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The Role of Family and Football Academy in Developing

## **Brazilian Football Expertise**

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### **Abstract**

*This study aimed to examine the influence of families and football academies on the pathway to football expertise of Brazilian players. Built on the 'contextualised skill acquisition research' framework, data were generated through the triangulation of three methods: contextual analysis; participant-observation, and; interviews, with the latter providing substantial information for the present study. Data were organised according to the mesosystemic context of Bronfenbrenner's bioecological model of human development, thematically analysed, and explained through the perspective of the framework of the ecological dynamics. The findings highlight how players navigate through their environment in relation to the social, emotional, psychological, and educational support they receive, as well as in relation to the clubs' supply of quality football training programmes. The findings provide the basis for practical recommendations to help clubs and their coaches in the task of developing and nurturing their human talent*

**Keywords:** expertise, soccer, mesosystem, family support, non-linear pedagogy

### **Introduction**

Becoming a professional association football player is the dream of many youngsters all over the world, although only a few will acquire the expertise and skill levels needed to achieve this hallowed status. The journey to the top is fraught with difficulties and unlikely to be completed by many. According to Calvin (2017), "...only 180 of the 1.5 million boys who play organised youth football in England at any one time become Premier League pros, a success rate of 0.012 per cent" (p. 7).

In Brazil, the pathway towards expertise in football usually starts as soon as a child can kick a ball with family members or friends through the means of playing informal (unstructured) football games, such as *pelada* (pick up games) (Araújo et al., 2010). At this early stage of development, rather than onerous, playing football is fun and enjoyable for

children (Uehara et al., 2018). Yet, relying on *pelada* alone does not suffice when it comes to the overall development of football skills and expertise. By around 14 years of age, only a selected few have the privilege to join a federated club (i.e., football academy), thereby boosting their chance to fulfil their dreams (Uehara et al., 2018).

Elite football clubs in Brazil have implemented a system offering resources such as training, accommodation, education, and pastoral care for players who come from different cities or regions (EsportesMais, 2017). Therefore, we sought to investigate in this study professional football clubs that could provide not only football training but also boarding, wider education, and pastoral care for the children. The implementation of such a system in Brazil was intensified during the ‘football crisis’ raised after the 1966 World Cup (Ferreira & Paim, 2011; Kunz, 2003). At that time, managers, coaches, and practitioners alike believed that the talent base in Brazil was in a state of decline due to the lack of investment in youth development. The initial purpose was to implement a youth development system that could maximise the opportunities for the best young footballers to play for professional teams in Brazil. However, since then, the aim has arguably evolved more towards gaining the economic rewards from fuelling the international transfer market. Since then, many professional Brazilian clubs have successfully achieved their aim of developing excellent footballers. One such example is the São Paulo Futebol Clube (SPFC), which will be further discussed later in this article.

The success of player developmental schemes in Brazil is of particular importance because many young players are living in poverty and may receive little or no financial support from their families. In other words, it is possible that many families would not support their child’s football dreams at all and would instead expect them to contribute to the household through chores, work, etc. However, pertinent to the analysis of the present study are players who have received support from their families (not necessarily financial support) and achieved success. According to Bronfenbrenner (2005), family is typically the single most important influence in child development throughout the life course. From their first breath until adulthood, infants, children, and teenagers depend upon family for protection, support, mentorship and provision for their needs such as good living conditions, education, nutrition, transport, time to play and so on (Dena et al., 2006). In sports, while some overt behaviours such as parental pressure toward their children can be detrimental, families usually play an important role in the development of young athletes. Within the context of this study, the definition of the ‘family’ extends beyond the immediate (blood) family members such as parents and siblings. It could also include relatives such as an uncle, a grandfather, a grandmother, or even close friends who can provide any form of support to the young player. This can include critical support to cope with the psychological, emotional, physiological and logistical demands of attending sports training and games (see Bremer, 2012). In line with this, a recent study found the perceptions of elite youth athletes were that parental practices (e.g., reinforcement, encouragement, role modelling) had a significant effect on their intrinsic motivation, in a comparison with that of their sub-elite peers. They believed they fostered a favourable learning environment, which in turn, increased the likelihood of obtaining a high level of sports performance (Teques et al., 2019). Similarly, Bremer (2012) highlighted that parental practices, through emotional, financial, and informational support, can boost players’ confidence and provide security during stressful times.

From an ecological dynamics perspective, when young players navigate through these different microsystemic contexts (i.e., family and football academies), an interconnected system is created (Button et al., 2021). Following the bioecological model of youth development, these interconnected microsystems are defined as a mesosystem (Bronfenbrenner, 2005). Many professional football clubs recognise the importance of

connecting effectively with families as young players transition into their academies. This crucial relationship is often mediated by social workers employed by the clubs (Ferreira, 2019). With this in mind, this study sought to analyse the contextualised Brazilian mesosystem formed by family and football academies. Specifically we were interested in exploring how these different microsystems influence a young player's career and nurture their development. As such, we hope to provide some practical recommendations within the Brazilian context that may also be worth consideration elsewhere.

## Method

This study builds on a multi-method approach known as the contextualised skill acquisition research (CSAR) framework (Uehara et al., 2016). The CSAR framework is underpinned by the theory of ecological dynamics which seeks to explain the emergence of expertise and skill in developing athletes, as a function of interacting task, individual and environmental constraints (Button et al., 2021; Uehara et al., 2016). Supporting the framework of the ecological dynamics is Bronfenbrenner's bioecological model of human development which considers the juxtaposition between nature and nurture as the key point of articulation (Bronfenbrenner, 2005; Krebs, 2009). The mechanisms that characterise the Bioecological model are the time, proximal processes, and four different, interconnected systems, including the microsystem, the mesosystem, the exosystem, and the macrosystem environmental constraints. Briefly, these mechanisms can be explained as such: the 'time' and 'proximal process' are mechanisms that operate around the characteristics of person-context interactions over time; the 'microsystem' refers to the variables that have direct contact with the learner and their close environment (e.g., family, parents); the 'mesosystem' contains other microsystems frequented by the person (e.g., the relationships between the family and football academy; more about mesosystem in the next section below); the 'exosystem' embraces the microsystems that do not contain the person but indirectly influence the person and the microsystem under analysis (e.g., parents' workplace); the 'macrosystem' comprises the overarching patterns of the micro-, meso, and exosystems contexts of a given society (e.g., culture) (Araújo et al., 2010; Uehara et al., 2016).

Data were generated and collected through the triangulation of three methods: historical contextual analysis, participant observation, and unstructured interviews. Starting from the contextual analysis, several sources of information (e.g., related university library, online databases, the internet, Brazilian books and articles which were translated, paraphrased and/or directly quoted from Portuguese to English) were explored with the aim to generate relevant and rich information, which was then used to inform the conduct of the other two methods: interview and participant/observation.

The next step was to conduct an ethnographic inquiry including interviews and participant observations in Brazil during the following periods: between December 2010 and February 2011; January 2017; November 2021 (the latter was online interview only due to pandemic restrictions). Based upon their extensive experience of Brazilian football, thirteen adults with different football-related backgrounds were identified for the interviews - some were ex-players and family members themselves giving them insight into both sides of the process. The identity of the participants has not been revealed for ethical reasons and the principles of identity protection and confidentiality. As such, participants are referred to by pseudo initials. Participant observation, or sometimes observations only, were performed mainly in the region of São Paulo, Brazil, during 2011 and 2017. The main sites of interest were: (i) a professional football club called Paulista FC, (ii) the São Paulo FC youth academy, (iii) a football pelada organized by a former professional player, and (iv), a football pelada in

a favela called Vila Ana. For this study, rich information emerged primarily from the participant observation of the SPFC academy.

To make sense of the collected information, the qualitative analytical steps proposed by Creswell (2009) were undertaken. These included: (i) transcribing the interviews and typing the field notes; (ii) translating the material from Portuguese to English; (iii) reading, re-reading, and organising the raw data; and (iv), reflecting upon common observations and interpreting their meaning. Most relevant to this article are the social constraints (defined as major influences that shaped behaviours) concerning family support and football academies, which fitted the mesosystemic dimension of the bioecological model (Uehara et al., 2016). However, the mesosystem is not the only context that shapes behaviour, but rather just one among many different socio-cultural systems of constraints that may facilitate expertise acquisition in Brazilian football. Data on other constraints, such as *pelada*, *malandragem* and *poverty* have been presented elsewhere (e.g., Uehara et al., 2018; Uehara et al., 2020; Uehara et al., 2021).

To adjust and enhance the quality of empirical procedures, a reflexive process of moving back and forth between the paradigms, theories, and methods of inquiry was required and followed (Dowling, 2008). All procedures were conducted according to the ethical guidelines of the participant institution's ethics committee (ref: 10/158). All participants, could withdraw from the study at any time and provided written consent before participating.

## Findings

Different contextualised systems of Bronfenbrenner's bioecological model have influenced football players development in Brazil (see Table 1). Processes that operate at the microsystemic levels are interdependent, meaning that an individual's microsystems do not operate independently, but are interrelated and continuously interact to shape one another (Krebs, 2009). This interrelation is also applied to other systems of the model such as the exosystems and macrosystems (see Bronfenbrener 2005).

Table 1.

*The systems and variables that underpin the development of Brazilian football expertise*

<b>Bioecological Systems</b>	<b>Variables/Findings</b>		<b>Supporting Literature</b>
Microsystem	Pelada (Pick Up Games)		Uehara et al., 2018
<i>Mesosystem</i>	<i>Family and Football Academies</i>		<b>Current Study</b>
Exosystem	Poverty		Uehara at al., 2021
Macrosystem	Malandragem (Trickery)		Uehara at al., 2020

The particular focus of this paper is the mesosystem which comprises the interconnected operation of two or more microsystems. In other words, a mesosystem is formed by the interrelation that takes place between two or more settings influencing the developing person (Bronfenbrener, 1979). Relevant to the present study and as futher highlighted below, these two settings are family and football academy (i.e., they interweave to provide layered support to the athlete).

*Family: Emotional and Psychological Support*

There are several insightful studies that have discussed the important role of the family in the development of expertise (e.g., Côté, 1999; Fredericks & Eccles, 2005). Pertinent to the current article are the socio-cultural studies related more directly to Brazilian football (e.g., Marques & Samulski, 2009; Moraes, Rabelo, & Salmela, 2004; Salmela & Moraes, 2003). Salmela and Moraes (2003) suggested that due to the socioeconomic disadvantages experienced by many living in Brazil, there was potentially less family support for talented football players compared to that in developed countries. In our study, one interviewee, JL confirmed that his family could not afford to support him financially to pursue his dream to become a professional footballer as they struggled to make ends meet. He lost his father when he was still a baby, and his mother was busy working full-time to provide care to a total of eleven children. As a young teenager, JL had to work at a shoe factory during the day and go to school in the evenings. Training and playing were only possible at the weekend. However, JL was determined to make it happen so that he could follow his dream, but he was also motivated to fulfil his desire to help his family to get out of poverty. He explained:

Despite all the odds, I never gave up. My desire to overcome all barriers and pursue my dream was paid off when I was scouted for a trial to play for SPFC at the age of 15. From there I flourished as a successful professional player. Within that, my other dream also came through as I managed to buy a house for my mother as well as one house each to all my siblings. (Interview, February 16, 2011)

There are many other stories like JL's across the history of football in Brazil. According to our interviewee SL, a professional goalkeeper football coach the norm is that most football players come from families with a humble financial background. They do not have financial resources to support all of their children's aspirations. However, SL attests that families do offer a lot of emotional support, motivation, guidance and love to their children. In his words:

More than financial support, I think the emotional support that the family gives is much more important, and I've seen a lot of it when I used to coach at the youth level. Not only for the child to achieve fame or success, but it is primarily to support the dream of that person who has the talent, has the potential; and as a result, the family enters into the spirit of supporting because they know there are many challenges to overcome. For each victory, for each triumph, how many difficulties and how many defeats exist along the way. Often if the young person does not have this support from the family, they may not reach to the top; and when I say family, I do not only mean proximal family members (e.g., mom and dad) but also a relative, an uncle, a grandfather, a grandmother, or even friends. I mean any person with a lot of affinities who may end up providing emotional and psychological support to the aspiring player. (Interview, November 6, 2021)

To exemplify such emotional support, youth interviewees TRT and SMS provided some invaluable insights. At the age of 15 yrs, TRT was scouted by the academy of Paulista FC, a professional club located in São Paulo and 2898 km from Natal, a city in the Northern territory of Brazil where his family resided. To have an idea of the appreciation of TRT for the emotional support he had received from his family, he broke down crying when he was asked about them. He explained that: "If it was not for my family support, I would not be able to be here today. Now as a youth player I want to do well, go to a bigger club so I can provide financial stability to my family" (Interview, February 20, 2011). TRT did well indeed and currently at the age of 28 years old he is a professional with Gremio FC, one of the Serie A teams in Brazil. Participant SMS also mentioned the sacrifices his family made by moving from one city to another when

he was thirteen to support him in his dream. As a young professional player at the age of 17 years, he said: “I am paying back the immense emotional support by providing financial support to my family” (Interview, February 21, 2011).

The interviewee SL also pointed out: “The athlete who succeeds, who earns a lot of money, who reaches his financial peak through his professional career, ends up giving back to the people who helped him in some way” (Interview, November 6, 2021). These narratives show how important the supportive relationship is between players and their families. It also brings football to light as a potential vehicle for upward social mobility in Brazil and hence a great source of motivation for many Brazilian children to pursue a professional career in that sport. It is worth noting that for those youth players who board (live) in the club’s facilities, the family must put all their trust in the academy to provide, not only football training, but also educational and pastoral care for their children. To achieve so, elite professional clubs in Brazil often employ social workers to look after the wellbeing and overall development of the youth players, and to liaise between the club and the players’ families (Ferreira, 2019). According to interviewee SL, “There was a time when my former club Paulista FC was in such a great financial position that they employed two social workers rather than only one; and these social workers did an excellent job” (Interview, November 6, 2021).

### *Football Academies: Training Philosophies*

From a skill acquisition point of view, football academies play an important role in refining perceptual-motor skills, psychological dexterities, and fitness to ultimately enable youth players to reach the top of their football pathways. A good example is São Paulo FC where the first author had the opportunity to observe and participate in their youth training programme in 2011.

Founded in 2005, the President Laudo Natel Athlete Formation Centre of São Paulo FC, also known as CFA Cotia, is in the town of Cotia, located about 30 km from São Paulo city (see Figure 2). The centre has a specialised structure and infrastructure to accommodate 110 youth athletes who are pursuing a professional football career. Built on a large area of 230,000 m<sup>2</sup>, the CFA Cotia includes one stadium, ten training soccer fields, gymnasium, gym, swimming pools, restaurants and a high standard hotel. Cutting-edge equipment is also part of the complex, including for example, the so-called “water path”, a water circuit that is used for proprioception training purposes (see Figure 3). In addition, the swimming pool is situated above ground level and surrounded by glass windows that allows physiotherapists to thoroughly observe the quality of movement of each athlete (see Figure 4). There, the Physiotherapy and Physiological Sports Rehabilitation Nucleus unit (REFFIS), internationally recognized for having served great names in world sport, look after the young players of the SPFC. Today, this youth training facility is one of the largest centres for sports exchanges in Latin America, receiving national and international delegation visits by officials of various sports. Besides football training, all youth athletes of the SPFC academy receive educational, psychological, nutritional, medical, dental, social and press relations training and support. Regarding education, the academy maintains agreements with schools in the region to provide the best possible education to the players. In addition, the club provides individualised academic assistance and tutoring. Ultimately, the effort of all has one aim: to develop top elite football players. SPFC has been one of the major providers of players to the Brazilian National Team (Alencar, 2021); and one of the biggest exporters of players to the top elite teams in Europe (Reis, 2021).





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*Figure 2:* A panoramic view of the São Paulo F.C. Cotia Youth Training Centre.



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*Figure 3:* Water-path for rehabilitation and proprioception training.





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*Figure 4: Swimming pool above the ground to assess movement.*

Despite the numerous fringe benefits from training in such systems, the most important thing is that players have access to expert coaches. One of these experts was our interviewee SA, a coach with a long history with SPFC. He started as a youth player at the age of 15 yrs. Three years later, he was promoted to the professional squad. On a parallel but relevant note, the highlight of his career was having played against the Brazilian football legend: Pelé. He said:

I was young and Pelé was a veteran. But, he was still magic. He had so many qualities but for me, his best quality was about his ability to perceive, anticipate, and play off the ball. By the time the ball came to him, it was as if he had three or four solutions to choose from, and usually, he had the aptitude to choose the best one.

(Interview, February 8, 2011)

Upon his retirement as a professional footballer, SA started coaching one of the youth teams of the SPFC academy. He successfully helped with the development of many high profile players (former and current players all having played/playing in top professional leagues, including in Europe) such as, to name just a few, Rogério Ceni and Kaká, and more recently, Lucas Moura and Casemiro. The following narrative emerged from the interview:

Q: Given your success in developing so many good players, tell me about your view on it. In other words, what is the key to be able to develop high standard players?

AS: I believe that one of my strengths is about identifying talented players. For example, when Kaká came for a trial as a youth player, he was skilful but not physically strong enough for his age, so other members of the selection panel wanted to reject him. I decided to keep him but instead of training him with our official youth squad, I trained him with a group of Chinese players who stayed here with us for a year. After that period, Kaká impressed everyone and got into the official squad.

Q: What did you see in Kaká that others did not?

AS: When I assess a young player, I looked amongst other things, his level of maturation. If I perceive that his level of maturation is lower in relation to his chronological age, but he is still playing relatively well against physically stronger players, then what he is doing is based on his talent, his potential. Once

the level of maturation even up, he will, usually, be a better player than the others. This is exactly what happened with Kaká.

Q: Once you have identified the talented players, what do you do to further develop them. In other words, what is your training methodology?

AS: The key is to develop players who can adapt their skills in any situation and environment. That is why a lot of my players do well in Europe or any other parts of the globe. To do so, I train a lot of the foundations but in a fun and various ways. For example, at the beginning I use a lot of “paredão” (i.e., big wall) to train kicking, passing. I often change the parameters such as distance, the angle, the target, the leg to kick, the type of passing, etc. For example, one of the tasks is to kick the ball in diagonal to the paredão so that the rebound comes to me [coach]. The players try to be as precise as possible otherwise they will need to run fast to collect the mis-passed ball that can go far away.

Q: Do you have any other examples of training?

AS: The key is to maximise the opportunity to apply those foundations to real game situations. To do that, I use a lot of small-sided game. Here, I can change the number of players, the size of the pitch; the type of the ball; I even use headband instead of bibs with the aim to refine their peripheral vision. In a way, I bring the essence of pelada to these training sessions, but rather than being very informal as played on the streets, it is run in a more educational way.

Q: How about the mental aspect of the game? How do you work that with youth players?

AS: This is a good question because a lot of coaches select mainly physically stronger players so that they can focus primarily on winning and winning at all costs. This may be due to the pressure they receive from their clubs or perhaps due to their lack of knowledge. For me, for any U17 teams and below, I focus mainly on development. So, the first thing is that players with me don't play under the pressure or mentality of 'we have to win'. As soon as you impose that, many players get scared of making mistakes and this inhibits their ability to try things, to be creative, to be audacious. So, I tell my players, at the final whistle there is a result. However, the result is not only about who won by scoring more goals than the other. The result in this case is a sum of everything that you do or try to do in the field. Sometimes you get it right and sometimes you don't, but as long as the intention for using a particular skill and/or making a particular decision was in line with that particular game situation, then you are on the right track to win and to win in a sustainable way. In other words, if you use your skills wisely and make good decisions, then the positive result will come naturally. This is a better culture of winning that I propose to my youth players.

The view of interviewee SL provides a similar focus. As highlighted earlier, SL is a goalkeeper football coach who has experience in coaching youth and professional players as well as male and female teams. With his success in developing many top-class goalkeepers, when he was coaching at Paulista FC (a second-tier team in Brazil), SL was invited in 2020 to train the professional female team of Palmeiras FC (first tier team in Brazil, with a long history and tradition). His coaching philosophy lies in what he calls 'functional training'. In his words:

Although there are perhaps well-established ways of training skills and techniques of goalkeepers - in which I think it is important to develop these techniques and skills through these conventional ways. However, I understand that 'functional training' is as important as skills training per se or perhaps more important; what I mean about functional training in which I direct my

methodology is that it is about the goalkeepers' capabilities of solving game problems according to the demand of a particular situation. It's about being perceptive about a game situation and insightful of the actions to take to solve the problem; because we see a lot of goalkeepers who in relation to technical aspects - if you test his goalkeeping foundations - the guy is exceptional, he catches the ball perfectly, he punches the ball perfectly, he is well-coordinated and everything else, but then in the games, he doesn't have the right timing, the right perception to make the right decisions and solve the game's problem, which, ultimately, in the case of goalkeepers is about not suffering goals; so my philosophy is based much more on this [functional training] than on that preciousness of isolated technicality – as I mentioned above, I think it's very important to train skills and perhaps even under the conventional ways so that the athletes' skills improve, and increasingly make him more efficient, more confident – however, technique alone does not take him beyond his ability to solve problems.

(Interview, November 6, 2021)

I then asked: How do you train this idea of functional training?

The most important thing is about creating analytical situations - which is also very important for technical adjustments and everything else - but the most important thing is to create an environment in the training that will provide stimuli in which the athletes, or in the case of my goalkeepers, they respond to these stimuli accordingly and in turn develop adaptations according to different game situations. It's a less methodical form of training, without unnecessary isolated repetitions; I mean, repeating is important, but repeating varied forms of decision-making; in practical terms, I like setting up tasks that can be performed in small-sided games; I create a lot of game simulations and in doing so I can train this idea of functional ability, meaning, train skills, technique, perception, decision making, and to a certain extent, physical conditioning all together

(Interview, November 8, 2021)

Interviewer: How about different age groups? Do you use the same training methodology for both professional and youth players?

The philosophy and methodology of training are almost the same but with some variants. At the youth level, we have a much broader construction; we offer all of those stimuli discussed above, but the intensity and volume are different; we also put more emphasis on skills development, and, more carefully, we take into considerations the physical, psychological, and maturational levels as well as the stage of learning, and of motor development; all of these have to be respected; because it would be pointless to design a situation which demands a very strong physical response, for instance, and the individual is not prepared for it yet; as for the professional, and in normal circumstances - let's consider the professional adult who has already gone through the phase of motor development and everything else - we have the possibility to apply everything required to stimulate those functional abilities; because you know that he/she, is already complete to give you all the answers, whether physical, technical, tactical, psychological, and functional; I think this is the basic difference, this issue of really respecting what is development and what is high performance as

a professional; in short, I think that's it, knowing how to respect the physiological and biological limits of the individual, mainly; not so much of the team, but of the individual.

Here, we can see that the application of the 'functional training' methodology is designed and delivered with respect to the individual constraints, which is in line with the principle of student-centred learning. In addition, it is worthy of noting that these discussion points by both SL and SA reveal several motor learning concepts underpinned by the notion of non-linear pedagogy and ecological dynamics, which will be discussed in the Discussion.

In concluding this section, our data show that a culturalized mesosystem, encompassing elements of family support, and football academies (referring here to the manipulation and availability of different tasks and environmental constraints), facilitates and influences the development of Brazilian players. This process includes the role of clubs providing high-quality football training to youth players who are also motivated to achieve their maximum potential by their families. Families that board their children at the football academies, place their complete trust in the clubs to provide the youngsters with not only football training but also educational and pastoral care. In many cases, the clubs provide better educational means for the players than the families themselves would be able to, because they are usually from a low socioeconomic status (Uehara et al. 2021). Thus, overall, these mesosystemic constraints strengthen the means for the player to achieve success.

## Discussion

On the rocky road to the top in football, many try but very few reach the summit. For those who do most likely they had to overcome many challenges and barriers along the pathway. This in effect, makes them resilient, adaptable, and stronger to deal with future challenges over their professional career (Collins & MacNamara, 2012). However, it is unlikely any players would go on to become professionals if they had to move through this process alone. Thus, together with their intrinsic motivations, supportive external factors are essential during the process of becoming an expert football player. Two key extrinsic factors supporting this process within a mesosystemic interactive context are the environmental constraints provided by family and football academy.

Family is the foundational social network that we live in, often throughout life; thus, family is the basis for the formation of any individual (Bronfenbrenner, 2005). In Brazil, the role of families in supporting their youth football players does not necessarily mean the provision of financial support, given their low socio-economic status background. As pointed out by interviewee SL, more than financial support, many families in Brazil provide a lot of psychological motivation and emotional support by means of encouragement, respect, and love. In return, once at the top, players have the pleasure and honour to help their families back, especially in financial terms. This places football in Brazil as a potential site of upwards social-economic mobility. This can also be seen as a source of motivation for many Brazilian children to pursue a professional football career (Uehara et al., 2021).

However, the support of family alone is not enough for the achievement of success. Amongst many other variables, including those discussed in previous articles of a similar nature (e.g., Uehara et al., 2018 (*pelada*); Uehara et al., 2020 (*ginga-malandragem*); Uehara et al., 2021 (*poverty*)), football academies play an important role. The academy of SPFC, for instance, has been successful in helping many Brazilian youth players achieve high professional standards with a high level of expertise in perceptual-motor skills. To do so, the academy provides an

excellent structure and infrastructure with the provision of social worker services and expert coaching methodologies.

Thus far, our analysis has shown how the development of football expertise in Brazil emerges in a non-linear fashion through the interaction of many constraints. Within that, the provision of adequate coaching expertise is of extreme importance. This is evidenced in the discussion with interviewee SA, a coach who, as illustrated above, incorporates in his coaching programme, the notion of *pelada*, small-sided and conditioned games, and the manipulation of many environmental and task constraints. Similarly, our interviewee SL provided goalkeeper training insights allied to notions such as functional training, adaptability, repetition without repetition, individual-centred learning, small-sided games, and environmental learning design. Such approaches are endorsed by the professional goalkeeping coach in Europe, Fabian Otte, who uses the principles of ecological dynamics to ensure *functionality* in his training programmes (Otte et al., 2020, 2021). These insights can be aligned with and explained by the principles of non-linear pedagogy. Briefly, the non-linear pedagogy approach is underpinned by the theory of ecological dynamics, and contains five pedagogical principles that explain the development of skills and expertise in sport. These principles are representative learning design, information-movement couplings, manipulation of constraints, functional variability, and attentional focus (see Button et al., 2021; Chow et al., 2022; Gray, 2021 for further details). It is unsurprising, therefore, that these coaches have been successful in developing so many elite football players in Brazilian academies by using smart coaching principles supported by contemporary motor learning theory.

## **Conclusion and Recommendations**

### *Limitations and Future Research*

Fieldwork data were primarily collected in the São Paulo region, where the first author grew up playing football. However, according to the contextual data, the development of Brazilian football players is not restricted to a single location, but rather encompasses the entire country. As such, other clubs and/or coaches may use different training approaches and are still able of developing great players.

Also the complexity of the relationships formed between the club, academy staff, players and families has emerged strongly and warrants opportunities for ongoing investigation. For example the connection between clubs and players' families may be mediated by other constraints, such as FIFA agents. Future empirical research might investigate how the synergy between families and clubs, through the means of FIFA agents, influences the overall development of the players, including their skills and expertise.

Another line for future research would be to contrast how different countries and cultural beliefs impinge upon the mesosystem that we have described. For example, a comparative analysis between Brazilian youth football (e.g., represented by the football academy of the São Paulo Futebol Clube (SPFC)), and a youth football academy from another continent, such as Europe, could generate further scholarly and practical knowledge, as there are many other countries with successful academies and programs.

Finally, the development of skills and expertise of Brazilian footballers emerges from the synergy of many constraints, which may include traumatic and/or coercive environmental constraints, which may need to be tested.

### *Recommendations to Clubs and Coaches*

1. To enhance the probability of developing successful football players, both families and academies must work synergistically with communication and understanding so that the players in development can feel secure and confident to pursue their dreams. For this to happen

clubs must work closely with players' families through the mediation of social workers to facilitate athletes' adaptation to the new environment and contribute to the overall development of the athlete on and off the field (Ferreira, 2019).

2. Clubs must have a coaching philosophy to guide the professional work of expert coaches and different sports practitioners, perhaps working in a Department of Methodology (Rothwell et al., 2020). The key needs to be to provide transdisciplinary knowledge and skills to design and deliver training sessions that stimulate discovery learning, adaptability, and a high level of coordination, control and skill, using a non-linear pedagogy underpinned by the theory of ecological dynamics.

3. This leads to the notion that an authentic mesosystem can promote the confidence and bravery of the players to be innovative and creative, and ultimately, to carry on the legacy of the Brazilian football style, the *ginga* style.

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