education sciences

Article

Coaches' Subjective Perceptions and Physical Performance: Key Factors in Youth Football Talent Identification—An Exploratory Study

Federico Abate Daga [1,*], Ruben Allois [1], Massimiliano Abate Daga [2], Franco Veglio [2] and Samuel Agostino [2]

[1] Department of Clinical and Biological Sciences, University of Turin, 10100 Turin, Italy
[2] Department of Medical Sciences, University of Turin, 10100 Turin, Italy
* Correspondence: federico.abatedaga@unito.it

Abstract: This study examines the subjective attributes that coaches consider most important for identifying and developing the talent of junior élite football players. It also explores whether players' physical fitness efficiency moderates these attributes and influences playing time during the regular season. Forty-three junior élite football players and four Italian Serie A club coaches participated in the study, contributing their unique perspectives and experiences. Players' physical fitness was assessed using the Yo-Yo Intermittent Recovery Level 1 test, while coaches rated players' abilities through a structured questionnaire. A significant positive relationship was found between 'understanding of the game and position on the field' and total playing time (t = 3.498, $p < 0.01$, β = 0.953). Physical efficiency further strengthened this relationship when players' fitness levels were average (b = 0.624, $p < 0.001$) and one standard deviation above the mean (b = 0.891, $p < 0.001$). These findings highlight the importance of tactical awareness in earning playing time and suggest that physical fitness enhances the effect of cognitive abilities on performance. This study provides insights into how coaches assess talent and underscores the value of integrating physical and tactical development in youth football, providing a testament to the power of collaboration in advancing our understanding of talent identification in sports.

Keywords: youth football; junior élite; subjective perception; football coaches; coaches and players behaviour

Citation: Abate Daga, F.; Allois, R.; Abate Daga, M.; Veglio, F.; Agostino, S. Coaches' Subjective Perceptions and Physical Performance: Key Factors in Youth Football Talent Identification—An Exploratory Study. *Educ. Sci.* **2024**, *14*, 1400. https://doi.org/10.3390/educsci14121400

Academic Editor: Robyn M. Gillies

Received: 14 October 2024
Revised: 21 November 2024
Accepted: 17 December 2024
Published: 20 December 2024

1. Introduction

Soccer, or football, is the most widely practised team sport globally, with participation spanning all levels of competition [1]. This prominence is reflected in the significant attention given to soccer by mass media, including newspapers, television, radio broadcasters, and social media, which dedicate substantial coverage to events ranging from local community leagues to global tournaments like the FIFA World Cup [2]. Beyond its role in public entertainment, soccer is also central in sports science literature. It is the most extensively studied sport, with approximately 14,000 citations on PubMed—almost 60% more than tennis, the second-most-studied discipline [3]. Despite this extensive body of research, there remains a critical gap in understanding regarding the dynamics of talent identification in youth football. While adult soccer dominates the literature, studies focusing on youth, typically categorised as "teenage" players, represent a smaller proportion, amounting to approximately 3000 articles [4,5]. This disparity is notable, given that talent identification and development during adolescence play a pivotal role in shaping future élite athletes. Early recognition of potential talent is essential for professional clubs' youth academies, as these institutions allocate substantial resources annually to developing young players. Investments often include academic support, specialised residence facilities, transportation, and comprehensive training programmes led by highly qualified coaches [5–7]. These academies' ability to succeed relies heavily on the accuracy of their talent identification

processes. These processes are often composed of a complex interplay between subjective evaluations by coaches (frequently influenced by personal biases) and objective performance metrics [8,9], such as physical fitness and skill assessments. However, the interaction between these two dimensions remains underexplored in the current literature. This gap is particularly concerning, as integrating subjective insights with measurable physical attributes could provide a more comprehensive and accurate framework for identifying and nurturing talent [10,11]. Moreover, previous studies suggest that subjective evaluations often prioritise technical, tactical, or psychological characteristics, reflecting coaches' preferences and philosophies [12]. While these assessments can offer valuable qualitative insights, they are prone to cognitive biases such as the "Halo Effect," potentially distorting evaluations when a single positive attribute disproportionately influences a coach's overall judgement of a player [13]. This bias highlights the importance of complementing subjective evaluations with objective data. Yet, few studies have rigorously examined how these factors interact in real-world youth football environments [14].

Talent identification in team sports such as soccer requires a nuanced approach, as players' performance depends on integrating physical, physiological, technical, and tactical abilities and psychological and sociological influences [11,15]. Consequently, a comprehensive and interdisciplinary approach is widely advocated for identifying and nurturing young talent. This approach emphasises integrating various evaluative methods to reduce bias in young players' evaluation, and recent research underscores the importance of such integrated systems [15–18]. Considering this, a holistic strategy provides a more comprehensive view of a player's capabilities and potential, addressing the multifaceted nature of football performance and the developmental variability observed in youth players. This is particularly critical in high-stakes environments like professional academies, where talent decisions can have long-term implications for the athlete and the organisation.

Despite increasing recommendations in support of adopting a holistic and multidisciplinary approach to talent identification, limited research has rigorously examined the intersection of subjective perceptions and objective physical performance data in youth football. Coaches and recruiters often rely on subjective evaluations, which provide valuable insights into technical, tactical, and psychological attributes but are prone to cognitive biases, such as the "Halo Effect [19,20]. On the other hand, objective data, including physical fitness measurements, offer quantifiable benchmarks but may fail to capture the contextual and nuanced aspects of player performance. The lack of clarity on how these two evaluative dimensions align creates a pressing need for studies exploring their relationship and combined impact on player development and match participation.

This study addresses these gaps by investigating the subjective attributes coaches perceive as critical in identifying and developing talent among junior élite football players. By integrating these subjective perceptions with objective data, such as physical fitness efficiency, the research provides a more comprehensive understanding of the factors influencing playing time. Furthermore, it explores the role of physical fitness efficiency as a potential moderating factor in the relationship between coaches' subjective assessments and players' actual playing time during the competitive season. Such an approach contributes to the growing talent identification knowledge and offers practical implications for optimising decision-making processes in professional youth academies.

2. Materials and Methods

2.1. Study Design and Ethical Considerations

This cross-sectional study was approved by the Institutional Research Bioethics Committee of the University of Turin (0433611). The young male players and coaches in this study belonged to the youth academy of an Italian professional soccer club. Participation was voluntary, and parents consented to their sons being involved in this research by signing an informed consent statement. Therefore, players without parental approval were excluded from the study. The study was conducted at the end of the regular season, enrolling U15 and U16 players and coaches of a professional football club (Italian Serie A).

Players had to meet the following inclusion criteria for this study. Firstly, they had to be part of the club since the season began. Secondly, they were required to be outfield players and to be regularly involved in football training (attending a minimum of three out of five training sessions and one match per week). Finally, they needed to have remained uninjured for a long time (i.e., more than two consecutive months). Conversely, players would be excluded if they played as goalkeepers, did not train regularly (one session or fewer per week) or were recruited during the ongoing season. The exclusion of goalkeepers, although reasonable due to the distinct physical demands of their position, limits the generalizability of the findings to all youth footballers, and this should be mentioned.

Furthermore, the Yo-Yo Intermittent Recovery Test Level 1 (YYIRT1) assessed players' fitness efficiency. On the other hand, coaches' subjective perceptions of players' performance were evaluated using a questionnaire. Each coach had to pass judgment via a score from one to five for each questionnaire item. Coaches were trained to use the Likert scale to avoid rating biases and ensure consistency and reliability in subjective evaluations (Figure 1).

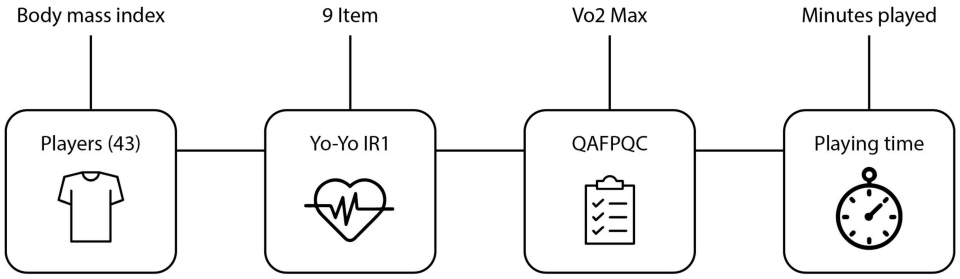

Figure 1. Graphical representation of the experimental design.

2.2. Participants

Fifty-two young èlite footballers, two head coaches, and two assistant coaches were recruited for this study. Participants belonged to the youth academy of a professional club. All players, coaches, and assistant coaches belonged to the U15 or U16 teams. All coaches were UEFA-certified, and their licences were regularly confirmed. Head coaches were UEFA A-licenced, while assistant coaches possessed UEFA B licences.

2.3. Procedures

All assessments were conducted in the last month of the regular soccer season. The physical fitness evaluation was performed on the training artificial turf to avoid a change in surface that might affect the outcomes. Secondly, the YYIRT1 was conducted on a sunny day at the beginning of the training schedule to prevent incoming fatigue and bad weather from impacting the evaluations. The typical training sessions took place from Tuesday to Friday, each lasting two hours, from 3 p.m. to 5 p.m. Each programme involved a 10 min warm-up conducted by the fitness coach and 20 min of practice matches at the end of the training. The central part of the schedule was dedicated to practicing three main skillsets, with 30 min dedicated to each. These included strength and conditioning with the fitness coach, soccer skills and abilities development with the assistant coach, and tactics with the head coach. Players were assigned to groups to ensure they paid adequate attention during tests, and their performances were monitored to avoid physical exertion outside of the evaluated parameters. Tuesday and Wednesday were chosen as the most suitable days to evaluate players. The testing session involved anthropometrics, physical fitness efficiency with YYIRT1, and a questionnaire to assess the quality of soccer players filled out by the coaches and their assistants. The first day of the evaluation (Tuesday) was addressed to U15, while the second (Wednesday) was discussed with U16. Before the testing session, the players performed 20 min standardised warm-up exercises of jogging, stretching, dynamic stretching, and rondos. Then, the players were split into three groups of 6–7 components. This procedure guaranteed an adequate number of players per testing station, improving their attention and helping them focus on the test performance. While

one group was performing the YYIRT1, the remaining players learned about tactics with the head coach. No physical effort was permitted to avoid incoming fatigue that could affect the outcomes. Before each test, footballers received clear verbal instructions and demonstrations. Researchers ensured that instructions were standardised across both age groups to maintain uniformity in testing conditions. After the training session, the head coaches and their assistants completed the questionnaire to assess the quality of soccer players. Once that player left the training centre, the questionnaire was filled in to avoid outside influence on the testing scores. Finally, each coach completed the evaluation questionnaire independently to minimise inter-rater reliability issues and prevent potential bias from peer influence.

2.4. Assessment of Anthropometric Status

In the changing room, body mass was measured to the nearest 0.1 kg (Rowenta BS1060, Erbach, Germany), with the players wearing only underwear. Standing height was calculated using a wall stadiometer with a precision of 0.01 m and a 60–210 cm range (Lanzoni D01602 H, Bologna, Italy). B.M.I. was calculated using a Microsoft Excel sheet, where the B.M.I. formula was previously inserted (B.M.I. = body weight/(height × height)).

Skeletal age was not measured. Even if it has been demonstrated that skeletal age can be considered the best measure of biological variability [21], all participants have reached their PHV (Peak Height Velocity).

2.5. The Yo-Yo Intermittent Recovery Test Level 1

The Yo-Yo Intermittent Recovery Test Level 1 was performed following the recommendations of Krustrup et al. [22] This test consists of repeated 2 × 20 m runs back and forth between the starting, turning, and finishing line at a progressively increased speed controlled by audio bleeps from a tape recorder. Between each bout of running, the subjects have a 10 s active rest period of 2 × 5 m jogging. In particular, this test involved four running intervals at 10–13 km/h (0–160 m) followed by seven runs at 13.5–14 km/h (160–440 m). Subsequently, the test continued with incremental speed increases of 0.5 km/h after every eight running bouts (i.e., after 760, 1080, 1400, 1720 m, etc.) until the players reached the point of exhaustion. The test was concluded when the player failed to reach the finishing line together with the "bleep" for two consecutive times. The distance covered is recorded and represents the test result. VO2 was automatically calculated by the digital app Yo-Yo Intermittent Pro version 4.55 for Android (Ruval Enterprises, Fox Meadow Ct Centreville, VA, USA) intended for smartphones that used the Bangsbo approach [23], with the following formula: VO_2max = (final distance (in metres) × 0.0084) + 36.4.

2.6. The Questionnaire for the Assessment of Football Player Quality by the Coach

This questionnaire was utilised for the first time in the study of Jukic and colleagues [20].

It was created to assess the main qualities that the coach's selection process was based upon, and this characteristic is particularly suitable for the aim of the present study. Moreover, Abate Daga and colleagues proposed a smoothly modified version [19] which suited their research better. The difference between the two versions consisted of the evaluation method. While Jukic and colleagues utilised a scoring range from letter A to letter D, Abate Daga and colleagues decided to register their scores using a Likert scale [24] from 1 to 5. This second approach was also utilised for this research. This strategy is part of the mindset that suggests applying a holistic multidisciplinary approach to talent identification [15]. The questionnaire comprised nine domains focused on technical, tactical, physical, and psychological characteristics: (1) passing and control of the ball; (2) leading the ball; (3) running with the ball; (4) the finishing technique at the goal; (5) heading; (6) understanding of the game and position on the field; (7) attitude towards the coach and training sessions; (8) competitiveness and enthusiasm before a match; and (9) speed and agility [20]. Players were evaluated on a scale of 1 to 5 (1 = feeble; 2 = somewhat flawed;

3 = average performance, 4 = good; 5 = excellent). Coaches completed the questionnaire immediately after the training sessions to avoid external influence on their subjective evaluations.

2.7. Assessment of the Players' Playing Time

Players playing time was calculated by recording the number of minutes played in each official match. A staff member marked the exact number of minutes played by each player on an official club report form created in a dedicated Excel sheet. The Excel sheet automatically calculated the total playing time using the "SUM" function.

2.8. Statistical Analysis

All data were analysed using SPSS, version 28.0.1.0 (SPSS Inc., Chicago, IL, USA).

Descriptive statistics ((mean and standard deviation (S.D.)) were used to present participants' demographic data. In addition, Cronbach's Alpha was calculated to assess questionnaire reliability.

The data's distributions were assessed for normality using Q-Q plots and frequency histograms. Based on the results of both analyses, the assumption of normality appears tenable, suggesting that the data can follow a roughly normal distribution.

Firstly, a bivariate correlation was conducted to observe correlations between the variables. Before the completion of the multiple regression analysis, z-scores were examined to ensure the absence of abnormal values and univariate outliers. In addition, Mahalanobis distances were computed to assess the presence of multivariate outliers. With five variables and a critical probability level set at 0.01, the critical chi-square value was 20.51. The highest observed Mahalanobis distance was 15.48, which fell below the required threshold. Additionally, tolerance and V.I.F. values were examined, indicating no evidence of multicollinearity among the variables. These preliminary steps confirmed the suitability of the data for the subsequent multiple regression analysis. The mean of standardised residuals is equal to 0, indicating that, on average, the residuals are centred around 0, which aligns with the assumption of a well-fitted regression model. Furthermore, the Durbin–Watson test was conducted to examine autocorrelation among the residuals, resulting in a value of 0.152. Subsequently, a moderation model was performed using PROCESS v4.2 for SPSS, and significance was set at $p < 0.05$.

3. Results

Fifty-two young élite footballers were recruited for this study. However, nine were excluded from this study because they did not meet the inclusion criteria. In particular, six were goalkeepers, one was acquired from another team during the ongoing season, and two players did not train regularly (at least three sessions per week), were injured or were yielded to other clubs during the season. Therefore, the remaining forty-three players were eligible for this study, and their data were considered for further analysis. The players' mean weight was 60.10 ± 7.56 kg; the mean height was 174.10 ± 7.47 cm, and the mean B.M.I. was 19.78 ± 1.78 kg/m^2. The sample belonged to the youth academy of a professional football club. Participants' anthropometric characteristics are represented in Table 1. Cronbach's Alpha coefficient was 0.843, indicating the questionnaire's high reliability. Furthermore, an additional Cronbach's Alpha coefficient based on standardised items was calculated as 0.842, confirming the consistency of the questionnaire's reliability regardless of item standardisation. To further ensure the robustness of the analysis, the results were reviewed for potential biases and outliers, with steps taken to exclude data that could significantly skew the results. These included rechecking the standard deviation to ensure that extreme values did not compromise the sample homogeneity.

Table 1. Representation of players' anthropometrics, physical efficiency and coaches' subjective perception (questionnaire items' score).

Players = 43	**Mean (SD)**
Age	14.62 (0.49)
Anthropometrics	
Weight (kg)	60.10 (7.56)
Height (cm)	174.10 (7.47)
BMI	19.78 (1.78)
Physical test	
VO2 Max (mL/kg/min)	47.41 (3.59)
Subjective evaluations	
Passing and control of the ball	2.93 (0.88)
Leading the ball	3.08 (0.84)
Running with the ball	2.95 (0.84)
The finishing technique at the goal	2.78 (0.80)
Heading	2.22 (0.70)
Understanding of the game and their position on the field	2.72 (0.97)
Attitude towards the coach and training sessions	3.55 (0.79)
Competitive character and enthusiasm before a match	3.08 (0.95)
Speed and agility	3.05 (0.86)

The correlation analysis between the variable "playing time" and various questionnaire items related to the coach's perception of different soccer skills revealed significant positive associations ($p < 0.01$) with passing and control of the ball (r = 0.471), the finishing technique at the goal (r = 0.432), understanding of the game and position on the field (r = 0.652), and competitiveness and enthusiasm before a match (r = 0.466). On the other hand, no significant correlations ($p > 0.05$) were found between "playing time" and leading the ball (r = 0.281), running with the ball (r = 0.302), heading (r = 0.292), attitude towards the coach and training sessions (r = 0.203), and speed and agility (r = 0.247). In summary, the variable "playing time" demonstrated significant positive relationships with passing and control of the ball, the finishing technique at the goal and understanding of the game and position on the field. In contrast, no significant correlations were detected with leading the ball, running with the ball, heading, attitude towards the coach and training sessions, and speed and agility. Interestingly, while physical fitness (VO2 Max) did not directly correlate with playing time, its role as a potential moderating factor became more evident in the later stages of the analysis, underscoring the importance of contextualising physical data within broader tactical and technical assessments (Table 2).

Table 2. Correlation table of whole variables.

	Playing Time	**VO2 Max**	**Passing and Control of the Ball**	**Leading the Ball**	**Running with the Ball**	**The Finishing Technique at the Goal**	**Heading**	**Understanding of the Game and Their Position on the Field**	**Attitude Towards the Coach and Training Sessions**	**Competitive Character and Enthusiasm Before a Match**
Playing time	--									
VO2 Max	−0.091	—								
Passing and control of the ball	0.471 **	0.084	—							
Leading the ball	0.281	0.228	0.877 **	—						
Running with the ball	0.303	0.151	0.778 **	0.916 **	—					
The finishing technique at the goal	0.432 **	−0.228	0.698 **	0.676 **	0.678 **	—-				
Heading	0.292	−0.142	0.102	−0.071	−0.033	0.131	—			
Understanding of the game and their position on the field	0.652 **	0.214	0.795 **	0.667 **	0.630 **	0.582 **	0.433 **	—		
Attitude towards the coach and training sessions	0.203	0.367 *	0.228	0.210	0.309 *	0.167	0.532 **	0.563 **	—	
Competitive character and enthusiasm before a match	0.466 **	−0.019	0.609 **	0.429 **	0.428 **	0.608 **	0.517 **	0.721 **	0.513 **	—
Speed and agility	0.247	0.321	0.499 **	0.627 **	0.710 **	0.395 **	0.042	0.502 **	0.544 **	0.462 **

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Secondly, the multiple regression analysis examined the relationship between the dependent variable, "playing time", and several questionnaire items that identify the rate of coaches' subjective perception of players' level of performance. The regression model demonstrated a statistically significant fit to the data, F (5, 27) = 5.785, $p < 0.001$. The model accounted for 51.7% of the variance in the dependent variable, with an R-squared value of 0.517. Among the predictor variables, "passing and control of the ball" did not show a significant relationship with "playing time" (t = −0.675, $p = 0.506$, β = −0.174). Similarly, "the finishing technique at the goal" also did not demonstrate a statistically significant association with "playing time" (t = 0.037, $p = 0.971$, β = 0.007). Furthermore, "competitiveness and enthusiasm before a match" did not exhibit a significant relationship with "playing time" (t = −0.136, $p = 0.495$, β = −0.136). On the other hand, the item "understanding of the game and position on the field" displayed a significant positive relationship with "playing time" (t = 3.498, $p < 0.01$, β = 0.953). This confirms that coaches prioritise cognitive and tactical aspects over technical skills when determining playing time, especially in élite junior football, in which technical proficiency tends to be more homogeneous. Finally, the objective variable of physical efficiency, "VO2 Max", was also insignificant (t = −1.761, $p = 0.090$, β = −0.269). The analysis suggests that "understanding of the game and position on the field" is the only item that significantly predicts the variable "playing time". The Variance Inflation Factor (V.I.F.) ranged from 1.143 to 4.153, indicating acceptable levels of multicollinearity among the predictor variables (Table 3).

Table 3. The table represents the multiple regression model, the moderation model, and the simple slope analysis.

Parameters	Coeff (β)	SE	t	*p*	LLCI	ULCI
	Multiple Regression Model					
Passing and control of the ball	−0.174	0.253	−0.675	0.506	−0.690	0.348
The finishing technique at the goal	0.007	0.205	0.037	0.971	−0.413	0.428
Understanding of the game and their position on the field	0.953	0.260	3.498	<0.01	0.376	1.443
Competitive character and enthusiasm before a match	−0.136	0.190	−0.692	0.495	−0.520	0.258
VO2 Max	−0.269	0.153	−1.761	0.090	−0.583	0.044
$R^2 = 0.517; F(5,27) = 5785, p < 0.001$						
	Moderation model					
Tactical skills **	0.617	0.122	5.122	<0.001	0.229	0.7411
VO2 Max	−0.258	0.123	−2.088	0.491	−0.168	0.348
Tactical skills*VO_2Max	0.266	0.113	2.337	<0.01	0.072	0.468
$R^2 = 0.577, F(3,29) = 13.235, p < 0.001.$						
* Dependent variable: Playing time						
	Simple Slope analysis					
VO2 Max Mean −1 SD	0.357	0.181	1.972	0.058	−0.013	0.728
VO2 Max Mean	0.624	0.119	5.213	<0.001	0.379	0.869
VO2 Max Mean + 1 SD	0.891	0.147	6.026	<0.001	0.588	1.19

* The dependent variable is "Playing time", which represents the actual playing time that players spend on the field during competitions. ** Understanding of the game and their position on the field.

Finally, a moderation model (Figure 2) was carried out to examine whether "VO2 Max" moderates the effect of "understanding of the game and position on the field" on the "playing time". The statistical analysis indicates that 57.8% of the variance observed can

be accounted for, and the results are statistically significant (F (3, 29) = 13.235, $p < 0.001$). The study reveals that "understanding of the game and position on the field" (β = 0.617, $p < 0.001$) have a significant main effect, while VO2 Max does not (β = −0.258, $p = 0.491$). The interaction effect was also significantly different from zero (β = 0.266, $p < 0.05$). The impact of tactical skills was assessed at various levels of the moderator VO2 max using the simple slope analysis. The item "understanding of the game and position on the field" failed to predict the playing time for players showing VO2 Max levels assessed around one standard deviation below the mean (b = −0.974, $p = 0.058$). However, a significant effect was observed for individuals with average VO2 Max (b = 0.624, $p < 0.001$) and those whose levels are one or more than one standard deviation above the mean (b = 0.891, $p < 0.001$) (Figure 3, Table 3).

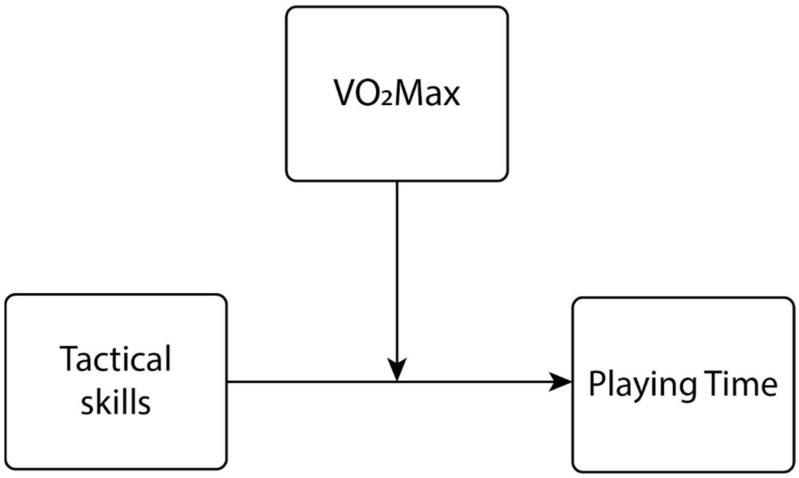

Figure 2. Graphical representation of the moderation model. Tactical skills refer to the item "understanding the game and position on the field".

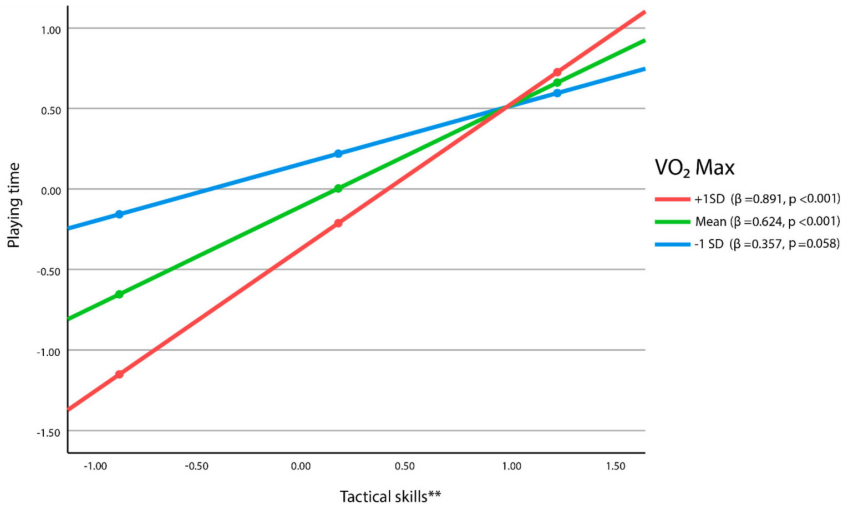

Figure 3. Graphical representation of the simple slope analysis. Inspecting the figure from the bottom to the top, the first line represents players with a physical efficiency of one standard deviation above the mean, the second line averages physically efficient players, and the third line depicts footballers with a physical efficiency of one standard deviation below the mean. Physical efficiency, represented as VO2 Max, positively moderated the effect of tactical skills on the total playing time only for players that showed average levels (b = 0.624, $p < 0.001$) and those whose levels are one standard deviation above the mean (b = 0.891, $p < 0.001$). ** This information improves our understanding of the game and position on the field.

4. Discussion

The primary purpose of this study was to investigate the most relevant subjective attributes that coaches believe to be "most important" for the talent identification of young élite footballers. Using total playing time during the regular season and the subjective coach perception of players' level, this study revealed several key findings. Notably, it became clear coaches prioritised tactical understanding and positioning over technical skills, reflecting a broader trend in modern football that emphasises "football intelligence" as the player's ability to read the game and react appropriately. The correlation analysis revealed a positive association between some questionnaire items for the subjective perception of the players' performance level assessment and the total playing time. In particular, the ability to pass and control the ball (r = 0.471), to shoot a goal (r = 0.432), to understand the game and position on the field (r = 0.652), and competitiveness and enthusiasm before a match (r = 0.466) were all positive associated with a more significant playing time. This outcome aligns with most of the current literature that confirms technical and tactical factors as the most relevant to the talent identification process [25–27]. Thus, these factors influence coaches' perception of each player's performance level, and the current study underlines it. However, the multiple regression analysis indicated that only the item understanding of the game and position on the field demonstrated a significant relationship with the actual playing time during a season, while the other items, even if positively associated, did not. This discrepancy between the perceived importance of technical skills and their actual influence on playing time suggests that coaches may take these skills for granted at the élite junior level, where technical proficiency is more uniform. As the players recruited to élite youth academies already possess a high level of technical competence, tactical awareness and cognitive abilities become critical differentiators in match play. This finding is consistent with recent studies emphasising the growing importance of tactical and psychological attributes in élite football development [24,25].

In addition, despite the importance of physical fitness in football, the objective measure—physical efficiency—was not directly associated with playing time. This factor may be due to the homogeneity in physical condition in youth élite players that undergo similar training regimes. However, the moderation analysis revealed that physical fitness does play a critical role as a moderating factor. Tactical skills and game understanding were stronger predictors of playing time for players with average or above-average physical fitness. This finding suggests that a baseline level of physical fitness may be necessary to fully realise the benefits of tactical abilities, highlighting the interplay between physical and cognitive factors in determining player success [27,28].

However, simultaneously, this finding partially contrasts with some previous literature. Although passing and controlling the ball and the finishing technique at the goal (technical domain) were positively associated with playing time in the correlation analysis, they did not emerge as significant predictors in the multiple regression analysis. The players' technical level in the study can likely explain this discrepancy. As élite youth players, they were all recruited after rigorous selection processes and try-outs in earlier seasons. Typically, players with the highest technical proficiency during childhood were given more playing opportunities, and thus were later recruited by professional academies [29]. Thus, all players were technically proficient, and the general level was homogeneous. Consequently, the players' technical abilities in this sample were relatively homogeneous. Coaches may assume that a certain level of technical skill is expected at this élite level, thus giving other attributes greater emphasis. Moreover, the significant relationship between the understanding of the game and position on the field and the total playing time suggests that coaches prioritise "football intelligence," which involves psychological and cognitive skills crucial for effective decision-making on the field [30].

As regards physical efficiency, no relationship was found between the total playing time and players' VO_2 Max outcomes. The current literature underlines that, in youth football, biological maturation and physical efficiency are discriminant factors for determining players' performance and actual involvement during games [31–35], and the present data

seem to contrast with these theses. Similarly to technical abilities, in junior élite football, physical efficiency is another parameter that coaches take for granted when they evaluate the player's performance level. Therefore, considering these data, it may be affirmed that they do not consider this element a discriminant factor for the line-up and involving the players during matches.

Secondly, to better understand the mechanisms that induce coaches to favour certain players over others, this research seeks to determine if the player's physical fitness efficiency may moderate the discriminant power of the subjective item "understanding of the game and position on the field" on the total playing time during the regular season. This research identified physical efficiency as a cheerful moderator of the relationship between the coach's perception of players' tactical skills and abilities and the total amount of minutes played during the regular season. This means that higher levels of physical efficiency positively influence the coach's perception of the player's tactical skills and abilities, which can be explained by a more efficient interpretation of tactical demands during the match [36–38]. However, this condition is solid for those players who showed average physical efficiency levels, while it was more vital for those whose levels were one deviation standard above the mean. On the contrary, this condition was not valid for those players who displayed VO2 Max levels of about one standard deviation below par. In this case, tactical skills and abilities failed to predict the playing time, indicating that the coach had a negative perception of the player's football abilities due to insufficient physical efficiency. Therefore, this outcome suggests that coaches perceive a sort of physical "minimum wage" that élite junior players should guarantee to show and enhance their tactical skills and abilities, and the more tactically skilled they are, the more they can play during official matches.

Finally, this study has its limitations. First, these data refer to a limited number of junior élite players in one professional club. Future studies should aim to replicate these findings with larger samples across multiple clubs to ensure the generalisability of the results. The outcomes might change if more players and more than one club were involved in the measurements. Secondly, subjective perceptions might be unconsciously influenced by the coach's emotions and feelings derived from the final results of the regular season and might generate a bias in personal evaluation. Although this research took steps to minimise this risk, such as completing questionnaires after training sessions to reduce external influences, more sophisticated tools, such as video-assisted performance reviews, could be employed in future research to triangulate subjective ratings with objective match data. However, engaging junior élite coaches, players, and clubs in research programmes often presents challenges due to variations in methodological guidelines, field-testing protocols, and competitive dynamics between clubs. Despite these difficulties, the fundamental strength of this study lies in its exploration of the factors that shape coaches' subjective perceptions of players' abilities and the mechanisms behind their selection preferences. Moreover, the findings highlight the role of physical efficiency as a critical asset in supporting tactical performance. Enhancing players' physical fitness may lead to greater tactical effectiveness on the field. For this reason, the findings of this study offer several practical applications for coaches and football academies. First, the emphasis on tactical awareness and game intelligence should encourage academies to focus more on developing these cognitive aspects, particularly in youth players who have already demonstrated a high level of technical skill. Secondly, while physical fitness alone may not guarantee more playing time, maintaining an adequate fitness level is crucial as it enhances the effectiveness of a player's tactical contributions. Therefore, training programmes should continue integrating tactical drills with fitness development to optimise performance on the field. Future research should explore additional variables that might influence the subjective perceptions of coaches, such as psychological resilience or leadership qualities. Secondly, a more significant sample and more coaches may be involved in future studies to empower the findings. Moreover, longitudinal studies that track the development of these attributes over time could provide valuable insights into how early perceptions of talent evolve as players mature. Finally, studies using more advanced statistical techniques, such as structural equation modelling,

could help untangle the complex relationships between subjective evaluations, physical attributes, and performance outcomes.

5. Conclusions

In conclusion, this study identified that players' tactical skills and game intelligence are the most influential factors shaping coaches' perceptions of their performance and playing time during the regular season. The findings emphasise that while technical skills remain important, they are often assumed to be at a high level in élite youth football. Thus, they are not the primary differentiating factor in playing time allocation. Instead, coaches appear to value cognitive attributes, such as understanding the game and positioning on the field, as these skills are crucial for success at higher levels of competition.

Furthermore, the results revealed that physical fitness, while not directly related to playing time, moderates the impact of tactical abilities. This suggests that, although physical fitness alone may not guarantee increased playing time, it is a foundational element that allows players to execute their tactical responsibilities on the field better. Therefore, a "minimum threshold" of physical efficiency is essential for players to fully leverage their cognitive and tactical skills.

These findings offer valuable insights for coaches and training staff in professional and amateur football clubs. They underscore the importance of developing technical skills and cognitive and physical aspects of a player's game. By integrating tactical training with fitness programmes, coaches can help players optimise their potential for success and playing time.

Author Contributions: Conceptualisation, F.A.D. and S.A.; methodology, F.A.D. and S.A.; software (graphics and data), S.A. and R.A.; validation, F.V. and M.A.D.; formal analysis, S.A.; investigation, S.A. and M.A.D.; resources, M.A.D. and R.A.; data curation, S.A.; writing—original draft preparation, F.A.D.; writing—review and editing, F.V.; visualisation, M.A.D.; supervision, F.V.; project administration, F.A.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted according to the Declaration of Helsinki and approved by the Institutional Research Bioethics Committee of the University of Turin (protocol number 0433611 date 20 June 2023).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are unavailable for sharing due to club owner restrictions and Italian privacy law.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Junge, A.; Dvořák, J. Football injuries during the 2014 FIFA World Cup. *Br. J. Sports Med.* **2015**, *49*, 599–602. [CrossRef] [PubMed]
2. Nicholson, M. *Sport and the Media: Managing the Nexus*; Elsevier: Amsterdam, The Netherlands, 2007.
3. Kirkendall, D.T. Evolution of soccer as a research topic. *Prog. Cardiovasc. Dis.* **2020**, *63*, 723–729. [CrossRef] [PubMed]
4. Sarmento, H.; Anguera, M.T.; Pereira, A.; Araújo, D. Talent Identification and Development in Male Football: A Systematic Review. *Sports Med.* **2018**, *48*, 907–931. [CrossRef]
5. Rees, T.; Hardy, L.; Güllich, A.; Abernethy, B.; Côté, J.; Woodman, T.; Montgomery, H.; Laing, S.; Warr, C. The Great British Medalists Project: A Review of Current Knowledge on the Development of the World's Best Sporting Talent. *Sports Med.* **2016**, *46*, 1041–1058. [CrossRef]
6. O'Connor, D.; Larkin, P.; Williams, A.M. Observations of youth football training: How do coaches structure training sessions for player development? *J. Sports Sci.* **2018**, *36*, 39–47. [CrossRef]
7. Howells, K.; Fletcher, D. Sink or swim: Adversity-and growth-related experiences in Olympic swimming champions. *Psychol. Sport Exerc.* **2015**, *16*, 37–48. [CrossRef]
8. Carling, C.; Le Gall, F.; Reilly, T.; Williams, A.M. Do anthropometric and fitness characteristics vary according to birth date distribution in elite youth academy soccer players. *Scand. J. Med. Sci. Sports* **2009**, *19*, 3–9. [CrossRef]

9. Ungureanu, A.N.; Beratto, L.; Daga, F.A.; Boccia, G.; Lupo, C.; Brustio, P.R. Changes in anthropometric and fitness profile of Italian regional academy rugby union players. *Biol. Sport* **2022**, *39*, 621–628. [CrossRef]
10. Dugdale, J.H.; Sanders, D.; Myers, T.; Williams, A.M.; Hunter, A.M. A case study comparison of objective and subjective evaluation methods of physical qualities in youth soccer players. *J. Sports Sci.* **2020**, *38*, 1304–1312. [CrossRef]
11. Unnithan, V.; White, J.; Georgiou, A.; Iga, J.; Drust, B. Talent identification in youth soccer. *J. Sports Sci.* **2012**, *30*, 1719–1726. [CrossRef]
12. Jiménez Sáiz, S.L.; Leal, S.D.; Santos, D.; Calvo, A.L.; Fuhre, J.; Øygard, A.; Saether, S.A. Coaches' Criteria for Talent Identification of Youth Male Soccer Players. *Sports* **2022**, *10*, 14. [CrossRef] [PubMed]
13. Yustina, A.I.; Gudono, G. Halo Effect in Subjective Performance Evaluation Bias. *J. Econ. Bus. Account. Ventur.* **2017**, *19*, 393–404. [CrossRef]
14. Till, K.; Baker, J. Challenges and [Possible] Solutions to Optimizing Talent Identification and Development in Sport. *Front. Psychol.* **2020**, *11*, 664. [CrossRef] [PubMed]
15. Larkin, P.; O'Connor, D. Talent identification and recruitment in youth soccer: Recruiter's perceptions of the key attributes for player recruitment. *PLoS ONE* **2017**, *12*, e0175716. [CrossRef] [PubMed]
16. Abate dDga, F.; Baseggio, L.; Gollin, M.; Beratto, L. Game-based versus multilateral approach: Effects of a 12-week program on motor skill acquisition and physical fitness development in soccer school children. *J. Sports Med. Phys. Fit.* **2020**, *60*, 1185–1193. [CrossRef]
17. Sannicandro, I.; Agostino, S.; Abate Daga, M.; Veglio, F.; Abate Daga, F. Developing the Physical Performance in Youth Soccer: Short-Term Effect of Dynamic-Ecological versus Traditional Training Approach for Sub-Elite U13 Players-An Ecological Exploratory Cluster Randomised Trial. *J. Funct. Morphol. Kinesiol.* **2024**, *9*, 83. [CrossRef]
18. Čaušević, D.; Covic, N.; Ibrahimović, M.; Mustafovic, E.; Causevic, D.; Ibrahimovic, M.; Alic, H.; Abazovic, E.; Masic, S. Talent Identification in Youth Football: A Systematic Review. *Artic. J. Anthropol. Sport Phys. Educ.* **2020**, *4*, 37. [CrossRef]
19. Abate Daga, F.; Veglio, F.; Cherasco, G.M.; Agostino, S. The Influence of Subjective Perceptions and the Efficacy of Objective Evaluation in Soccer School Players' Classification: A Cross-Sectional Study. *Children* **2023**, *10*, 767. [CrossRef]
20. Jukic, I.; Prnjak, K.; Zoellner, A.; Tufano, J.J.; Sekulic, D.; Salaj, S. The importance of fundamental motor skills in identifying differences in performance levels of u10 soccer players. *Sports* **2019**, *7*, 178. [CrossRef]
21. Malina, R.M. Skeletal Age and Age Verification in Youth Sport. *Sports Med.* **2011**, *41*, 925–947. [CrossRef]
22. Krustrup, P.; Mohr, M.; Amstrup, T.; Rysgaard, T.; Johansen, J.; Steensberg, A.; Pedersen, P.K.; Bangsbo, J. The Yo-Yo intermittent recovery test: Physiological response, reliability, and validity. *Med. Sci. Sports Exerc.* **2003**, *35*, 697–705. [CrossRef] [PubMed]
23. Bangsbo, J. *Fitness Training in Football: A Scientific Approach*; August Krogh Institute, University of Copenhagen: København, Denmark, 1994; p. 336. Available online: https://books.google.com/books/about/Fitness_Training_in_Football.html?hl=it&id=piKLQgAACAAJ (accessed on 25 August 2023).
24. Jebb, A.T.; Ng, V.; Tay, L. A Review of Key Likert Scale Development Advances: 1995–2019. *Front. Psychol.* **2021**, *12*, 637547. [CrossRef] [PubMed]
25. Huijgen, B.C.H.; Elferink-Gemser, M.T.; Lemmink, K.A.P.M.; Visscher, C. Multidimensional performance characteristics in selected and deselected talented soccer players. *Eur. J. Sport Sci.* **2014**, *14*, 2–10. [CrossRef] [PubMed]
26. Towlson, C.; Cope, E.; Perry, J.L.; Court, D.; Levett, N. Practitioners' multi-disciplinary perspectives of soccer talent according to phase of development and playing position. *Int. J. Sports Sci. Coach.* **2019**, *14*, 528–540. [CrossRef]
27. Zuber, C.; Zibung, M.; Conzelmann, A. Holistic patterns as an instrument for predicting the performance of promising young soccer players—A3-years longitudinal study. *Front. Psychol.* **2016**, *7*, 1088. [CrossRef]
28. Forsman, H.; Gråstén, A.; Blomqvist, M.; Davids, K.; Liukkonen, J.; Konttinen, N. Development of perceived competence, tactical skills, motivation, technical skills, and speed and agility in young soccer players. *J. Sports Sci.* **2016**, *34*, 1311–1318. [CrossRef]
29. Kelly, A.; Wilson, M.R.; Jackson, D.T.; Goldman, D.E.; Turnnidge, J.; Côté, J.; Williams, C.A. A multidisciplinary investigation into "playing-up" in academy football according to age phase. *J. Sports Sci.* **2021**, *39*, 854–864. [CrossRef]
30. Kelly, A.L.; Williams, C.A.; Cook, R.; Sáiz, S.L.J.; Wilson, M.R. A Multidisciplinary Investigation into the Talent Development Processes at an English Football Academy: A Machine Learning Approach. *Sports* **2022**, *10*, 159. [CrossRef]
31. Toselli, S.; Mauro, M.; Grigoletto, A.; Cataldi, S.; Benedetti, L.; Nanni, G.; Di Miceli, R.; Aiello, P.; Gallamini, D.; Fischetti, F.; et al. Maturation Selection Biases and Relative Age Effect in Italian Soccer Players of Different Levels. *Biology* **2022**, *11*, 1559. [CrossRef]
32. Bidaurrazaga-Letona, I.; Lekue, J.A.; Amado, M.; Gil, S.M. Does A 1-Year Age Gap Modify the Influence of Age, Maturation, and Anthropometric Parameters as Determinants of Performance Among Youth Elite Soccer Players? *J. Strength Cond. Res.* **2019**, *33*, 2541–2547. [CrossRef]
33. Itoh, R.; Hirose, N. Relationship Among Biological Maturation, Physical Characteristics, and Motor Abilities in Youth Elite Soccer Players. *J. Strength Cond. Res.* **2020**, *34*, 382–388. [CrossRef] [PubMed]
34. Yang, S.; Chen, H. Physical characteristics of elite youth male football players aged 13–15 are based upon biological maturity. *PeerJ* **2022**, *10*, e13282. [CrossRef] [PubMed]
35. Abate Daga, F.; Panzolini, M.; Allois, R.; Baseggio, L.; Agostino, S. Age-Related Differences in Hamstring Flexibility in Prepubertal Soccer Players: An Exploratory Cross-Sectional Study. *Front. Psychol.* **2021**, *12*, 741756. [CrossRef]
36. Rampinini, E.; Impellizzeri, F.M.; Castagna, C.; Coutts, A.J.; Wisløff, U. Technical performance during soccer matches of the Italian Serie A league: Effect of fatigue and competitive level. *J. Sci. Med. Sport* **2009**, *12*, 227–233. [CrossRef]

37. Gomez-Piqueras, P.; Gonzalez-Villora, S.; Castellano, J.; Teoldo, I. Relation between the physical demands and success in professional soccer players. *J. Hum. Sport Exerc.* **2019**, *14*, 1–11. [CrossRef]
38. Bradley, P.S.; Carling, C.; Archer, D.; Roberts, J.; Dodds, A.; di Mascio, M.; Paul, D.; Diaz, A.G.; Peart, D.; Krustrup, P. The effect of playing formation on high-intensity running and technical profiles in English FA Premier League soccer matches. *J. Sports Sci.* **2011**, *29*, 821–830. [CrossRef]