Examining the development environments of elite English football academies: The players' perspective

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ABSTRACT

As a preliminary investigation, we examined elite youth football academy players' perceptions of the quality of their development environment, at a crucial stage in their progression to the professional level. With institutional ethics approval, the Talent Development Environment Questionnaire (TDEQ) [1] was used to survey 50 elite players aged 16-18 (*m* 17.1, ± *s* = 0.6 years) recruited from the academies of Premier League and Championship clubs in England. Overall, the results suggest that elite player development environments are perceived to be of a good quality. However, while academies appeared strong in areas related to coaching, organisation, and sport-related support; they were somewhat deficient in areas related to athlete understanding, links to senior progression, and key stakeholder relationships. In addition to the importance of establishing well-integrated youth and senior teams and positive working relationships with parents; the findings underline the necessity for academies to pay close attention to the psychosocial environments they create for developing players. Theoretical considerations and applied implications for those involved in elite player development are discussed.

Keywords: elite, environment, development, football, psychosocial

INTRODUCTION

The development of gifted young football players is paramount on the agenda for those responsible for governing professional football in England (e.g., The Football Association, Premier League). While the English Premier League (EPL) has enjoyed exponential growth over the last two decades, concerns have been raised about the decreasing number of English players that have been developed during this period. Supporting this notion, recent research from the Centre International d'Etude du Sport (CIES) Football Observatory revealed that the playing time of English under-21s in the EPL has fallen to its lowest level [2]. More precisely, in the 2012/13 season, only 35 English under-21 players made appearances in the EPL; the lowest figure since 2005. Despite much conjecture and vociferous debate regarding elite player development within the game, what is clear is that the ever increasing quality of the English Premier League (EPL), underpinned by the extraordinary financial power of elite clubs, has led to a scenario where, to 'break through' to the elite level, young players not only have to be one of the finest in England but also the world. For this reason, the director of youth at the EPL has noted that, "the focus on youth has probably never been as intense or as urgent since the inception of the Premier League as it is right now." [3].

This notable real world significance is reflected in the increasing amount of research within the sport sciences that has been dedicated to the topic in recent years [4, 5, 6, 7]. Notwithstanding the different perspectives taken (e.g., sociological, motor control and learning, stress and coping), this research is ultimately united by a shared focus on the application of scientific principles to help those involved in elite player development.

While the development and eventual success of a gifted young player is considered to be influenced by an intricate blend of innate, psychological, and behavioural factors [5], few would dispute that it is also largely shaped by their environmental experience [8]. Indeed, Williams and Reilly [9] contend that the very term "talent development" in football infers that young players are provided with an appropriate learning environment to translate their potential into excellence. Offering support for this view, in a study identifying factors perceived to influence the development of elite academy players [5], providing a rich and vibrant learning environment was considered central to successful progression. In coaching psychology literature, as well as on the topic of developing talent, what constitutes a vibrant learning environment has received increased interest [10]. Traditionally, coaching environments have been criticised for adopting approaches in which young, developing athletes are treated as "sponges", thereby reflecting a more passive style to learning. It is now encouraged that to promote learning, coaches need to encourage active learning (e.g., questioning methods and problem solving type drills), as well as using strategies to help athletes become aware of their performance (e.g., coach-athlete dialogue) and raise self-awareness. Highlighting the role of such environments, Mills et al., [5] findings suggested creating conditions that promote a number of intrapersonal factors associated with success (e.g., resilience, confidence, competitiveness). Indeed, self-awareness was found to be one of the key factors associated with the successful development of Academy football players. Over all, this recognised need to cultivate appropriate developmental climates in which to nurture young players underlines Gagne´’s [11] contention that exceptional natural abilities can remain solely as gifts if not effectively nurtured via the developmental process into systematically developed talents. Put simply, elite players would appear to be largely built not born and, as such, points toward the environment created at a youth academy as one of the most directly controllable factors in the life of a young player.

Despite the importance placed on a players' development environment, to-date, little is known about the environments that are created for elite young players. Given that elite youth football in England is considered to be inherently challenging and largely characterised by a highly pressurised climate for success [7], the lack of research in this regard in somewhat surprising. Notwithstanding the contributions of recent investigations [5, 6, 7] that underline the necessity for developing players to be able to cope with the potentially wide-ranging demands they encounter within academy environments; scant research has specifically explored the development environments that are established to nurture players into the elite senior level of the game. In an attempt to redress this imbalance, Mills, Butt, Maynard, and Harwood [12] examined successful elite academy coaches' perceptions of factors considered to underpin optimal development environments for players on the verge of the professional level. Key themes identified included: (i) espousing a coherent philosophy with clearly defined core values, expectations, and behavioural standards; (ii) promoting whole person development; (iii) empowering key stakeholders (i.e., staff, players, and parents) to create a sense of ownership and relatedness; (iv) forming positive relationships with key stakeholders and prioritising player wellbeing; (v) maintaining well-integrated and stable personnel with strong links to senior team operations (vi); establishing clear and effective lines of communication; (vii) being adaptable and committed to innovation; and (viii) constructing an achievement-focused climate with explicit opportunities to progress. Collectively, the findings emphasised the importance of establishing strong, dynamic organisational cultures within youth academies.

Despite the valuable insights generated from this research, our understanding of elite player development environments is far from complete and some important questions remain unanswered. Firstly, obtaining coaches' views of how they shape the environment, while important, only represents one part of the equation. Given that coaching effectiveness is

largely considered to be a process-product phenomenon, it would also seem important to elicit the perceptions of developing players to gain their perspectives on the academy environment. Indeed, generating such player-driven insights would help to provide a more complete picture of the environments elite young players are nurtured within. Importantly, insights of this nature would also appear to bridge an evident real-world need. As Green [13, p.10] observed, "despite the time, effort, and huge investment that has gone into England's youth development schemes, one thing the clubs, their leagues, and the FA have not been very good at is finding out what the people who have been through the system felt about it."

Second, despite Williams and Reilly's [9] recommendation that a key area for research in elite youth football is to provide guidelines for nurturing players through each stage of development, few studies, to-date, have specifically focused on key stages along the player development pathway. One such key stage along this pathway relates to the investment years [14]. In talent development terms, this represents the specific transition from elite junior to elite senior where training, competition, and the pursuit of elite level performance become the major foci of a developing athletes' life. In elite youth football terms, this represents the stage where players who show real promise are signed to undertake a two year full-time youth training programme known as an academy scholarship. This structured programme provides young players with a finite window of opportunity to realise their ambition of becoming a professional. Although elite athletes have frequently described this specific transition as the most difficult stage they encountered [15], presently, little is known about players' developmental experiences during this critical period in their early career. This point highlights a gap in the literature that warrants attention. As such, it would seem important for the continued advancement of the area that research begins to build a clear picture of elite development environments as seen through the eyes of players at a pivotal, invariably 'make or break', stage in their footballing lives.

Third, from a methodological perspective, the greater part of talent development research has been retrospective in nature. Specifically, high-achieving elite adult athletes have been asked to reflect on their athletic careers [16]. Notwithstanding these contributions to the literature, research with athletes *in situ* would seem vital as it may reveal more information about talent development than examining the recalled perspectives of those already at the elite adult level [14]. Indeed, such research would help to identify the positive and negative aspects associated with development so they can either be maximised or minimised in the lives of young athletes [17].

In light of both the empirical and real-world need to better understand the environments in which young players are nurtured, the purpose of the present study was to examine elite academy players' perceptions regarding the quality of their development environment at a decisive stage in their progression to the professional level. It is anticipated that such a detailed, scientific insight will enable a clearer understanding of their current strengths and, importantly, areas that might need improving. In the interests of bridging the gap between research and practice, such information would provide those working within elite youth football with actionable insights that might, in part, help facilitate the development process of gifted young players.

METHOD

Participants

50 elite youth football academy players aged 16-18 years (*m* 17.1, ± *s* = 0.6 years) participated in the study. Of these, 41 were English and nine were from overseas countries (i.e., African n=3, Asian n=1, Eastern European n=2, Northern European n=3).

To capture balanced and geographically diverse perspectives of elite player development environments, players were recruited from academies that were based in the North (n=1), Midlands (n=1), and South (n=1) regions of England. For authenticity of the data, it was also

important to recruit a sample that could justifiably be considered elite. To this end, the inclusion of players was based on two strict criteria. First, the players were recruited from academies that participate in the top division of the EPL's Professional Development League (PDL). Academies in this division have been awarded category one status by the EPL which represents the highest tier of elite youth football in England. This category is only awarded to select academies that meet stringent criteria in relation to their youth development programmes [3]. At the time of data collection, only 20 academies held this status. There are approximately 20 scholars (i.e., 1st and 2nd years) in each academy, thus, the present sample equated to approximately 12% of all elite developing players in England. Second, it was a prerequisite that all players were at the scholarship stage of development (i.e., 16-18 years), and were contracted by the club on a full-time, day-to-day basis. This ensured that reliable, stage-specific perceptions of the development environment could be gathered.

Instrumentation : Talent Development Environment Questionnaire (TDEQ)

The TDEQ was used to capture the players' perceptions. Developed by Martindale et al. [1], the TDEQ is a 59 item questionnaire designed to measure the extent to which features of good practice are experienced by athletes in their development environments. Based on key features emanating from the extant talent development literature, the TDEQ has been developed as a generic tool that evaluates the environmental features deemed useful for facilitating development across sports, stage/age, gender, and culture. Specifically, the instrument comprises seven factors: (i) Long-term development focus; (ii) Quality preparation; (iii) Communication; (iv) Understanding the athlete; (v) Support network; (vi) Challenging and supportive environment; and (vii) Long-term development fundamentals. The internal consistency of the questionnaire shows adequate to excellent reliability and a recent validation study also demonstrated robust structural properties and sound ecological

validity [1]. In light of its psychometric properties, the TDEQ is considered a tool that can be used with confidence in applied talent development research settings.

Procedure

Following institutional ethics approval, the academy managers of youth academies that met the stipulated inclusion criteria were initially contacted by email detailing the purpose and nature of the study. For those who agreed to participate, convenient times were arranged to collect the data. Before data collection commenced, informed consent was obtained from the academy manager and players which confirmed their understanding of the purpose of the study and their agreement to participate. For those under 18, parental and/or guardian consent was also obtained. Administration of the questionnaires took place at the respective academy's training facilities in quiet classroom conditions under the supervision of the researcher and/or the academy manager and Head of Education and Welfare (HoEW). From the total number of scholars that were invited to participate in the study, 50 completed the survey, indicating an 85% completion rate. The supervised, on-site, data collection ensured that all questions (i.e., each of the subscales) on the survey had been answered. At the onset, players were also informed that there were no right or wrong answers, given assurances about the confidentiality of their responses, and encouraged to provide honest answers. To further reduce social desirability, the participants were not asked to provide any identifiable details and were assured that any information emanating from the questionnaires would only be displayed as a group average. The questionnaires took approximately 15 minutes to complete.

Data analysis

Due to the structure of the questionnaire, previous studies [1] using the TDEQ coded responses on a 6-point scale ranging from 1 (strongly agree) to 6 (strongly disagree). For this reason, a lower mean indicated a more favourable perception. However, for ease of interpretation, and in line with Wang and colleagues [18], all items in the present study were

coded from 1 (strongly disagree) to 6 (strongly agree). This permitted higher scores to relate to a perception of higher quality experience.[1]

To add validity and accuracy to the interpretation of the data, the reliability of the TDEQ was initially measured using Cronbach's alpha. Specifically, preliminary statistical analysis was carried out to determine the internal consistency of the instruments factors. In the present investigation, all but one of the subscale alpha coefficients were found to be adequate and ranged between .60 and .92 (development focus, $\alpha = .92$; quality preparation, $\alpha = .60$; communication, $\alpha = .84$; understanding of athlete, $\alpha = .63$; support network, $\alpha = .78$; and development fundamentals, $\alpha = .76$). Congruent with Wang et al. [18], the challenging and supportive environment factor demonstrated low internal reliability ($\alpha = .40$), and thus was omitted for interpretation at the subscale level.

After establishing reliability, the mean subscale scores were calculated for each of the remaining six factors. Given Martindale et al.'s [1] recommendation to use item scores in conjunction with subscale scores when using the TDEQ in applied research, descriptive statistics were then calculated for all individual item scores within each factor[2]. Following on from this, all items were subsequently quartile ranked by proportion of agreement. This process enabled a detailed, quantitative analysis of the key strengths and areas for improvement as seen through the players' eyes. Items ranked in the top quartile (i.e., top 25th percentile) were greater than 80% proportion of agreement, and as such were classified as strengths (+) of the development environment. Conversely, items ranked in the bottom quartile (i.e. bottom 25th percentile) were less than 70% proportion of agreement, and as such were categorised as areas for improvement (^).

RESULTS

[1] Except for negatively phased items where a lower item mean relates to a higher quality perception of that aspect.
[2] Nine of the TDEQ's items are miscellaneous and, as such, are not used in calculating the subscale scores, nor have they been included in the item level analysis.

The results are structured in two parts. First, the mean subscale scores of the main variables are displayed (see Table 1) to show how elite player development environments are perceived at an overall factor level. Second, to provide a deeper and more meaningful understanding of the players' perceptions beyond the subscale scores, each factor is presented in more detail to elucidate trends in the data at an item level. Descriptive statistics for the items within each factor are summarised in Table 2. In addition, Figure 1 displays the specific features of the development environment identified as strengths and areas for improvement. Interpretation of these key areas in light of assumptions derived from the extant talent development literature will be provided in the discussion.

Overall

At an overall factor level, players reported that their development environment exhibits a long-term development focus, provides robust support networks, and largely demonstrates effective communication. However, features of the environment relating to athlete understanding, long-term development fundamentals, and quality preparation were not viewed as strong. These six factors are discussed in turn below beginning with the three strongest factors.

Long-Term development focus

This factor comprises 27 items that relate to the extent to which development opportunities are specifically designed to facilitate long-term success (e.g., on-going opportunities, rounded development, and clear expectations). The items in this factor also relate to the attitudes, psychological skills, and understanding required for long-term progression (e.g. responsibility, dedication, coping skills). With a mean subscale score of 4.67, this factor emerged as one of the highest performing components of the development environment and, as such, was viewed largely positively by the players.

Within this factor, nearly all players (96%) agreed to some extent that they were

expected to take more responsibility for their own development as they became more experienced (*m* = 4.83). The players also largely indicated that their training was beneficial and challenging (*m* = 4.91); and specifically designed to help them develop in the long term (*m* = 4.85). With specific emphasis on the coach, the majority of players reported that their coach cared more about them becoming a professional than having a winning team (*m* = 4.81); constantly reminded them that dedication and desire would be key to how good a performer they would become (*m* = 5.00); was good at making them understand their strengths and weaknesses (*m* = 4.98); and emphasised the need for constant work on fundamental skills (*m* = 4.98). Further, the players mostly agreed that there were people to help them deal with any nerves or worries they experienced (*m* = 4.60); and reported that they were told how they could help each other develop further in their sport (*m* = 4.85). Despite the largely positive responses, approximately two-thirds of players (65%) agreed to some extent that developing performers are often written off before they have had an opportunity to demonstrate their full potential.

Support network

This factor comprises eight items that relate to the degree to which a coherent, approachable, and wide-ranging support network is available to help support and develop players in all areas. With a mean subscale score of 4.68, this factor was one of the highest performing components of the environment. Within this factor, the players revealed that they felt they could pop in to see their coach or support staff whenever they needed to (*m* = 5.38), and that the coaches and support staff were largely approachable (*m* = 4.77). Players also indicated that they had access to a variety of professional support staff to help their development (*m* = 4.98). 83% of players reported that all the different aspects of their development were organised into a realistic schedule; while the majority revealed that their training programmes were specifically developed to their needs (*m* = 4.51). In addition,

players largely reported that their coach regularly talks with support staff about what they are trying to achieve (*m* = 4.68); and predominantly considered the coaches and support personnel to be on the same wavelength with what is best for them (*m* = 4.49). The majority of players also revealed that their coach makes sure that their college understands about the demands placed on them with regards training and competition *(m* = 4.51).

Communication

This factor contains seven items that collectively relate to the degree to which the coach communicates effectively with players in both formal and informal settings. With a mean subscale score of 4.39, this component of the environment performed adequately. Within this factor, the players largely agreed that their coach explained how their training and competition programme work in tandem to help them develop (*m* = 4.79). The majority of players also indicated that they talked with their coach about what current and/or past world-class performers did to be successful (*m* = 4.40). While 83% of players agreed to some extent that the feedback they receive almost always relates to their goals; a substantial proportion (45%) of this agreement was tentative (*m* = 4.21). The players largely reported that they regularly talk with their coach about the things they need to do to progress to the elite senior level (*m* = 4.49); and that they regularly set goals that are tailored to their individual needs (*m* =4.49). While the majority of players also indicated that they often discuss the connections between different aspects of their training (*m* = 4.51); only 44% either agreed or strongly agreed that they often worked with their coach to identify what their next big test will be (*m* = 4.15).

Quality preparation

This factor, consisting of five items, refers to the extent to which clear guidance and opportunities are in place to provide and reinforce quality practice through training, recovery, and competition experiences. With a mean subscale score of 4.16, this factor was viewed as

one of the weaker elements of the development environment. All items within this factor were negatively phrased. To this end, a lower mean score relates to a perception of higher quality experiences. Within this factor, the majority of players reported that they get good quality competition experiences at the level they require (*m* = 2.64); and are taught how to balance training, competing, and recovery (*m* = 2.55). However, approximately four out of ten players (39%) revealed that they felt pressure from their peers to do things differently to what the coach asks (*m* = 3.04); while a similar proportion (41%) indicated that they are rarely encouraged to plan for how they would deal with things that might go wrong (*m* = 3.06). In addition, only around a half of all players (45%) reported with certainty (i.e. either agreed or strongly agreed) that the guidelines regarding what they need to do to progress are clear (*m* = 2.79).

Understanding the athlete

This factor comprises four items that collectively relate to the extent to which the coach understands the player in depth, at a holistic level, and has developed a strong professional relationship with them. With a mean subscale score of 4.15, this factor was one of the weaker performing components of the environment. Congruent with the communication factor, all items within this subscale were negatively phrased and, as such, lower item mean scores indicate a more favourable perception. Within this factor, the majority of players felt that their coach took time to talk with other coaches that work with them (*m* = 2.68), and mostly indicated that they received help to develop their mental toughness (*m* = 2.57). However, a third of players (34%) revealed that their coach rarely talks to them about their well-being (*m* = 3.09); with a similar proportion reporting that their coach seldom takes an interest in their life outside of sport (*m* = 2.98).

Challenging and supportive environment

This factor consists of four items that relate to the degree to which players are appropriately challenged by, and supported through, their development experiences (e.g., links to higher level players, educational support). Due to an unacceptable alpha coefficient, the mean subscale score was not computed for this factor. At an individual item level, the majority of players reported that they are regularly told that winning and losing "right now" will not determine how successful they will be in the future (*m* = 4.38). In addition, approximately a third (36%) of players indicated that their college does not support them with their sport when they need it (*m* = 3.02). As well as the largely tentative agreement regarding the opportunities players had to train with players at a level they aspire to (*m* = 4.02); over half (56%) of all players indicated that they do not often get help from more experienced performers (*m* = 3.51).

Long-Term development fundamentals

This factor consists of seven items that collectively relate to the extent to which key features for effective development are embedded in the programme (e.g., on-going opportunities, parental support, and athlete autonomy). With a mean subscale score of 3.95, this factor was the weakest performing facet of the environment. However, it is important to note that this score might have been adversely impacted by an item (i.e., "I am encouraged to participate in other sports") that is not particularly relevant for the athletes in this study. Within this factor, approximately 4 out of 10 players felt that they would not be given good opportunities if they experienced a dip in performance (*m* = 3.91), while 50% of players felt that their coach did not make time to talk with their parents about what they are trying to achieve (*m* = 3.43). Moreover, only 47% of players agreed with conviction that they had opportunities to discuss how more experienced players handled the pressures they face (*m* = 4.17). Though the greater part of players indicated that they were involved in most decisions about their development (*m* = 4.34), a fifth (21%) reported that they were not. More

positively, the majority of players felt that they had their progress and performance reviewed regularly on an individual basis (m = 4.47); and largely indicated that the advice their parents provide fits well with the advice they get from their coaches (m = 4.49).

DISCUSSION

The purpose of the present study was to examine elite youth football academy players' perceptions of the quality of their development environment at a key stage in their progression to the professional level. To our knowledge, the current investigation is the first to reveal the perspectives of such athletes within elite high-performance training environments. As such, the findings offer a step forward in this area, not only within elite youth football, but also elite youth sport in general. The aim of this section is to situate the identified key strengths and areas for improvement (see Figure 1) in light of assumptions derived from the extant talent development literature. Following on from this, we present a number of applied implications and recommendations for those involved in elite player development.

The majority of strengths emerged from the long-term development focus factor and appear to largely relate to coaching practice (e.g., technical instruction, training plans). In doing so, this emphasizes the high quality of coaching players feel they are receiving within elite academies. Given the importance placed on high quality coaching in fostering a rich and vibrant learning environment within football academies [4], this is an encouraging finding. Additional strengths within this factor related to a focus on improvement rather than winning, and the promotion of self-responsibility, both of which are considered key features of effective development environments [12]. The other strong points emerged from the support network factor. Specifically, access to a variety of different professionals (e.g., sport scientists), and the availability of coaches and support staff were both identified as high quality perceptions. Given that well-developed support systems have been shown to be

strongly correlated with performance [19], this is an important aspect of the environment that academies are largely perceived to do well.

Highlighting the significance of these aforementioned factors, in a study examining the impact of the development environment on young athletes' goal pursuits and life aspirations, Wang et al. [18] found these factors positively predicted intrinsic goal striving. As such, these two high-performing factors point toward the presence of conditions that facilitate intrinsic motivational climates. Given that elite high-performance environments of this nature might naturally align young players with externally driven goals, this represents a further encouraging finding.

Notwithstanding these positives, the results also revealed a number of lower quality perceptions. As displayed in figure one, these areas for improvement were more evenly spread across the factors, and included issues pertaining to peer pressure, goal-setting, feedback, contingency planning, diminished opportunities due to form, and college/school support. While not overlooking the significance of these areas, three notable themes emerged that specially relate to key factors identified in the literature as exerting a significant influence on player development [12]. As such, we feel these merit particular attention. Specifically, these central themes concerned athlete understanding, links to senior progression, and key stakeholder relationships; each of which will be discussed in turn.

Although understanding the athlete and their world view is considered central to appropriate support [1], this factor was not amongst the best performing components of academy environments. Interestingly, while the aforementioned strengths might be linked to intrinsic drives, a lack of athlete understanding is suggested to promote extrinsic goal striving [18]. This suggests that opposing motivational forces might be at play in academy environments. As previously mentioned, it is conceivable that these extremely competitive, high-performance settings might influence players and coaches towards developing an

environment that fosters extrinsic goals and rewards (e.g., successful team, securing a professional contract, getting players through). In such extrinsically motivated climates where players are incessantly scrutinised, and coaches are often under pressure to ‘produce’; there exists the potential for coaches to become ego-involved in their work and, in turn, emit controlling behaviours that ultimately promote a controlling climate [20]. It is important to note that in these environments it is likely that coaches are focusing on their primary role, which is to develop players, and ultimately ensure that as many players as possible have the abilities to make it to the professional senior level. Consequently, coaches may be unaware that they are developing extrinsically-driven motivated climates, and thus, indicating a potential area for future coaching education development in Academy football and in other youth sports feeder systems.

In addition, while strong support systems are positively linked to performance, a lack of perceived support can lead to poor coping mechanisms and stress [21]. Although high quality perceptions of informational and tangible support emerged as key strengths in this study; perceptions of emotional support were clearly not as strong. Indeed, while players largely indicated that they had good coach-athlete relationships, it was clear that they did not feel particularly understood at a holistic level with coaches seldom expressing an interest in their lives outside of football. Given that young players find themselves immersed in an environment that is fundamentally concentrated on being successful at football, coupled with the tough and masculine culture that tends to characterise professional football, it is not entirely surprising that players’ holistic needs might be compromised. To this end, one wonders if these environments might "sow the seed" for an athletic identity and potential identity-foreclosure for these adolescents [22]. If a strong athletic identity is developed, education and the teaching of life skills can often be neglected [23]. To compound matters, such is the strength of many young players’ desire to "make it" it is somewhat understandable,

despite the limited likelihood of success, why these adolescents might be susceptible to prioritising their football education over their academic and/or general life skill education [24]. Despite the fundamental importance placed by the FA and EPL on player welfare and holistic development; the findings suggest that academies might not be doing enough in this regard. To this end, it would be remiss of academies, both developmentally and ethically, to "gloss over" the socioemotional needs of these individuals, especially given the demands this key stage of development is considered to exert on young athletes. Considering the needs of overseas players provides a cogent example in this regard. Although the present sample was mainly comprised of English and home nation players, a small proportion of the respondents were from overseas. This reflects the increasingly global nature of modern day elite youth football [25]. In addition to the demands placed on local players, overseas players must cope with an often large cultural transition. Indeed, it is highly probable that these players would encounter a range of cultural and lifestyle related issues (e.g., language barrier, home-sickness) that extend far beyond those associated with the football environment. It is likely, therefore, that the demands are heightened for these players in their attempts to adapt to academy life. From from an applied perspective, it would seem important that the psychosocial environments created for these players are well-established to ensure that issues linked to acculturalisation do not have an adverse impact on development.

The second noteworthy theme to emerge in the current study relates to continuing opportunities and links to senior progression. Specifically, players indicated that opportunities to train with senior performers, receiving help from more experienced players, and opportunities to talk about how these players handled the challenges they now face were not readily available. Possibly linked to this, there was a general perception that players are often written off before showing their real potential. These findings might largely be explained by the pervasive short-term “win at all costs” culture that exists in professional

football. Indeed, traditionally elite clubs have favoured ready-made, experienced players over youth with a view to having an immediate impact or return on investment.

Nevertheless, from a developmental perspective, opportunities for athletes to experience the advanced standard and increased pressure of higher levels (e.g., senior adult, professional) is considered crucial for effective development [1, 5]. Indeed, highlighting the link between environmental engineering and the development of attributes that fall under the rubric of mental toughness, Mills et al. [5] revealed that challenging training environments (e.g., training with senior team) helped promote key intrapersonal attributes associated with successful progression at this key stage (e.g., resilience, coping with pressure, confidence). As such, it appears crucial that youth and senior team operations are well-integrated. Indeed, any semblance of dichotomy between the two might have serious repercussions for successful player development. In real world operations, it does appear that those professional clubs using well-established players (i.e., those players who are nearing the end of their careers and might be moving towards a youth team coaching role) to bridge this gap, are successfully "getting players through."

The third important theme to emerge centred on key stakeholder relationships with specific emphasis on the coach-parent dyad. While some parents are considered to facilitate player development, certain parental behaviours (e.g., conflicting coaching advice) are considered to exert a negative influence [5]. As such, the prevailing view amongst coaches appears to be one that considers parents as more of a hindrance than a help. In support of this notion, the players in the present study indicated that their coach did not make sufficient time to talk with their parents about their development. However, of particular note, players also revealed that their parents' advice was largely congruent with their coaches. These findings suggest that academy coaches might be overlooking the important role parent's play in the development process [16]; even through the investment years where the coach is considered

to exert a greater influence [14]. Indeed, forming positive key stakeholder relationships and empowering parents to create a sense of ownership and relatedness are considered key factors underpinning the creation of optimal player development environments and a high-performance culture [12].

Applied implications

In the interests of bridging the gap between research and practice, the question remains how academies can be helped to meet the needs of developing players at this decisive stage of development. In this regard, the findings offer a number of practical implications for those involved in elite player development. First, the findings underline the importance of building strong links to the senior team. Although such relationships might ultimately rest upon the senior team manager championing a pro-youth policy, it is recommended that links to senior players could be established in the form of a mentoring scheme. Importantly, rather than inviting 1st year or early career professionals - who may be reluctant to assist players that could be viewed as a threat - such a scheme would lend itself to the participation of already established/late career professionals who may be nearing the end of their careers and looking to transition into coaching. Indeed, we contend that inviting established professionals to pass down their knowledge, share their experiences of the development process, and provide insights into how they met the challenges that young players now face could play a crucially important function in the development of players at this key transitional stage.

Second, it is clear that academies need to pay close attention to the psychosocial environments they create for developing players. From a developmental standpoint, this is a serious ethical issue, especially if there is a risk that the nature of these academies might not prepare these individuals for life outside of football. Consequently, we believe those responsible for the design and implementation of academy programmes should not only be mindful of young players' socioemotional needs; but also make a genuine, concerted effort to

prepare players for all eventualities. In this regard, for a truly balanced approach to player development, we believe coaches at the youth level should be encouraged to ground their practice around an athlete-centred model where performance excellence co-exists in the same environment as personal excellence. When applied, this approach to coaching is considered a powerful tool in empowering young athletes to learn and take more responsibility for their own development, which ultimately, results in enhanced performance and a thriving, supportive team environment [26].

Notwithstanding the importance of what essentially rests at the heart of the coaches' role (i.e., technical instruction), in light of the players' perceptions, we feel an athlete-centred approach would be more developmentally appropriate. We also acknowledge that some readers may be cynical that such utopia is possible given the culture of the game. Certainly, the efficacy of such an approach would greatly rest upon the club advocating a holistic policy as part of their vision for player development. However, if the conditions can be created whereby an academy manager feels secure in the knowledge that producing players is not the sole outcome measure, we are confident that such a model of development could be successfully woven into the fabric of an academy's culture.

The findings also offer a number of applied implications for sport psychologists working in youth football settings. Specifically, the nature of these implications would involve practitioners going beyond the traditional canon of mental skills training, as well as performance enhancement techniques. For example, to overcome the influence of a largely externally driven sport culture that is susceptible to the establishment of controlling climates, sport psychologists could have an important role to play in the promotion of autonomy-supportive coaching behaviours. Such coaching is considered to make players feel more competent in their sport, more autonomous in their actions, and better related to significant others from their environment [27]. Enhanced perceptions of these three basic psychological

needs help foster more intrinsic drives and adaptive goal orientations that are considered fundamental to optimum functioning and positive self-growth [28].

Furthermore, as opposed to ostracising parents as a control measure, it would seem important that academies strive to build more positive working relationships with parents. To help accomplish this, we feel sport psychologists would be ideally placed to facilitate parent workshops geared towards optimising their influential role as a football parent. In light of the suggestion that the intensive journey of an academy player is mirrored by an equally demanding journey for their parents [29], these workshops, could play a key function in parental development by also acting as an organised forum for parents to share their experiences.

Strengths and limitations

From a real-world perspective, a primary strength of this investigation is that a detailed, scientific attention to elite players' perceptions regarding the quality of their talent development environment might assist academies to optimise their programmes. In addition, as a preliminary attempt to examine elite football academy players' perceptions of the quality of their development environment at a key stage in their journey to the professional level, the findings not only advance our limited understanding regarding talent development environments; but also help to bridge an important gap in the knowledge base regarding key stages of athletic development. Given the high quality sample, we also feel this investigation was enhanced by ensuring accurate and reliable perceptions of elite high-performance environments could be assembled. From a methodological viewpoint, by capturing "in the moment" views of elite players presently involved in the talent development process on a day-to-day basis, an additional strength of the study involved overcoming some of the limitations of previous retrospective designs. Moreover, given the recommendation to consider individual items as well as overall factor scores when using the TDEQ in applied

research, the present study was enriched by 'drilling down' to an item level which enabled more meaningful and practical insights.

Notwithstanding these strengths, some limitations must also be acknowledged. Firstly, given the culturally specific focus on the English academy system, the transferability of our interpretations to player development environments in other countries is speculative. As such, readers should be circumspect in any attempt to relate the findings to other contexts. Second, as the TDEQ has been designed as a generic tool, its developers recognise that a range of context-specific issues may be apparent which might necessitate the development of sport and/or stage specific versions [1]. Given the complex, idiosyncratic sub-culture of elite youth football, we concur with this suggestion. Indeed, to fully evaluate the experiences of developing players, a sport-specific diagnostic tool unique to the sporting population might need to be developed, which we feel would have far greater precision as an applied diagnostic tool. To illustrate our point, although cross training or participating in other sports is considered important for athletes in the sampling years of development, this item would not be appropriate for those in the investment stage. However, in the TDEQ's current form, disagreeing with this statement would relate to a low quality perception of the environment, and as such might influence the reliability of the overall subscale score. Despite this potential limitation, given the robust questionnaire development process, ensuing level of psychometric properties, and sound ecological validity, we are confident in the insights generated by the current instrument.

Concluding remarks

Although academies were generally viewed positively, the findings suggest that these elite high-performance environments might not be fully meeting young players' developmental needs. Indeed, given that player welfare, links to senior progression, and positive key stakeholder relationships are all suggested to be vital for the creation and

regulation of an optimal development environment, it would seem imperative that academies pay closer attention to these potentially problematic areas. Encouragingly, as elite players are largely considered to be “built” not “born”, the academy environment would appear to be one of the most directly controllable factors in the life of a young player. To this end, we have put forward a number of suggestions for how these areas might, in part, be addressed. From a broader talent development perspective, there remains a clear need for substantiated, evidence-based practice concerning the creation of optimal talent development environments. With a particular emphasis on football, establishing such environments would appear crucial if the FA and Premier League wish to realise their aspirations of improving current youth development programmes. While we believe the present study represents a step forward in achieving that goal, it is imperative for future research to continue to determine the key processes and mechanisms that underpin effective player development with a view to bridging the gap between research and practice, and ultimately helping young players transform their gifts into systematically developed talents.

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Table I. Mean subscale scores for player perceptions of the quality of the development environment

TDEQ Subscales	M	*SD*
Long-Term Development Focus	4.72	0.87
Quality Preparation	4.18	1.11
Communication	4.43	0.92
Understanding the Athlete	4.17	1.13
Support Network	4.73	0.92
Long-Term Development Fundamentals	3.98	1.10

Table II Means and standard deviations for TDEQ items within each factor

Factor 1: Long-Term Development Focus	**Mean**	***SD***
My coach is good at helping me to understand my strengths & weaknesses	4.98	0.97
My coach is good at helping me understand what I'm doing & why I'm doing it	4.85	0.88
My coach emphasises the need for constant work on fundamental skills	4.98	0.77
The more experienced I get the more my coach encourages me to take responsibility for my own development	4.83	0.79
My development plan incorporates a variety of physical preparation	5.02	0.71
If I got injured I believe I would continue to receive a good standard of support	5.06	0.99
I am constantly reminded that my personal dedication & desire will be key to how good a performer I become	5.00	0.83
My coach constantly reminds me what he expects of me	4.64	0.92
My coach is a positive supporting influence on me	4.57	1.21
My coaches care more about helping me to become a professional than they do about having a winning team right now	4.81	0.82
My coach plans training to incorporate a wide variety of useful skills & attributes	4.83	0.96
My training is specifically designed to help me develop effectively in the long term	4.85	0.66
My coach emphasises that what I do in training & competition is far more important than winning	4.60	0.83
I am being trained to be ready for almost anything that is thrown at me in sport & life	4.70	0.86
I spend most of my time developing skills & attributes that my coach tells me I will need to compete at the pro level	4.85	0.62
My training sessions are normally beneficial & challenging	4.91	0.78
Me & my sports mates are told how we can help each other develop further in the sport	4.85	0.66
My coach allows me to learn through making my own mistakes	4.70	0.75
I am encouraged to keep perspective by balancing frustrations in one area with thinking about good progress in others	4.36	0.87
Organisation is a high priority to those who develop my training programme	4.66	0.81
There are people who help me/teach me how to deal positively with any nerves or worries that I experience	4.60	0.83
If it didn't work out for me here, there are other good opportunities that would help me to keep progressing	4.64	1.05
Developing performers are often written off before they have had a chance to show their real potential*	3.72	1.35
My coaches and those who support me give me straight answers to my questions	4.68	1.02
Factor 2: Quality Preparation		
I struggle to get good-quality competition experiences at the level I require*	2.64	1.03
I am rarely encouraged to plan for how I would deal with things that might go wrong*	3.06	1.13
The guidelines in my sport regarding what I need to do to progress are not very clear*	2.79	1.14
I am not taught that much about how to balance training, competing, & recovery*	2.55	1.18
I feel pressure from my mates in sport to do things differently from what my coaches are asking of me*	3.04	1.06
Factor 3: Communication		
I regularly set goals with my coach that are specific to my individual development	4.47	1.04
My coach & I regularly talk about things I need to do to progress to the top level	4.49	0.93
My coach often talks to me about the connections/overlap between different aspects of my training	4.51	0.78
My coach & I talk about what current &/or past world-class performers did to be successful	4.40	1.10
My coach and I often try to identify what my next big test will be before it happens	4.15	1.08
My coach explains how my training & competition programme work together to help me develop	4.79	0.72
Feedback I get from my coaches almost always relates directly to my goals	4.21	0.81
Factor 4: Understanding the Athlete		
My coach rarely talks to me about my well-being*	3.09	1.25
My coach doesn't appear to be that interested in my life outside of sport*	2.98	1.13
My coach rarely takes the time to talk to other coaches who work with me*	2.68	1.07
I don't get much help to develop my mental toughness in sport effectively*	2.57	1.06
Factor 5: Support Network		
I have access to a variety of different professionals to help my development	4.98	0.92
I can pop in to see my coach or other support staff whenever I need to	5.34	0.84
My coaches talk regularly to the other people who support me in my sport about what I'm trying to achieve	4.68	0.81
My training programmes are developed specifically to my needs	4.51	1.08
My coaches ensure that my college understands about me & my training/comp	4.51	0.86
Those who help me in my sport seem to be on the same wavelength when it comes to what is best for me	4.49	0.98
My coaches & others who support me in my sport are approachable	4.77	0.98
All the different aspects of my development are organised into a realistic timetable for me	4.55	0.90
Factor 6: Challenging & Supportive Environment		
My school/college doesn't really support me with my sport when I need it*	3.02	1.26
I am regularly told that winning and losing just now does not indicate how successful I will be in the future	4.38	1.05
I have the opportunity to train with performers who are at a level I'm aspiring to	4.02	1.36
I don't often get any help from more experienced performers*	3.51	1.38
Factor 7: Long-Term Development Fundamentals		
I would be given good opportunities even if I experienced a dip in performance	3.91	1.08
I am encouraged to participate in other sports and/or cross train	3.09	1.32
I often have the opportunity to talk about how more experienced performers have handled the challenges I face	4.17	1.05
My coaches make time to talk to my parents about me & what I'm trying to achieve	3.43	1.31
The advice my parents give me fits well with the advice I get from my coaches	4.49	1.00
My progress & performance is reviewed regularly on an individual basis	4.47	0.93
I am involved in most decisions about my sport development	4.34	1.05

* Refers to negatively phrased item where a lower mean score relates to a better quality perception

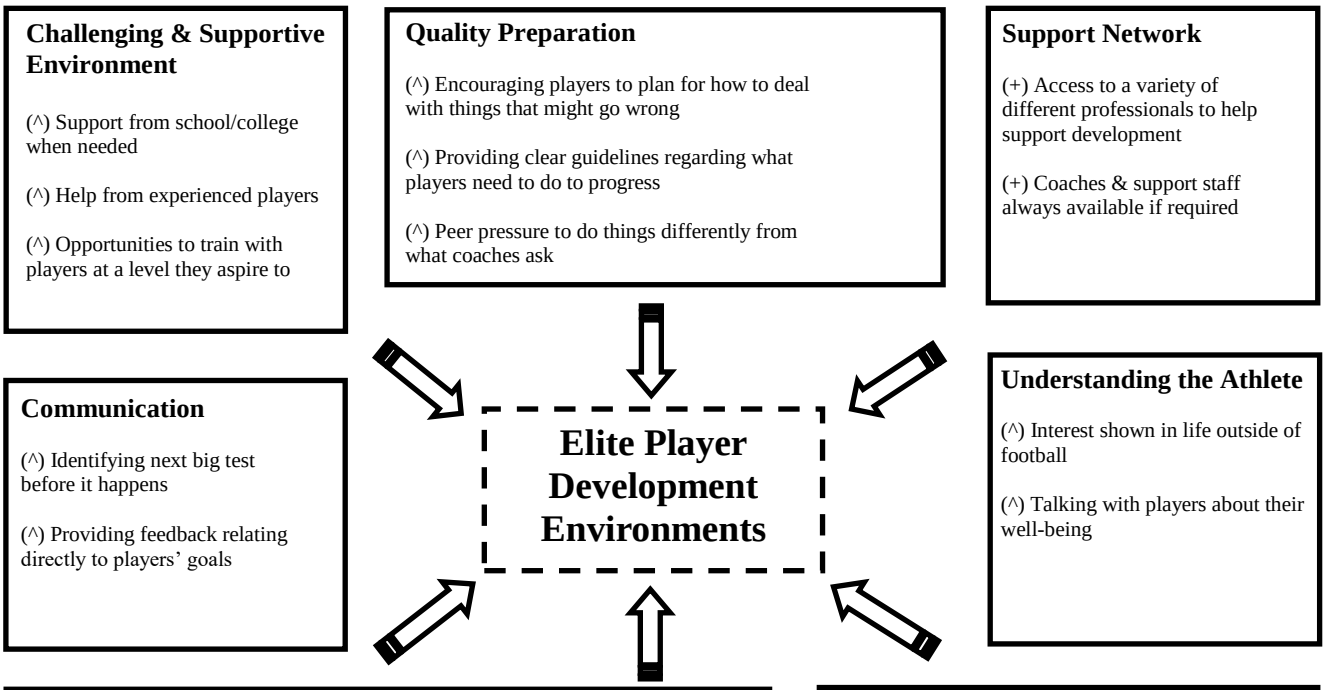

Figure 1. Features of elite player development environments perceived as key strengths (+) and key areas for improvement (^).
Note: For the purposes of calculating sub-scale scores and ranking proportion of agreement, all negatively phrased item raw-scores were reverse coded.