

## Key factors influencing talent development in youth football: a systematic literature review

Factores clave que influyen en el desarrollo del talento en el fútbol juvenil: una revisión sistemática de la literatura

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**Abstract.** Talent development in youth football is crucial for clubs, academies, and national associations worldwide. To ensure that talented youths reach their full potential, a comprehensive understanding of the key factors that shape their development is imperative for all stakeholders, including coaches, parents, and sports organizations. This study conducted a systematic literature review (SLR) to identify the key factors influencing talent development in youth football. Methods: After a thorough review process, 27 articles were selected for the final analysis. The SLR examined current research to provide a comprehensive understanding of talent development in youth football. The examination identified seven critical elements that impact talent development: psychological, social, environmental, biological, educational, physical, and mental toughness and resilience. This research highlights the complexity of young football talent development. These results underscore the need for a comprehensive strategy that considers all seven variables. Young athletes, teams, and sports generally stand to gain from these ideas to enhance talent development programs. The potential for enhancing these programs is significant, inspiring a new wave of motivation in the field. Subsequent investigations need to examine the interplay between these variables in various temporal and contextual situations, with a specific emphasis on a comprehensive examination of how sociocultural elements impact talent development pathways.

**Keywords:** Talent Identification, Football, Soccer, Youth Development, Education

**Resumen.** El desarrollo de talentos en el fútbol juvenil es crucial para los clubes, academias y asociaciones nacionales de todo el mundo. Para garantizar que los jóvenes talentosos alcancen su máximo potencial, es imperativo que todas las partes interesadas, incluidos entrenadores, padres y organizaciones deportivas, comprendan en profundidad los factores clave que dan forma a su desarrollo. Este estudio realizó una revisión sistemática de la literatura (SLR) para identificar los factores clave que influyen en el desarrollo de talentos en el fútbol juvenil. Métodos: Después de un proceso de revisión exhaustivo, se seleccionaron 27 artículos para el análisis final. La SLR examinó la investigación actual para proporcionar una comprensión integral del desarrollo de talentos en el fútbol juvenil. El examen identificó siete elementos críticos que impactan en el desarrollo de talentos: fortaleza y resiliencia psicológica, social, ambiental, biológica, educativa, física y mental. Esta investigación destaca la complejidad del desarrollo de talentos en el fútbol juvenil. Estos resultados subrayan la necesidad de una estrategia integral que considere las siete variables. Los atletas jóvenes, los equipos y los deportes en general se benefician de estas ideas para mejorar los programas de desarrollo de talentos. El potencial para mejorar estos programas es significativo e inspira una nueva ola de motivación en el campo. Las investigaciones posteriores deben examinar la interacción entre estas variables en diversas situaciones temporales y contextuales, con especial énfasis en un examen exhaustivo de cómo los elementos socioculturales impactan en las vías de desarrollo del talento.

Palabras clave: Identificación de talentos, fútbol, fútbol americano, desarrollo juvenil, educación

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### Introduction

For clubs, academies, and national football organizations worldwide, talent development in youth football has become a significant focus area (Lundqvist et al., 2024). Identifying and nurturing young talent is now a key factor for achieving sustained success in football, at both the club and national levels, especially as the global reach and competition continue to increase (Nilsen et al., 2024). To provide a comprehensive understanding of this complex process, this systematic literature review synthesizes recent research to explore the key sociocultural and educational factors that influence youth football talent development.

The focus on sociocultural factors in talent development is of paramount importance. As several studies have indicated, the primary aim of youth academies and development programs is to identify and cultivate athletes with the greatest potential for elite performance (Feichtinger & Höner, 2015;

Saputra et al., 2024). This process is not only critical for individual player growth but also for maintaining the long-term competitiveness of national teams and football clubs. Furthermore, due to financial, logistical, and educational challenges, smaller football nations particularly rely on developing homegrown talent (Andrew et al., 2022). This emphasizes the need for effective strategies that are informed by social and cultural contexts in global football talent development. Youth football talent development is inherently multifaceted, encompassing various aspects of a young player's growth. While previous approaches have included technical/tactical and physical elements, our study specifically emphasizes sociocultural, psychological, and educational influences (A. L. Kelly et al., 2022). This perspective acknowledges that a player's development is significantly shaped by their social environment, support systems, and educational opportunities, offering a broader understanding beyond just physical abilities. The Four-Corner Model (FCM), commonly utilized by professional

football academies, highlights the importance of a holistic approach, but our review narrows its focus to the social and psychological dimensions (English Football Association, 2020; Layton et al., 2023). This approach aims to clarify how these factors interact and influence the overall development of young footballers, particularly in diverse sociocultural contexts.

As noted (Güllich, 2018), the complexity of talent development is further underscored by the need to consider both the "macrostructure" of developmental involvement histories and the "microstructure" of practice. This study indicates that several childhood and adolescent behaviors, including playing much football under the supervision of peers, competing in coach-led practices and games in other sports during childhood and adolescence, and emphasizing game-based practice and playing forms within coach-led football training, are linked to higher levels of world-class performance in adulthood. These results highlight the value of a broad approach to youth development instead of early specialization or a limited concentration on specific abilities.

Furthermore, several stakeholders, including coaches, parents, and the general academic environment, impact young football skill development processes. Football academies provide intricate and varied assistance for young players' abilities and personalities, which are crucial to their success in the future (Akbar et al., 2024; Bognár et al., 2024). Combining elements from education, psychology, social work, and sport-specific fields results in a comprehensive setting that supports lifelong learning, flexibility, and mental health. This strategy aligns with the growing understanding that becoming a great football player involves more than physical ability or technical proficiency.

### ***The importance of talent development in youth football development***

The importance of young football talent development stems from its capacity to influence the sport's trajectory and provide a steady supply of talented athletes. Talent development is a multifaceted and intricate process that encompasses many elements from the physical, psychological, social, and technical/tactical realms, as noted by A. L. Kelly et al., (2022). This all-encompassing strategy is essential for producing well-rounded players who can adapt to the changing needs of contemporary football. The FCM, which is extensively used by professional football teams and organizations, emphasizes the value of a comprehensive approach to talent development by supporting player evaluation and development across six crucial subcomponents. Effective talent development initiatives are crucial for football teams and individual players alike to succeed in the future. According to Feichtinger & Höner, (2015); Gamonales et al., (2024), the primary objective of youth football programs is to find and nurture individuals with the best chance of becoming top performers. This goal emphasizes the need for efficient methods for identifying and developing talent so that young athletes may reach their full potential. Fur-

thermore, developing talent involves more than just generating elite athletes; it also entails building a pool of talented people who can contribute to the sport. The multifaceted nature of talent, which necessitates the gradual development of several qualities, makes the intricacy of this process straightforward. The ability of young football talent development to combat inequality and provide equitable chances in the game is another crucial component of the program. To rectify the disparity in involvement between genders, Lyons et al., (2024) emphasize the need to concentrate on developing potential in young football, particularly for women and girls. This part of talent development is essential for the sport to flourish and become more inclusive overall. Furthermore, as shown by (A. L. Kelly et al., 2024), psychological traits and social circumstances may impact the identification and development of talent. In-depth talent development plans considering these variables may help level the playing field and guarantee that skill—rather than social or economic background—becomes the leading indicator of success in the sport.

The global nature of football and the increasing competitiveness of sports further underscore the importance of effective talent development in youth football. Andrew et al., (2022) noted that smaller soccer nations, in particular, rely heavily on developing youth athletes into experts in adulthood because of financial, logistical, and coach education constraints. This reliance on homegrown talent makes robust youth development programs essential for maintaining competitiveness at the international level. Furthermore, as mentioned in (Vogt et al., 2018), the globalization of talent identification and increasing transfer fees for professional football players have led to more professional youth training centers that use controlled performance diagnostics such as Footonaut. This trend highlights the growing investment in and importance placed on youth talent development by football clubs and organizations worldwide.

The importance of talent development in youth football extends beyond sports performance to encompass the holistic development of young individuals. Ivarsson et al., (2015) emphasized the crucial need to examine young elite athletes to help facilitate their physical and psychological well-being, in addition to their talent development. This perspective recognizes that effective talent development is not just about creating skilled footballers but also about nurturing well-rounded individuals who can thrive both on and off the pitch. Bognár et al., (2024) support this notion, highlighting that soccer academies offer complex and multifaceted support for young players' skills and personalities, which play a fundamental role in their future success. By adopting a holistic approach that integrates sport specific, physical, educational, and psychological factors, talent development programs can create a supportive environment that fosters continuous learning, adaptability, and mental well-being.

There are still many unanswered questions about the significance of talent development in young football. These include the long-term impacts of various development

strategies, balancing best specialization and diversity, and how socioeconomic and cultural variables affect talent development (A. L. Kelly et al., 2024). Furthermore, how different elements combine to influence talent development needs to be clarified (Lyons et al., 2024). A comprehensive literature evaluation is urgently needed to address these gaps and the crucial role that talent development will play in determining the future of football. This study intends to contribute to creating more efficient, evidence-

based methods for developing young football talent by synthesizing existing data, identifying essential influencing elements, and recommending opportunities for further research. The results of this assessment might direct coaching techniques, improve policy-making, and improve talent development initiatives—all of which would eventually help players, teams, and the sport as a whole. This study is essential for maintaining the worldwide success and progress of sports and enhancing the quality and sustainability of football at all levels.

Table 1.  
Critical article acceptance and rejection

Criteria	Acceptance	Rejection
Publication year	Journal articles published between 2014 and 2024	Publication before 2014
Language	English	Non-English languages, such as Chinese and Malay
Article access	Open access	Restricted access or non-open access articles
Types of reference	Journal article	Conference proceedings, papers, theses, and book
Research field	Sports science and talent development.	Fields outside of sports science and talent development

## Methodology

The present investigation used a systematic literature review (SLR) technique to examine the primary components that impact young football skill development. According to Naji et al., (2024), the SLR technique makes it possible to conduct a thorough and organized study of the body of research, which makes it easier to synthesize results and generate new ideas. This research methodically located, filtered, and assessed pertinent material from many databases in compliance with the accepted protocols for performing systematic literature reviews (Nurhidayah Yaakop et al., 2023; Višić, 2022). This study was conducted using a systematic approach guided by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This approach was employed to ensure transparency and precision in the selection process of studies related to the key factors influencing talent development in youth football. This meticulous methodology guarantees an exhaustive analysis of the present status of knowledge in the domain. This study provides a solid basis for comprehending the intricacies of talent development in youth football.

### Article search strategy

Three well-known databases were used for the article search: Web of Science (WoS), Scopus, and ERIC via EBSCOhost. The extensive coverage of scholarly literature in sports science and talent development is why these databases are selected. Football or football, youth or adolescent, and the term "talent development" were combined in the search approach. To fine-tune the search and guarantee the recovery of the most relevant articles, Boolean operators (AND, OR) were used. The search was performed on article titles, abstracts, and keywords to ensure the inclusion of relevant studies. A total of 715 articles were initially found via this methodical approach to article identification across the three databases, offering a substantial body of work for further screening and examination.

### Article criterion selection

To ensure the relevance and quality of the selected articles, specific criteria for acceptance and rejection were established. As outlined in Table 1, these criteria encompassed several key aspects. The publication year was limited to articles published within the last ten years between 2014 and 2024, ensuring the inclusion of recent and relevant research while excluding outdated studies. The language was restricted to English to facilitate comprehensive understanding and analysis. The study prioritized open-access articles to ensure wider accessibility of the research. In terms of reference types, only peer-reviewed journal articles with full-text availability were accepted, excluding conference proceedings, papers, theses, and books, to maintain a focus on peer-reviewed, scholarly work. Furthermore, articles directly related to talent development in youth football were prioritized. The research field was narrowed to articles specifically addressing football and soccer, with a particular emphasis on those mentioning key factors in talent development. These criteria were applied systematically during the screening and eligibility phases of the article selection process, resulting in a refined collection of high-quality, relevant studies. This rigorous selection process enhanced the validity and reliability of the study's findings, providing a solid foundation for analyzing the key factors influencing talent development in youth football.

### Article selection process

Figure 1 illustrates the systematic article selection procedure for this investigation into key factors influencing talent development in youth football. The initial search across three databases (Web of Science, Scopus, and ERIC via EBSCOhost) identified 715 articles. After applying exclusion criteria, including publications before 2014, non-English articles, theses, proceedings, conferences, books, the field of sports science and talent development, 679 articles remained. During the screening phase further reduced this

number to 36 articles based on full-text availability and relevance of titles. During the eligibility phase, 9 articles were excluded due to a lack of full text (n=2), irrelevant research titles (n=1), duplication across databases (n=4), and not meeting acceptance criteria or being review articles (n=2). Ultimately, 27 articles met all four eligibility criteria and were included in the final analysis: 4 from Web of Science, 2 from Scopus, and 3 from ERIC. These 27 articles form the core of this systematic literature review, providing comprehensive insights into the factors influencing talent development in youth football.

Information was systematically extracted, including the title, author(s), publication year, research objectives, and specific findings related to key factors influencing talent development in youth football. Particular attention was given to extracting data on various aspects of talent development, such as training methodologies, psychological factors, physiological attributes, and environmental influences that contribute to the nurturing of young football talent. The data extraction process was carefully conducted to ensure that all relevant information was captured, providing a comprehensive basis for subsequent analysis and synthesis of the findings across the selected studies.

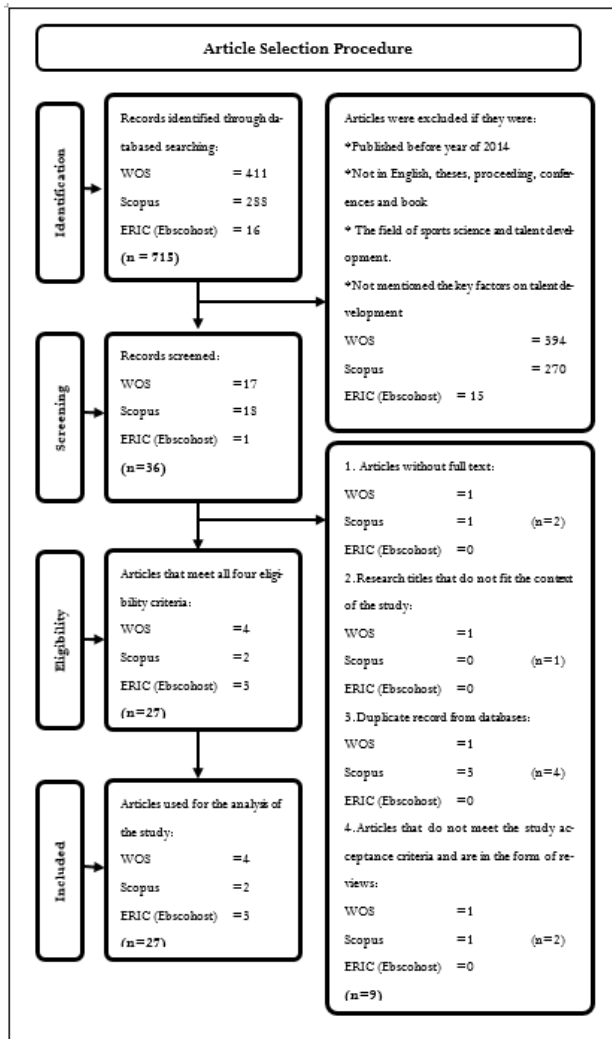


Figure 1. Diagram of the article selection procedure

### Data extraction

WoS, Scopus, and ERIC via EBSCOhost provided 27 journal articles for data extraction. These articles were selected after a rigorous screening process and met all the established acceptance criteria. From each article, key information

## Results and Discussion

The systematic literature review (SLR) identified seven key factors influencing talent development in youth football, as illustrated in Figure 2. These factors encompass a broad spectrum of influences, ranging from individual characteristics to external conditions. Psychological factors, sociocultural elements, environmental considerations, biological aspects, pedagogical approaches, physical attributes, and mental toughness and resilience all play crucial roles in shaping young footballers' potential. While this review focuses primarily on sociocultural influences, it is important to acknowledge that technical-tactical skills also play a foundational role in player progression. Technical-tactical training interacts with social factors such as coaching styles and team dynamics, influencing a player's overall development. The interplay of these factors creates a complex ecosystem that determines the trajectory of talent development in youth football, highlighting the multifaceted nature of nurturing young athletes in this sport.

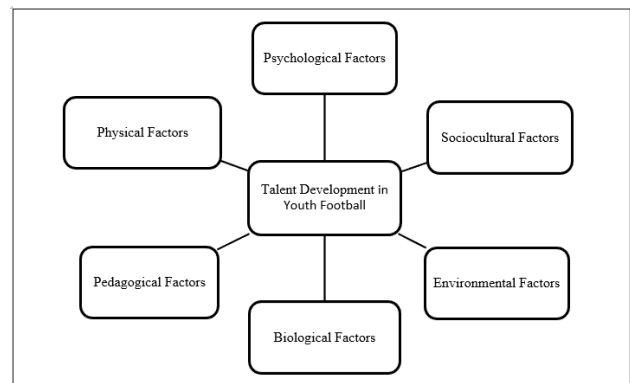


Figure 2. Key factors influencing talent development in youth football

The findings are further summarized in Table 1, which provides a concise description of each factor along with relevant references, offering a clear overview of the key elements influencing youth football talent development.

Table 2.

Key factors influencing talent development in youth football.

Key Factors	Description	References
Psychological Factors	Motivation, self-efficacy, mental toughness, resilience, decision-making, and game intelligence play a critical role in player development.	Lyons et al. (2024); Fuhre et al. (2022); A. L. Kelly et al. (2022); McGuigan et al. (2024); Forsman et al. (2015); Doncaster et al. (2020)
Sociocultural Factors	Parental support, cultural background, socioeconomic status, and gender norms affect player development, with family support playing a significant role.	A. L. Kelly et al. (2024); Bognár et al. (2024); McAuley et al. (2022); Murray et al. (2020); Lyons et al. (2024)
Environmental Factors	Factors like access to facilities, club ideology, and specialized training environments influence talent development.	Doncaster et al. (2020); Lyons et al. (2024); Söderström & Garn (2023); Andrew et al. (2022); McGuigan et al. (2024)
Biological Factors	Maturity, physical development, and genetic components play a critical role in football talent development, influencing selection and playing levels.	A. Kelly et al. (2021); Lovell et al. (2017); Leyhr et al. (2021); Towlson et al. (2017); Votteler & Höner (2014); McAuley et al. (2023)
Pedagogical Factors	The role of well-trained coaches and their pedagogical strategies in fostering talent is crucial, along with the alignment of training methods with empirical research.	Figueiredo et al. (2014); Bognár et al. (2024); Sæther (2015); Andrew et al. (2022); Ivarsson et al. (2015)
Physical Factors	Physical attributes such as speed, agility, and technical skills like dribbling and passing are essential in identifying and developing young football talent.	Kilian et al. (2023); Lovell et al. (2017); Höner et al. (2021); A. L. Kelly et al. (2022); Lovell et al. (2017)

### Key Factor 1: Psychological Factors

Psychological factors emerge as a cornerstone in the development of youth football talent, with multiple studies highlighting their critical role in player progression and success. The research consistently emphasized the importance of motivation, self-efficacy, and cognitive abilities in shaping a young player's potential. For example, Lyons et al., (2024) underscores the significance of motivation and self-efficacy, whereas Fuhre et al., (2022) specifically mention coaches' criteria for talent identification, including motivation, willingness to learn and train, and joy in playing the game. These findings suggest that intrinsic drive and belief in one's abilities are fundamental to a player's development trajectory.

Mental toughness and resilience have been identified as unique and essential components in talent development. According to A. L. Kelly et al., (2022), traits linked to talent development include the capacity to handle stress and failure and general mental fortitude. McGuigan et al., (2024) emphasize the importance of mental toughness in helping athletes transition to professional first-team football, arguing that these qualities become more crucial as players advance to higher competition levels. Murray et al., (2020) examined the impact of transformational parenting and coaching on teenage football players' mental toughness and physical performance, highlighting the crucial role of key individuals in helping players develop mental toughness and resilience. However, these psychological factors do not exist in isolation but are deeply intertwined with the player's environment and experiences.

The development of perceived competence, as highlighted in (Forsman et al., 2015), adds another layer to our understanding of psychological factors in talent development. This study examines the interplay between perceived competence, tactical skills, and motivation, suggesting a complex relationship between a player's self-perception and their actual abilities. Furthermore, Doncaster et al., (2020) emphasizing decision-making, game intelligence, and per-

ceptual-cognitive skills in FC Barcelona's talent identification process underscores the importance of higher-order cognitive functions in football talent development.

These findings collectively indicate that nurturing positive psychological attributes, including mental toughness and resilience, should be a central focus in youth football development programs. To ensure that the techniques used are both morally and scientifically sound, it is crucial to evaluate how these qualities are formed and quantified carefully. Furthermore, it is essential to carefully balance the advantages of emphasizing psychological variables against any potential risks, such as increasing pressure on young athletes or neglecting other important aspects of growth.

### Key Factor 2: Sociocultural Factors

Sociocultural elements strongly influence young football players' growth; research indicates that parental support, cultural background, and socioeconomic level significantly impact talent development. The interaction between technical skills and social influences, such as coaching methods and team strategies, play a crucial role in shaping a well-rounded athlete. A. L. Kelly et al., (2024) reported a fascinating correlation between young football players' lower socioeconomic position and their coach's rated potential. This unexpected outcome casts doubt on accepted knowledge and poses significant queries about the connection between player development and socioeconomic background. Coaches may have preconceived notions or prejudices on the basis of a player's upbringing or that athletes from less fortunate backgrounds may become more resilient or motivated owing to their circumstances. To avoid overgeneralizing and consider any confounding variables, it is essential to evaluate this conclusion cautiously.

Parental influence on talent development is another critical sociocultural element emphasized in several research studies. While Murray et al., (2020) investigated the effects of transformational parenting on mental toughness and physical performance, Bognár et al., (2024); McAuley

et al., (2022) highlighted the significance of family support and the cultural context. These results highlight the intricate interactions that shape a young player's development between the home context and training context. However, it is crucial to consider the possible adverse effects of intense parental participation, such as heightened pressure on young athletes or disputes with coaching staff. The sociocultural component of gender also becomes evident when considering talent development settings for boys and girls. As noted by (Lyons et al., 2024), preconceptions and historical biases have an impact on these surroundings. This emphasizes the need to critically evaluate how gender norms and expectations may affect the processes of identifying and developing potential in junior football. These results highlight how important it is to approach talent development holistically, considering athletes' social and cultural backgrounds. However, putting such a strategy into practice involves many difficulties, including determining how to address different family structures, financial inequality, and deeply embedded gender prejudices in football culture.

#### **Key Factor 3: Environmental Factors**

Environmental factors encompass a wide range of influences on talent development in youth football, from the broader soccer ecosystem to specific training environments. This research highlights the multifaceted nature of these environmental influences and their profound impact on player development. Doncaster et al., (2020), focusing on FC Barcelona's sporting model, suggested that environmental constraints such as broader social constructs and the popularity/competitiveness of the sport can significantly influence talent development. This research raises significant concerns about how young players' development is influenced by the larger football culture in a nation or area. Additionally, effective talent development techniques should be used only sometimes but rather customized for various cultural and athletic situations.

According to Lyons et al., (2024), access to facilities and equipment are essential elements that underscore the importance of organizational support. The developing environment and club ideology are essential factors in helping players transition to professional football (McGuigan et al., 2024). These results highlight the vital role of academies and clubs in fostering conditions that support talent development. It is crucial to consider the possible adverse effects of rigidly regulated learning settings, such as the possibility of burnout or disregard for players' overall growth. Söderström & Garn, (2023) identify school specialization programs and top training conditions as critical components in Swedish football players' sports specialization. High-level skill development may result from specialization, but there are hazards to be aware of, such as higher injury rates and lost opportunities to develop various skills. Andrew et al., (2022) noted that the need for formal competition, stakeholder participation, and a shortage of funding, developmental activities, and systems are also vital. Given the pos-

sibility of a significant disadvantage for players from resource-poor situations, this research raises crucial considerations regarding equality in talent development. All of these results point to the need for professionally managed, resource-rich, nurturing settings for the best possible talent development. However, to avoid unexpected repercussions and ensure that players' general growth and well-being are not compromised for the sake of top performance, it is imperative that this work be approached thoughtfully.

#### **Key Factor 4: Biological Factors**

The development and identification of potential in young football are significantly influenced by biological variables, especially those associated with growth and maturity. This study raises critical issues concerning existing methods in youth football, which regularly show how player performance and selection are impacted by maturity status. A player's trajectory in the sport may be significantly shaped by their physical growth, according to studies A. Kelly et al., (2021); Lovell, Bocking, Franssen, & Coutts, (2017) that indicate that maturation status is a critical factor determining both playing level and position. The need for a more sophisticated method of identifying talent that takes long-term potential into account in addition to presenting physical characteristics is highlighted by this research.

However, implementing such a method involves several difficulties, such as determining how to correctly forecast future growth and how to set up contests to consider different maturation rates. Leyhr et al., (2021); Towlson et al., (2017); Votteler & Höner, (2014) discussed the relative age effect, which is strongly tied to biological maturation. In youth football, these studies demonstrate how relative age and maturity might skew talent assessment and position allocation, possibly excluding brilliant but later-maturing individuals. This phenomenon severely challenges talent development systems in terms of equity and efficacy McAuley et al., (2023), adding a genetic component to our comprehension of the biological elements involved in developing ability. Using genetic data in talent discovery and development creates ethical concerns and new options for studying individual variances in development. These results highlight how important it is for talent development and identification programs to consider individual variances in biological maturation.

#### **Key Factor 5: Pedagogical Factors**

Pedagogical factors emerge as crucial elements in nurturing young football talent, with research emphasizing the pivotal role of well-trained, knowledgeable coaches in facilitating player development. (Figueiredo et al., 2014) highlight the importance of specialized training centers and experienced coaches in bridging the gap between empirical research and practical developmental strategies. This finding underscores the need for a strong connection between academic research and field practices, suggesting that effective talent development requires coaches who can translate

theoretical knowledge into practical training methods. However, implementing this research–practice link presents significant challenges, including how to effectively disseminate research findings to coaches and how to encourage evidence-based practices in often tradition-bound football cultures.

The pedagogical preparedness of coaches and their role as moral models is emphasized in (Bognár et al., 2024; Sæther, 2015), highlighting the multifaceted nature of the coaching role in youth development. This finding suggests that effective coaching in youth football goes beyond tactical and technical instruction to encompass character development and ethical guidance. However, this expanded view of the coaching role raises important questions about coach education and selection processes, as well as the boundaries of coaches' responsibilities in young players' lives. Andrew et al., (2022) points to the lack of formal coach education and qualified coaches as barriers to talent development in some contexts, highlighting systemic issues in coach development that can have profound impacts on player progression. This finding emphasizes the need for comprehensive, accessible coach education programs but also raises questions about how to ensure quality and consistency in coaching across diverse football environments. Ivarsson et al., (2015) suggested that a talent development environment characterized by a long-term development focus, wide-ranging support, emphasis on appropriate development, and individualized support is associated with higher levels of well-being in youth elite football players. This holistic approach to talent development, prioritizing player well-being alongside performance, represents a significant shift from traditional, often more ruthless approaches to elite youth football. However, implementing such an approach presents considerable challenges, including how to balance individual needs with team objectives and how to measure and prioritize player well-being in highly competitive environments.

### **Key Factor 6: Physical Factors**

Physical factors, encompassing a range of fitness attributes and technical skills, consistently emerge as significant elements in the talent development process for youth football. Kilian et al., (2023); Lovell, Bocking, Fransen, & Coutts, (2017) identify specific physical attributes, including anthropometric characteristics (height, weight) and speed abilities (sprinting, agility), as key factors in talent identification and development. This emphasis on physical characteristics aligns with traditional approaches to talent identification in football. However, this focus raises critical questions about potential biases in talent identification, particularly given the varying rates of physical development among youth players. There is a chance that gamers who mature quickly may be given preference, perhaps ignoring later adopters who could have even more long-term potential. Lovell, Bocking, Fransen, Kempton, et al., (2017) shed light on how individual physical attributes—such as sprinting ability and aerobic fitness—affect the technical

and physical aspects of juvenile football. This research highlights the relationship between physical characteristics and on-field performance and argues that physical development should be considered an essential component of player development rather than being seen in a vacuum. However, it is essential to consider how a focus on physical performance could affect young football strategies and tactics, perhaps making physicality the game's most crucial component. A. L. Kelly et al., (2022) mention more excellent lob pass and dribbling ability as factors associated with talent development. Höner et al., (2021) specifically mention sprint and dribbling skills in assessing potential talent predictors. Technical skills are also highlighted as critical physical factors. These results highlight the value of technical skill and pure physical traits, indicating the need for development programs that strike a balance between the two. Even if the significance of these physical components is obvious, it is vital to consider their development and evaluation. Suppose that existing physical traits are given too much weight. In that case, talent scouting may become too short-sighted and overlook individuals with other, more desirable attributes who may acquire these features later in life. Furthermore, hazards are associated with early, intense physical training, such as a greater chance of injury and even burnout. Encouraging physical and technical talent in a manner that promotes long-term growth and general well-being is a problem for talent development programs.

### **Conclusion**

This thorough examination of youth football skill development reveals a complex, multidimensional process driven by a complex web of interrelated psychological, social, environmental, biological, educational, physical, and mental toughness variables. The results highlight the need for a paradigm change in methods for developing talent, going beyond limited ideas that define talent mainly as skill or physical ability and adopting a more comprehensive, developmentally aware perspective. This study emphasizes how critical psychological elements such as motivation and self-efficacy determine a young athlete's development. It also highlights the significant influence that societal elements—such as gender norms, financial position, and family support—have on the processes involved in developing talent.

Future studies on the role of social elements seem to be quite intriguing. The surprising discovery A. L. Kelly et al., (2024) that a lower socioeconomic level is linked to a higher coach-perceived potential defies expectations calls for further research. Subsequent research endeavors may delve into the processes behind this correlation, scrutinizing how player motivation, resilience, and skill development are impacted by socioeconomic background.

Further investigation of the effects of historical prejudices and gender stereotypes on the circumstances in which boys and girls develop their talents Lyons et al., (2024) at talent development centers is necessary. Research might examine how these biases appear in player opportunities,

coaching methods, and resource distribution. It could also assess methods for establishing more equal growth routes. One of the practical ramifications of this research is the need for comprehensive talent development initiatives that consider each of the seven critical elements. Football organizations should work to provide resource-rich, nurturing settings that foster not only technical and physical capabilities but also social support, psychological fortitude, and cognitive capacities. The various characteristics of talent development should be emphasized in coach education programs, providing coaches with tools to identify and develop potential in various socioeconomic and cultural circumstances.

Furthermore, to reduce the relative impact of age and consider individual variances in biological maturation, talent detection procedures should be altered. Future research should concentrate on longitudinal studies to obtain a deeper understanding of how these variables interact over time and in diverse cultural settings. More research is needed to determine how sociocultural variables affect the paths of talented individuals, particularly in marginalized or underrepresented areas. Using this comprehensive, culturally aware talent development method, the football community may endeavor to establish more efficient, moral, and inclusive channels for raising the next generation of players.

### Conflict of interest

The authors declare that they have no conflicts of interest.

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