

An investigation of the talent development pathway in Scottish female football

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Literature in Talent Development (TD) for female sports is sparse and assumes applicability from existing male TD research. The purpose of this study was to gain an understanding of the TD pathway in Scottish female football. Five expert coaches and five international players were interviewed regarding their experiences within Scottish female football. Key findings demonstrated the main influences within the TD pathway. Mixed football was evident in the early stages while big gulfs were reported throughout the development process. Lack of capacity and resources to provide coherent support in a systematic way was the key constraint within the Scottish TD pathway. Practical implications include the education of club coaches and integration of sport psychologists in the development pathway.

KEY WORDS: Talent development, Female football, Pathway, Environment.

Introduction

Female football is ever growing globally capturing a lot of attention at elite level. In 2013, participation rates ameliorated with 29 million registered female players playing the game across the world (Scott & Andersson, 2013). More recently (2017), the Union of European Football Associations (UEFA) women's Euro tournament recorded an accumulative television audience of 178 million viewers and a total record number of 240,045 spectators (The

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Union of European Football Associations, 2018) while the last world cup in France 2019 was watched by more 1 billion people across the world. This was a major catalyst for the development of women's football as the game received increasing attention and inspired young females to participate in football (FIFA, 2021). Those facts along with the bold vision from FIFA to develop women's football has brought the growth in profile and popularity of women's football into the spotlight. The FIFA Benchmarking Report was completed in June 2021 to facilitate this process (FIFA, 2021).

The FIFA Women's World Cup hosted in France in 2019 was a major catalyst for the development of the game. Women's football reached new heights, captured the attention of new fans and new audiences, inspired, and created a new generation of players and icons and left a lasting legacy around the world. In line with FIFA's overall vision and dedicated strategy to develop women's football, which sets out the game plan for the future of the sport, it is vital that we maintain the momentum and boost the growth of women's football between every edition of the FIFA Women's World Cup.

In 2014, Fédération Internationale de Football Association (FIFA) released guidelines on the organisational structures of female Talent Development (TD) programmes (FIFA, 2014). In addition, UEFA have since made it their objective to increase the number of full-time female footballers, professional coaches, and qualified referee's by providing each association with £150,000 (annually) until the year 2020.

Within the UK, the English Football Association (EFA) has introduced the "Game Changer" programme, a strategy to appropriately support players transitioning from youth to senior football. Currently, the Scottish Football Association (SFA) has aligned objectives with UEFA to grow their player base from recorded numbers of 12,885 in 2014 to 20,000 registered players by the year 2020 (Scottish Football Association, 2019). In addition to this, the Scottish National Team has had significant achievements by qualifying for first time in the UEFA Women's Euro 2017 and World Cup 2019 reaching to their all-time high of 19th place in the FIFA Women's World Rankings in 2014 (currently 21st place). This highlights not only the necessity to better understand female football in general but also the originality of the TD pathway in Scottish female football which has created elite footballers and has led to international achievements within the last years.

Talent Development Pathway

The Differentiated Model of Giftedness and Talent (DMGT 2.0) proposes a clear distinction between the concepts of giftedness and talent.

Those who are considered 'gifted' in a particular domain, possess through their genetic makeup, untrained natural abilities (e.g., intellectual, creative, muscular, motor control). The 'gifts' that any given individual starts with, in combination with the positive and negative catalysts for development leads to the development of a range of competencies, and potentially a 'talented performer' (Gagné, 2009). The Talent Development (TD) pathway is complex in nature as athletes progress through different stages and transitions and face multiple challenges. The stages of development identified in the literature include the early years or sampling phase (participation in a variety of sports and unstructured play), the specialisation phase (focusing on one or two sports), and the investment phase (commitment to one sport) (Bloom, 1985; Côté et al., 2003). Another approach in the literature has divided athletic development in four macro stages which are further differentiated in 10 micro phases: Foundations (F1, F2 and F3); Talent (T1, T2, T3 and T4); Elite (E1 and E2) (Gulbin et al., 2013). The transitions between those stages in sport are particularly challenging as the intensity and the demands are higher while transitions in other domains of athletes' lives such as psychological, psychosocial, academic/vocational may be occurring during the same period (Wylleman et al., 2013). As such, understanding talent development can best be captured by exploring the bio-psycho-social development of individual participants (Kiesler, 1999).

The development process can be facilitated or hindered by both intrapersonal and environmental catalysts. Intrapersonal catalysts include physical and mental traits such as health, temperament, and resilience. They also include goal management attributes, such as self-awareness, motivation, autonomy, and perseverance. These types of characteristics not only help budding athletes stay physically and mentally healthy throughout the development process, but also facilitate the learning process and the extent to which development occurs from the opportunities and experiences that are available (MacNamara et al., 2010a, 2010b). More specifically, in their studies MacNamara et al. (2010a, 2010b) identified that competitiveness, commitment, vision of what it takes to succeed, imagery, importance of working on weaknesses, coping under pressure, game awareness, and self-belief were the attributes that facilitate the successful development of athletes towards elite level. To further reinforce this point, since a number of challenges are anticipated within the athletic career those skills can be developed in advance to better prepare the athletes.

The environmental catalysts include factors related to the opportunities and facilities that are available to any given individual. This will depend on factors such as geographical location, economic and social circumstances.

More specifically, Rees et al., (2016) reviewed the key areas relevant to talent development in relation to the performer, the environment, and practice and training. The authors identified that birthdate, genetics, anthropometric and physiological factors, psychological skills and motivational orientations, and personality traits can influence the performers. In relation to the environment factors such as us the birthplace, support from parents, family, sibling, and coaches, and athlete support programmes can have an influential role. Finally, the volume of sport-specific practice and training, and the effect of early specialisation in comparison to sampling and play can also be influential factors for talent development.

It also relates to the value that different sports are given within the culture, society, and family that they live in. For instance, in Scotland the most practised sports in Scotland for males and females are football, hockey, rugby, swimming, and tennis. There will be a range of significant individuals within the lives of a young person that can influence their development. One of crucial elements forming the environmental catalysts is the Talent Development Environment (TDE) which refers to the organised system influencing the progression of players (Li et al., 2014; Martindale et al., 2005). Researchers have described the structure, functions, and components of the close (micro) and the wider (macro) environment influencing the development of players (Bronfenbrenner, 1999; Dorsch et al., 2020). More specifically, macro environment includes for example the sporting culture and the National Governing Association (NGA) both of which may have a significant impact on participation levels and development of players (Baker & Horton, 2004; Pankhurst et al., 2013). While the micro environment includes individuals such as coaches, parents and teachers who play a vital role in the development of athletes in their pathway towards elite level (Côté et al., 2003; Nash et al., 2012; Ott Schacht & Kiewra, 2018; Witte et al., 2015). Existing research examining TDEs specifically in football is scarce and most of it focuses primarily on male football with all the research being case studies of highly successful elite clubs (Flatgård et al., 2020; Larsen et al., 2020; Ryom et al., 2020).

Talent Development Environments: Research in Male and Female Football

Within the UK, Mills et al. (2012, 2014) have examined the TDEs of elite male football academies identifying key attributes of players (e.g., resilience, goal-directed attributes) and environmental characteristics which are essential for effective talent development in football. A number of case

studies have examined TDEs in different sports some of which have focused on football. Those studies highlighted that successful TDEs appear to share common characteristics such as strong relationships between coaches and players, supporting a dual career, encouraging players to take responsibility, and adopting a long-term holistic approach towards talent development (Aalberg & Sæther, 2016; Flatgård et al., 2020; Larsen et al., 2013, 2020; Ryom et al., 2020). On the other hand, the limited studies focused on female football have mostly been conducted by Gledhill and his colleagues. For instance, Gledhill and Harwood (2015) identified that social agents need to support players to facilitate their dual career development. Similarly, Gledhill and Harwood (2019) showed that communication and understanding the athletes were factors that need to be strengthened in TDEs in female football. As outlined by Curran et al. (2019) and Gledhill et al. (2017) there is an underrepresentation of female research in the talent development literature which suggests that the generalisability of findings from male to female football is difficult.

Rationale and Objective

Research examining TDEs in sports is disproportionately focused on male players highlighting the need to explore more in depth the female game (Gledhill & Harwood, 2014). Considering the structure of professional sport, which is male dominated, the needs of female athletes can be misunderstood (Douglas & Carless, 2009). Since most of the TD research has been conducted within male football the generalisability of findings into female football is difficult due to developmental differences between genders (Gill, 2001). Those differences between genders can be in relation to fitness (Mujika et al., 2009), match performance characteristics (Bradley et al., 2014), skill development (Barnett et al., 2010), participation (Pesce et al., 2018), and social development (Brody, 1985). However, despite those differences the rules in football are the same for both genders unlike other sports. As a result, women have to cope with relatively much tougher demands than males such as goal size, ball size and weight, pitch size and dimensions, distance to wall, and match duration (Pedersen et al., 2019). As such, examining more in-depth TD environments and pathways within female football will allow us to better understand the existing structure in female football and enable us to design bespoke talent development processes if needed. Therefore, the aim of the current study was to investigate the characteristics of the TD pathway within Scottish female football.

Methodology

PARTICIPANTS

With the intention of documenting a precise view of talent development within Scottish female football, it was paramount to invite participants with a widespread base of knowledge surrounding the subject area. Therefore, recruitment was directed towards those distinct individuals who are a product of the Scottish talent pathway and individuals who possess first-hand experience in developing talented Scottish female players. Other research studies have focused on specific elements of the development pathway and hence recruited athletes who were currently developing (e.g., Blijlevens et al., 2018). In contrast, our study aimed to investigate the entirety of the development pathway and as such it was deemed necessary to focus on recruiting players who have experienced the whole pathway before reaching to elite level.

Five elite level coaches were recruited alongside five Scottish international A-Squad players so in total ten participants participated in the current study. This is in line with the recommendations about the number of interviews required for qualitative research since Kuzel (1992) suggested that in a study with heterogeneous sample 6-8 interviews are acceptable. Similarly, Guest et al., (2005) after conducting an experiment about data saturation and variability concluded that a sample of six interviews can be sufficient to enable development of meaningful themes and useful interpretations. Elite coaches were selected to offer knowledge on the specific mechanisms behind TD and provide insight to institutional practices on female player development. To fulfil the recruitment criteria and be considered as 'elite' coaches had to withhold a minimum of ten years coaching experience, holding a UEFA B licence, and have had an active role in developing Scottish female international players in the talent pathway. Coaches had an average of 11.2 years of coaching experience ($SD = 0.8$) experience, they were all UEFA A licence holders, and their mean age was 37.2 ($SD = 4.6$). In addition, they all had coached at elite level in Scotland and as such they can be considered as 'elite' coaches for the Scottish context and hence as the most appropriate sample pool when examining the talent development pathway in women's football in Scotland.

International players were selected in the aim of collating tangible information refined from their unique developmental experiences (Polkinghorne, 2005). Players were asked to share opinions established from their journeys and expand on topics such as initial sport contact, playing experiences and subsequent International A-Squad involvement. Players' mean age was 26.8

($SD = 4.4$); they joined Scottish youth national teams at different points in time (one in the U14s, two in the U16s and two in the U17s), but all participants have progressed to the Scottish national A-Squad. Currently, three of the participants compete in the Scottish Women's Premier League while two compete in the Football Association (FA) Women's Super League. This assembly of participants allowed for a collaborative and clear view on the existing characteristics of the Scottish female talent pathway.

DESIGN

A qualitative methodology was selected to capture the structure of the TD pathway. The prevalent literature in this area was used to further encourage the accuracy of interview topics (Ritchie et al., 2013). More specifically, two interview guides (one for each sample group) consisted of eleven questions each were created based on the relevant literature (e.g., MacNamara & Collins, 2013; Martindale et al., 2007, 2010; Larsen et al., 2013; Webb et al., 2016). The questions to players were the following:

- Could you describe what were some of your influences during your development?
- When did you start to feel that football was becoming a bit more important to you?
- Could you tell me about the people who supported you while playing?
- Could you describe some of the transitions you had to make within your career?
- Could you describe your developmental experiences as a footballer?
- Could you describe any examples of where you had to face a challenge?
- Could you tell me about some of your achievements as a footballer?
- What would you describe your strengths and weaknesses to be?
- Could you describe your involvement with the national team?
- Looking back, would there be anything you would have done differently to get into the national squad?

Similarly, the coaches who participated in the current study were interviewed based on the following interview guide:

- Could you describe your role within the development footballers and the female game?
- How do you facilitate the development of players towards elite level?
- How do you identify talent within female Scottish football?
- Could you describe the physiological development of players, what do you expect an elite performer to possess?

- What are the key psychological characteristics that players need to reach elite level?
- Could you provide an example of how a player should react in a challenging situation?
- How do you facilitate the development of psychological characteristics in a player?
- What support mechanisms do talented players have as they progress towards elite level?
- Could you describe the talent pathway for the players?
- Could you provide some examples of how players' transitions through the pathway?
- What is the selection process for a player to be selected to the national team?

Semi-structured interviews were conducted to allow for open ended responses (Gill et al., 2008). This design enabled the reduction of researcher bias and supported the augmentation of rapport, comfort, and participant recall (King et al., 2018). In pursuit of maximising the quality of participant responses, two pilot interviews were conducted with one player and one coach to obtain feedback (Chenail, 2011). This allowed for any refinements and alterations to the guides and interview process.

PROCEDURE

All interview guides and procedures were subject to ethical approval from University's Ethical Committee prior to commencing recruitment measures and data collection. Once participants voluntarily agreed to take part in the study, face to face interviews were arranged at a neutral venue, at the convenience of the individual.

Interviews were conducted in a quiet and safe area to avoid interruptions, risk participant identifications, and encourage participant trust (King et al., 2018). Participant confidentiality was outlined prior to the commencement of each interview. Data management processes and the substitution of names for non-identifiable numbers were also clarified (Merriam, 1998; Orb et al., 2001).

All participants were given an information sheet for the study and provided a signature of consent showing their understanding of data collection methods and processes of participant confidentiality. Participants were provided with an interview guide and prompted to take a five-minute familiarisation period in consideration of responses (Kvale & Brinkmann, 2009).

Interviews lasted between 45 and 60 minutes and were recorded via a Dictaphone (Olympus DM-670, Japan) for verbatim transcription purposes (Kvale & Brinkmann, 2009). Throughout the interview process, counter probing techniques and clarification methods were used as required in helping each respondent elaborate and elucidate responses (Patton, 2002).

DATA COLLECTION AND ANALYSIS

Encouraging the dependability of results, thematic analysis was used to identify patterns and themes from the accumulated transcriptions. This SYSTEMATIC approach allowed the data to be permissible as rigour (Koch, 2006). Phases of data analysis included the six steps as described by Braun and Clarke (2006): data familiarisation, initial coding, searching for themes, reviewing the themes, defining and naming the themes and finally producing the report.

The processes of familiarisation included an initial reading of individual transcriptions and the notation of ideas before re-reading. This gave the researcher the opportunity to understand the data before meticulously coding meaningful units. Codes established from researcher interpretations were collated and assigned to non-predefined themes before comparing sets of themes across all data sets. Final themes were determined by the amalgamation of initial themes between all transcriptions (Braun & Clarke, 2006).

ESTABLISHING TRUSTWORTHINESS

Establishing trustworthiness is paramount in ensuring the interpretation of data is accurate and genuine (Shenton, 2004). Following the guidelines from the literature to improve the credibility of our study we adopted a triangulation process through collaboration of different researchers who reached to the same conclusions (Tracy, 2010; Tracy & Hinrichs, 2017).

To further establish the validity of results, the method of peer reviewing was introduced to allow the data to be coherently viewed by an experienced second researcher (Creswell & Miller, 2000). This was achieved by sharing comparisons over the categorisation and organisation of themes. To ensure regularity in the establishment of themes, two phases of peer reviewed categorisation transpired. Percentages of adherence were recognised following both phases of comparative theme placement and organisation. An initial adherence level of 80% was achieved before reaching an adherence of 95%, succeeding the second phase of categorisation. This method contributes to the overall accuracy and rigour of produced results (Shenton, 2004).

Results and Discussion

The aim of the current study was to investigate the characteristics of the TD pathway within Scottish female football. The TD pathway described by the participants of this study was aligned with previous research which has identified three key stages during the development process: sampling phase, the specialisation phase, and the investment phase (Bloom, 1985; Côté et al., 2003). The key characteristics of the TD pathway as shown in table 1 were the following: mixed football and limited technical support in the early stages, big gulfs in the development process, and lack of capacity to provide coherent support in a systematic way.

MIXED FOOTBALL AND LIMITED TECHNICAL SUPPORT IN THE EARLY STAGES

The majority of the participants reported that they played mixed football during the early stages of their development. Players described this experience to be beneficial for their development as it formed the basis of their skills and attributes. Player 5 described how her skills and attributes may not have been developed as efficiently through playing solely female football. In addition, Player 1 explained that she decided to return to mixed football (af-

TABLE I
Main Themes And Subthemes Emerged Through The Inductive Thematic Analysis

Main Themes	Sub Themes
Mixed Football and Limited Technical Support in the Early Stages	Early involvement and early enjoyment Involvement with the primary school team and/or competed amongst boys in a grassroots club Volunteer coaches with lack of expertise and knowledge
Big Gulfs in the Development Process	Difficulty in understanding positions and roles while playing an 11 aside match due to lack of experience Playing amongst the best players within the region Competing at the older age groups/more experience players and early selection Tough transitions from 19's to A-Squad leading to a high(er) chance of dropping out Increased level of aspirations and targets
Lack of Capacity to Provide Coherent Support in a Systematic Way	Shift of responsibility and use of self-documented diaries Access to high performance centres and local gyms Growth opportunities through challenges Open line of communication and emphasis on coherent messages delivered at various levels (association, clubs, school parents) Smaller talent pool and no professional female football in Scotland

ter playing female football) as it was more competitive, and she was seeking for a challenge that would allow her to improve.

I was the only female that was playing amongst the boys, I stood out like a sore thumb, but I absolutely loved it, and for me it would be something that I would never change. I think it gave me a good foundation for my football because I thought it provided so many skills and attributes that you wouldn't get from playing just female only. (Player 5)

I went back to the boys because I just preferred it and I would play with the boys at school and everything. It was just more competitive and that was why I went back to the boys until I was obviously at an age where I had to kind of move on to a girls' team. (Player 1)

The concept of mixed football was also evident in un-structured settings such as street football. This can be linked with findings in the literature in relation to sibling dynamics and deliberate play. For instance, as Player 3 highlighted she used to compete against her brothers and other boys in the street and at the park taking part in deliberate play activities. Findings from existing research suggest that athletes who are competing against their (older) siblings can reach to higher levels since this process aids their development (Hopwood et al., 2015). Interestingly, recent findings suggested different ways of utilising siblings in talent development. For instance, either in pre-season to increase motivation; through a demanding period as a support mechanism; or during a session of the same sport to create a challenge (Taylor et al., 2021). that Activities akin to these described by Player 3 are considered to increase the level of enjoyment and motivations promoting long-term involvement (Baker & Cobley, 2008; Côté et al., 2007). In addition, high levels of both play and practice in football is considered to be most appropriate pathway according to the early engagement hypothesis (Ford et al., 2009).

During that development phase between the ages of twelve to maybe fifteen I played a lot with my brother and his friends. Back then kids would play in the street and the park and every others day it would be eight or nine a side and sometimes the boys where two three years older. So although I wasn't playing within a team, I still felt a lot of my development happened in and around that time. (Player 3)

Mixed integration was actively encouraged by the association since coaches perceived that it facilitates the development of players. This view is reflected by Coach 2 who explained that mixed integrated football offers a better challenge for aspiring youth female footballers.

Individually when we do come across particularly talented individuals, as long as they enjoy it and they are comfortable to do so, we really strongly advocate that they seek opportunities to play mixed football, they will be able to play more often, and the standard is quite likely to be more challenging which helps them to develop. (Coach 2)

Moreover, it was identified that most of the club coaches are volunteers without UEFA coaching qualifications. As highlighted by player 3 this meant that they lacked the appropriate expertise to design and deliver a spherical development plan which would include tactical and technical skills. It was also reported that coaches working for the association or equivalent (e.g., institute of sport) were better qualified than club coaches highlighting the dichotomy between regional/national and club coaches.

As for club coaches I don't think there was a huge amount of technical influence on me there because I felt they were there as volunteers and didn't have the expertise although those people are still integral. They are giving up time for nothing in return so in terms of opportunity undoubtedly those coaches were important, but I don't know how much they developed me as a footballer. (Player 3)

Currently within a squad I am involved in the institute of sport and I would say the coaches are a lot more qualified as appose to the (club) coaches who would not be as qualified as those ones or have as much experience. (Player 2)

Research examining volunteer coaches in sport is scarce offering limited insight into the role of volunteer coaches and their influence on the development of talented individuals (Griffiths & Armour, 2013; Wiersma & Sherman, 2005). As Coach 1 stated club coaches could provide individualised training to the players to enable them to enhance their weaknesses, however for this to happen appropriate planning and qualified coaches would be necessary. Volunteer coaches seem to be an integral “cog” in the development pathway of youth female footballers in Scotland. As such their role and the coach education programmes in the UK needs to be evaluated (Adams et al., 2016).

It's the club that should be giving them the individualised training as they have the most contact with them, three nights a week and can afford to do individual stuff with them because they have that time. (Coach 1)

Coaches recognised the lack of high-quality coaching at club level and suggested that players would require a higher number of training with the regional squads. However, the concern is that while selected talented players receive high-quality coaching the potential gap between them and their unselected peers widens. This may occur as players that do not have equal opportunities and/or access to high-quality coaching, facilities, feedback, and volume of training. According to TD literature equal opportunities for development are important (Andronikos et al., 2016) as some characteristics of talent may need several years to emerge (Simonton, 1999).

The quality of coaches at club level in Scotland, is not as high as it should be within the girls and women's game. When we get the girls within the regional performance squad, the girls will get to do some technical work as well which they may not always get at their club. Ideally, we would love to have them in for two sessions per week, but obviously current resources do not allow. (Coach 4)

Big Gulfs in the Development Process

As players continue within their respective clubs, various transitions take places starting from the transitions from 7 a-side football to 11 a-side. Participants reported that they were faced with big gulfs in their development process. Coach 2 described how players may find it difficult to adapt to new requirements of 11 a-side football particularly in relation to new positions, tactical understanding, and perceptions of ability levels.

Now the other side of things is the transition from seven aside to elevens. You may have players who need to train with an older age group in order to experience those positional changes as they may not have experienced elevens at all. (Coach 2)

To tackle those issues that may even lead to drop out from football TD programmes may consider a comprehensive way to carefully facilitate the transition of players from 7-a-side to 11 a-side football. For instance, 9 a-side football may allow for a period of adaptation, coinciding with the preparation and understanding of playing demands as described by Morris et al. (2015). Interestingly, after the completion of the data collection for the current study 9-a-side football was introduced in Scotland demonstrating a positive change to aid the development of youth female footballers.

Moreover, participants reported that the transition to adult level was quite challenging as they had to adjust to a different environment compared to youth football. This supports the existing literature which suggests that the transition from junior to senior level in sports is the most challenging in the athletic career (Stambulova, 2009). For instance, Player 3 described that *“it’s quite a gulf between playing against girls who are fifteen and your stepping into an environment against women that are in their thirties.”*

A gradual introduction to the new team environment was perceived as positive by player 5 who reported that becoming familiar with the coaches, the teammates and in general with the environment helped her to have a successful transition to adult level. In line with this, recent findings suggest that providing the opportunities to athletes to gradually experience training and competition at senior level training can facilitate their progression to senior level (Andronikos, 2018).

I would step up and play with the ladies first team which obviously helped the transition and I think it helped for familiarisation with the players, coaching staff and the environment because its brand new going from seventeens which is essentially youth football to adult football, there’s established personalities, different languages being used. (Player 5)

Being selected for a youth international squad is another important mile-

stone in the development of female footballers in Scotland. As the selections are focused mainly on the players of regional talent programmes, players may be asked to shuttle through international ranks during a short period of time. Those “fast-tracked” transitions can be debilitating as recent studies have shown that excessive challenge can be problematic (Taylor & Collins, 2019). As such, it is important to be mindful that focus need to be placed on appropriate development rather than early selections (Martindale et al., 2005). Widening the talent pool could facilitate this and therefore female football talent programmes may need to consider the growth of female football participation, by maximising the potential of national talent (Bennet et al., 2019).

Literally within nine months I was a national player at under seventeens level, and I was fast tracked to be the first under seventeens player, playing for the under nineteens as well, so it was a kind of a mad eighteen-month period and a big change for me. (Player 4)

As players reach the age of 19, coaches and players reported a pivotal junction in which elite level players make the challenging transition from international 19's to international A-Squad. Player 2 identified a substantial increase in the performance standards and expectations at senior international level. Therefore, quality preparation at appropriate level appears to be necessary for breaking into the elite level (Franck et al., 2016, 2018; Morris et al., 2017; Pummell & Lavallee, 2019)

I do feel like seventeens to nineteens isn't a massive jump compared to the nineteens to A-Squad. I think because there was a three-year gap before reaching the A-Squad and it is hard, the transition from playing at (club) and then playing within the A-Squad. You're playing against some of the best teams in the world and the quality and intensity of training rises at that level, it's a big jump. (Player 2)

According to coach 4 often players do not manage to be members of the A-Squad due to the vast increase in performance standards. This stage may last up to three years and progress is slower which in combination with concurrent demands players may not make that big step to international level or even drop out from football. Relevant research has highlighted the need for support during this transition (Franck et al., 2018; Stambulova et al., 2012) and recent findings suggest that interventions programmes prior to this transition can be beneficial (Pummell & Lavallee, 2019).

A lot of them will either think nineteens was as far as I could go, I'm never going to make that, or they might think you know what? I have a chance of making it but because it takes two or three years, they don't see any progress, so they go to other things or focus on their academics or they leave the game entirely. (Coach 4)

Lack of Capacity to Provide Coherent Support in a Systematic Way

Within the current study, the importance of support was highlighted however in some cases players were left in their devices. For example, Coach 1 described that players need to take responsibility for their own development alongside the support system provided. It has been identified in the literature that shifting responsibility over to the talented individual encourages self-regulatory habits and it has been a key characteristic of successful TDEs (e.g., Aalberg & Sæther, 2016; Larsen et al., 2020).

When you sit down with them and have the one to one's, what you want to see is a balance of their training, gym time alongside their schoolwork and everything else. Often you will see those ones who are doing too much or maybe not enough, so it's about helping them to alter their week to week schedule and avoid things like burnout. (Coach 5)

The key thing is that the players should understand they are responsible for all the decisions that they make, we can provide a support network to offer them a little bit of guidance but ultimately, they have to make the decisions. (Coach 1)

Another example showing that players are sometimes left in their own devices was described by both the players and the coaches indicating that players need to take responsibility for their own development and learning in order to be better prepared for future challenges (i.e., competing at senior level). For example, they had to complete gym-based programmes within their own time. To aid this additional preparation the association ensured that players had access to gym facilities working in conjunction with local fitness centres. However, there was no capacity of available resources to supervise or guide players during those programmes and as such it was solely their responsibility to complete their additional training.

You were given like a programme and I remember us being given a free membership to health clubs. It was almost like your responsibility to go and carry that out. I remember we got given a 20-minute circuit and sometimes for me if I get told to do something and if I don't do it, I'd be panicking because I had not done it. I know some players would write things that they had done some training and maybe hadn't and I was like I could not do that. I think that was a big part of it, like if I had written something down, I would stick to it. (Player 4)

They take responsibility for their own development through those IDP's (Individual Development Plan's) and ultimately that responsibility comes down to each individual player because if they don't, they are in trouble because when they get to senior level, they may not always have someone who will care for them or their development. (Coach 3)

Player 3 gave a detailed overview of the environmental demands that an elite performer is faced with. She explained the vital need to develop

resilience to cope with the demands and challenges. Those challenges may include de-selection, injuries, or day to day training workload. This concept of developing mental skills such as resilience through challenge was introduced by Collins and MacNamara (2012) who suggested that talent requires challenge to develop at their best potential.

I guess having and building that resilience whether that comes through injuries or not being selected or being out of favour or never being the best, there's maybe better players ahead of you or fitter players in front of you. I think all that collectively is a challenge day to day, having the mental capacity to train four nights a week in all weather conditions. Within a sport, when you have that constant demand and expectation and pressure to be there, turn up, be on form and be happy. (Player 3)

Latest research has reinforced the beneficial role of challenge and has recommended the inclusion of structured and managed challenges in TD programmes (Collins et al., 2016; Savage et al., 2017). Interestingly, coaches of this study embraced mistakes and challenges as opportunities to grow and therefore encouraged players to step out of their “comfort zone” as part of their learning and development process.

The message we try to put forward is that mistakes will happen and that's ok because if the players are shying away from opportunities given to them and not stepping out of their comfort zone, then were not making mistakes. We try to get them in the mind set of, making mistakes is an opportunity to learn. (Coach 5)

On the one hand, taking responsibility for their own development, developing through challenges, and learning through mistakes are characteristics that have been identified in successful environments in the past (Henriksen, 2010; Savage et al., 2017; Toering et al., 2011). In addition, self-regulated learning has been shown to differentiate elite to non-elite youth football players (Toering et al., 2009). On the other hand, the network of people and organisations creating the development environment of the players (i.e., association, clubs, schools, parents) need to combine their efforts in a coherent way to facilitate their effective development. This approach can strengthen the support of athletes allowing them to develop through challenges rather than perceive them as excessive or too difficult to cope with.

Coach 5 provided an example of a player who had dropped out from football due to difficulties in balancing a dual career which is one of the most common challenges for footballers according to the literature (Larsen et al., 2013; Mills et al., 2012). The coach (participant 5) intervened and communicated with both the school and the parents to support the player and enable them to remain engaged in football. Furthermore, Coach 2 described that

coaches provided details about the expectations and responsibilities of the players and their parents during meetings. This shows that another key factor influencing the TD (i.e., parents) was considered (Côté et al., 2003).

We had a player who had dropped out of the seventeens squad, her issue was schoolwork, so I knew her teacher and I phoned the teacher to chat to the school and chatted to the parents. If it's an issue with the club again we will make a call and have the discussion with the head coach at the club. (Coach 5)

In terms of parents, initial presentations will be given to explain what is expected of both the player and them. They need to have an awareness of what is required, and the parents have to countersign a player expectation form to say that they will support the player to achieve those expectations. (Coach 2)

Nonetheless, it is important to highlight that coherent messages and support need to be provided in a systematic way (Martindale et al., 2005) as support networks can facilitate the development of athletes, help them with work-load management, and enhance their well-being (Ivarsson et al., 2015). This support needs to be provided systematically with appropriate personnel in place. As such, it becomes apparent that the role of sport psychologists can be beneficial in a TDE (Headrick et al., 2015). To further reinforce this argument Coach 2 suggested that the Scottish development programme should recognise the value of sport psychologists and consider how consider the support they could offer. More specifically, Coach 2 recommended that full time psychologists are needed to employ the mental skill training required to enhance those skills and attributes that are necessary at elite level.

It would be amazing if the SFA did have a full-time psychologist, but we don't have that, so we just have to lead by doing what we think is best based on our own experiences. (Coach 2)

A positive example was provided by player 2 who explained that when players leave school to continue into higher education dual careers are supported from Scottish universities enabling players to invest in their careers and represent their country at international level. Dual career support is important for all the players as it has proven to be helpful in the long-term for players regardless of whether they “make it” or not to elite level (Andronikos et al., 2019; Gledhill & Harwood, 2015).

If I did ever need a deadline extended, the university are pretty good about it but I could go to the association and let them know if I needed a deadline changed, if it clashed with any international duties, but that's mostly if the university didn't accept my request. That would usually solve the situation. (Player 2)

The lack of resources can also be attributed to the fact there were no professional female football clubs in Scotland. In 2020 Celtic Women was

the first team in Scotland that moved to a professional status for the first time in the country. Another potential solution could be to share resources with neighbouring Scottish male football clubs like for example the Olympique Lyonnais football club in France (Dunn & Welford, 2014). Coach 4 described that it would be beneficial if some female football clubs become professional as it would enhance the competitiveness of the sport. In addition, the professionalisation of clubs could also support a collective movement towards the growth of resources and the increase in participation rates, thus expanding the availability of talent (Abbott et al., 2005).

I think it would be good for us as an association, if some of the teams do go full professional, I think having club academies we obviously give us a better breed of player. I think we would need an elite club licencing criteria to ensure it becomes a high-performance environment. (Coach 4)

Limitations and Future Research

The sample group of this study was carefully chosen and included experienced coaches working at elite level and international female footballers to increase the rigour of the current study. Nonetheless, some of the coaches had been related to the Football Association; therefore, future research could attempt to focus on club coaches and/or board members within female football. This may help to gain a wider understanding of the operational demands or unique challenges in the TD pathway of female football. In addition, retrospective interviews with successful athletes may be limited by recall or hindsight biases. Finally, dropped out female footballers could be incorporated in a research to provide a more holistic perspective of the mechanisms and characteristics of the TD pathway.

Conclusion

Mixed football during early stages was highlighted as beneficial which is a unique finding that requires further investigation to increase our current understanding. Introducing players gradually to the new challenges and environments during the transition periods (e.g., junior to senior level) was shown to be significant reinforcing previous research (Collins et al., 2016; MacNamara et al., 2010a, 2010b; Savage et al., 2017; Toering et al., 2011). To facilitate this process sport psychologists or practitioners with more knowledge about sport psychology/talent development may need to be introduced to the TD pathway. For example, structured challenges could also be incor-

porated in collaboration with the coaches to encourage players to go out of their comfort zones and essentially develop through challenge (Collins & MacNamara, 2012). Similarly, psychological skills training could be implemented within training in a drill-based approach (Diment, 2014; Harwood et al., 2015). Additionally, initiative promoting street football in a wider extent could be introduced to allow young people to experience the sport in a more natural and relaxed setting while being challenged at the same time.

Previous research examining successful TDEs highlighting the need for quality preparation and coherent support (Franck et al., 2018; Henriksen, 2010; Martindale et al., 2007). Therefore, since lack of capacity to provide coherent support in a systematic way was evident in the current study further consideration needs to be taken in relation to the available resources and support networks.

Furthermore, the lack of high-quality coaches at club level was one of the original findings of this research as it emphasised a deficiency of the TD pathway in Scotland. It is evident that coaches play a critical role in the TDE (Holt & Morley, 2004) and therefore having the knowledge and expertise to deliver high-quality training programs is necessary (Mills et al., 2012, 2014). Hence, coach education and higher criteria for club level coaches could be implemented towards that end. In addition, professionalisation of clubs may facilitate the employment of full-time staff members and players at club level. This change can lead to higher playing standards and increase the overall quality of female football in Scotland (Dunn & Welford, 2014).

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