Casais L, Lago-Penas C, et al. High speed running and sprinting profiles of elite soccer players. *J Hum Kinetics* 2017; 58: 169–176.
44. Andrzejewski M, Chmura P, Konefal M, et al. Match outcome and sprinting activities in match play by elite German soccer players. *J Sp Med Phys Fit* 2017; 58: 785–792.

45. Gollan S, Bellenger C and Norton K. Contextual factors impact styles of play in the English Premier League. *Sp Sci Med* 2020; 19: 78.
46. DeLang MD, Rouissi M and Bragazzi NL. Soccer footedness and between-limbs muscle strength: systematic review and meta-analysis. *Int J Sp Phys Perf* 2019; 14: 551–562.
47. Paul DJ and Nassis GP. Testing strength and power in soccer players: the application of conventional and traditional methods of assessment. *J Str Cond Res* 2015; 29: 1748–1758.
48. Dugdale JH, McRobert AP and Unnithan VB. Selected, deselected, and reselected: A case study analysis of attributes associated with player reselection following closure of a youth soccer academy. *Front Sp Act Liv* 2021; 3: 663124. https://doi.org/10.3389/fspor.2021.633124
49. Sarmento H, Anguera MT, Pereira A, et al. Talent identification and development in male football: a systematic review. *Sports Med* 2018; 48: 907–931.
50. Unnithan V, White J, Georgiou A, et al. Talent identification in youth soccer. *J Sp Sci* 2012; 30: 1719–1726.
51. Mills A, Butt J, Maynard I, et al. Identifying factors perceived to influence the development of elite youth football academy players. *J Sp Sci* 2012; 30: 1593–1604.
52. Sieghartsleitner R, Zuber C, Zibung M, et al. Science or coaches' eye? – Both! Beneficial collaboration of multidimensional measurements and coach assessments for efficient talent selection in elite youth football. *J Sp Sci Med* 2019; 18: 32–43.
53. Nicholls SB and Worsfold PR. The observational analysis of elite coaches within youth soccer: the importance of performance analysis. *Int J Sp Sci Coach* 2016; 11: 825–831.
54. Cote J, Baker J and Abernethy B. Practice and play in the development of sport expertise. In: R Eklund and G Tenenbaum (eds) *Handbook of sport psychology*. New Jersey: Wiley, 2007, pp.184–202.
55. Koopmann T, Faber I, Baker J, et al. Assessing technical skills in talented youth athletes: a systematic review. *Sp Med* 2020; 50: 1593–1611.
56. Rowat O, Fenner J and Unnithan V. Technical and physical determinants of soccer match-play performance in elite youth soccer players. *J Sp Med Phys Fit* 2016; 57: 369–379.
57. McCormack S, Jones B, Elliot D, et al. Coaches' assessment of players physical performance: subjective and objective measures are needed when profiling players. *Eur J Sp Sci* 2021; 22: 1177–1187.
58. Thelwell RC, Wagstaff CRD, Chapman MT, et al. Examining coaches' perceptions of how their stress influences the coach–athlete relationship. *J Sp Sci* 2017; 35: 1928–1939.
59. Wagstaff CRD, Gilmore S and Thelwell RC. When the show must go on: investigating repeated organisational change in elite sport. *J Change Manag* 2016; 16: 38–54.
60. Webb T, Dicks M, Brown DJ, et al. An exploration of young professional football players' perceptions of the talent development process in England. *Sp Manag Rev* 2020; 23: 536–547.
61. Aalberg RR and Saether SA. The talent development environment in a Norwegian top-level football club. *Sp Sci Rev* 2016; 24: 59.
62. Oprean VB and Oprisor T. Accounting for soccer player: capitalisation paradigmn vs. expenditure. *Proc Econ Fin* 2014; 15: 1647–1654.
63. Gerrard B. Achieving transactional efficiency in professional team sports: the theory and practice of player valuation. In: J Goddard and P Sloane (eds) *Handbook on the economics of professional football*. Cheltenham: Edward Elgar Publishing, 2014, pp.189–202.
64. Kulikova LI and Goshunova AV. Human capital accounting in professional sport: evidence from youth professional football. *Med J Soc Sci* 2014; 5: 44–44.
65. Burgess DJ and Naughton GA. Team development in adolescent team sports: a review. *Int J Sp Phys Perf* 2010; 5: 103–116.
66. Ivarsson A, Stenling A, Fallby J, et al. The predictive ability of the talent development environment on youth elite football players' well-being: a person-centred approach. *Psych Sp Ex* 2015; 16: 15–23.
67. Henriksen K, Stambulova N. Creating optimal environments for talent development: a holistic ecological approach. In: J Baker, S Cobley, J Schorer, et al. (eds) *Routledge handbook of talent identification and development in sport*. London: Routledge, 2017, pp.270–284.
68. Zuber C, Zibung M and Conzelmann A. Holistic patterns as an instrument for predicting the performance of promising young soccer players – a 3 years longitudinal study. *Front Psych* 2016; 7: 1088.
69. Wills G, Tacon R and Addesa F. Uncertainty of outcome, team quality or star players? What drives TV audience demand for UEFA Champions League football? *Eur Sp Manag Q* 2022; 22: 876–894.
70. Dowling C, Reeves MJ and Littlewood MA. Developing individuals whilst managing teams: perspectives of under 21 coaches within English Premier League football. *Soccer Soc* 2018; 19: 1135–1150.
71. Bjorndal CT and Ronglan LT. Orchestrating talent development: youth players' developmental experiences in Scandanavian team sports. *Sp Coach Rev* 2018; 7: 1–22.
72. Nesti M and Sulley C. *Youth development in football: lessons from the world's best academies*. London: Routledge, 2014.
73. Nesti M, Littlewood M, O'Halloran L, et al. Critical moments in elite premiership football: who do you think you are? *Phys Culture Sp* 2012; 56: 23.