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Short notice
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Talent Identification Best on Skill Above Average and Creativity in Youth Football Athletes

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Abstract: *Identification athletic talent is an important step that serves as the fundamental basis for the success of sports performance development systems, especially in soccer. The success or failure of a performance development system is greatly influenced by the talent identification process. However, there is still much speculation about the effectiveness of this instrument in identifying talented players, due to a lack of standardization in academic football circles. The purpose of this study is to test the validity and reliability of the skill above average and creativity test instruments for football athletes. This study is a development study conducted using a quantitative and qualitative approach. Data collection was carried out using the Delphi technique, involving five experts. Data analysis used the V-Aiken validity test, Cronbach Alpha, and Intraclass Correlation Coefficients (ICC) to test inter-rater reliability. Based on the results of the validity and reliability tests, the skill above average and creativity test instruments have a high level of validity and a good level of reliability. The validity test using V-Aiken yielded a result of 0.88, and the reliability test using Intraclass Correlation Coefficient ICC) showed a score of 0.789. Thus, the above-average skill and creativity test instrument for soccer athletes, which covers four aspects, namely anthropometry, physical, skills, and intelligence tests, can be used.*

Keywords: *Talent Identification, Football, Skill Above Average, Creativity, Athletes*

Introduction

It is generally accepted that performance in sports is influenced by the interrelationship of various complex factors (Ningrum et al, 2024). Aspects of sports such as physical fitness, mental readiness, physical development, motor skills, and tactical understanding all contribute simultaneously to optimal performance (Glazier, 2017) - Success in competitive soccer depends on several factors, such as technical, tactical, physical, and mental abilities (Kutlu et al., 2017) Given the existence of contemporary high-performance sports, increasing participation rates, and high performance expectations placed on athletes, individual success in this field increasingly depends on the combination of innate physical and psychological attributes. Currently, athletes blessed with the physiological and mental predispositions required for specific sports, particularly soccer, have a high tendency for success (Martirosyan & Stepanyan, 2025). Psychological aspects include intelligence, task commitment, self-confidence, independence, and adaptability, so athletes must have a strong mental mindset to achieve maximum performance (Jowett et al., 2017) . Therefore, an athlete's success in a match is not only determined by the perfection of their movements but also by the quality of their mental mindset

The proliferation of efforts to identify talent is interesting given the lack of a clear definition of what undiscovered talent is (Schorer et al.,2017). For example, (Simonton, 2017) states that a person's talent depends on a combination of genetic traits and environmental influences. The search for promising athletic prospects is typically conducted among individuals aged 10 to 15 years, using various methods and instruments (Larkin & O'Connor, 2017). It is important to develop valid and reliable strategies, methods, and instrument for recruiting athletes (Jokuschies et al., 2018). However, there is still much speculation about the effectiveness of these instruments in identifying talented players, due to a lack of standardization among soccer academies. The value oh physical testing programs in identifying and developing talents is still a topic of debate (Mendez-villanueva, 2012). The mechanism for identifying gifted children can be seen from three things, namely skill above average, task commitment, and creativity (Renzulli, 2012).

Skill above average can manifest as general or specific abilities. These abilities can be measured by aptitude or general intelligence tests, or by achievement tests or specific aptitude tests, such as in soccer (Ziegler, 2011) . The best test takers are not necessarily the most creative and productive people in the future. (Renzulli, 2021) recommends the

fair use of skill above average as an adequate selection criterion. Furthermore, Hendry suggests that predictions of future success can be made based on metrics such as height, weight, and body mass index. According to William et al., technical skills are a dominant factor in predicting the long-term success of trained players. Skills, decision-making, and strategies differ between 11 vs. 11 and 3 vs. 3 game formats, therefore observation is a consideration in identifying soccer talent (Williams, 2010) . It is important to note that the physical characteristics for various positions at the senior level are not yet fully developed among young players aged 8 to 14 years (Deprez et al., 2015).

Intelligence can be used effectively in planning athlete training programs (Connor et al., 2022) . Intelligence quotient (IQ) plays a 20% role in success in life (Ahmed, 2015) . IQ is one of the pillars of an athlete's success (Widohari et al., 2022) . Intelligence and talent are very important in developing athletes into professional athletes (Jurnal et al., 2020) . However, at an early age, many young players lack intelligence in thinking because Indonesian athletes are only talented in skills and physical abilities. Some professional soccer academies use competency tests to assess technical and physical skills. Invalid talent identification instruments, challenges in selecting the appropriate age for players to begin training, and suboptimal training delivery are believed to be contributing factors to the failure of the development process in professional soccer academies. The effectiveness of talent identification tools in soccer remains a subject of scientific debate (Primasoni et al., 2024). Although the causes of development failure are diverse, a crucial determining factor in the early stages of achieving quality input is the efficacy of talent search tools.

The main objective of this study is to discover talented athletes who have not yet been actively participating in certain sports, provide opportunities for talented young athletes to develop their athletic skills properly, direct children to sports that match their potential, guide children, improve effectiveness and efficiency in the coaching process and utilization of human resources, optimize athletic performance by involving talented athletes in competitions or sporting events, and understand the psychological aspects of athletes using IQ test. The results are expected to produce an instrument for identifying soccer talent and provide recommendations for identifying talent and the appropriate age for professional soccer academies to recruit talented players.

Materials and Methods

This study uses development research, also known as R&D research. Research and development aims to validate and refine products to align with the needs of research (Sugiyono, 2013). The research procedure used is Borg and Gall theory, which consists of ten stages. This method and model were chosen because they aim to produce a product in the form of a test instruments model for identifying the skill above average and creativity of soccer players. This research involved licensed soccer coaches and five sports and psychology practitioners. The data analysis of the construct validity of the skill abover average and creativity test used content validity. This study used four steps to validate the content. First, the author collected relevant research sources and conducted a participatory observasional study as a preliminary development. Second, the five experts assessed the product using the Delphi technique to 1 to 5 (Doolan-Noble et al., 2019). The third step was to analyze the quantitative data obtained from the assessments of the four experts using Aiken's V formula (Aiken, 1985).

The final step is the data analysis technique for testing the reliability of the skill above average and creativity test instruments developed by researchers using Cronbach's Alpha (Douglas G. Bonett, 2015) and using Intraclass Correlation Coefficients (ICC) (LG Portney, 2009) with the help of SPSS version 25. The conclusion for the reliability test using Cronbach's Alpha is that with n = 10, the R table value at a significance level of 5% is 0.632.

Data Analysis Technique

The validation of the instrument content is analyzed using the V-Aiken formulation, the range of V-Aiken values is 0 to 1, if the V value is <0.6 in the low category, if the V value is between 0.6 - 0.8 in the medium category, if the V value is >0.8 in the high category.

Table 1. *V-Aiken Formula*

$$V = \frac{\sum s}{n(c-1)}$$

$$s = r - lo$$

V is the Aiken scale for which the value will be sought
S is the result of reducing the validator's score with the lowest score
N is the number of validators
C is the highest validity value
Lo is the lowest validity value

The reliability of the instrument is analyzed using the Intraclass Correlation Coefficient (ICC), following the classification of the interpretation category of the analysis results (LG Portney, 2009).

Table 2. *ICC Value Category*

ICC Value	Interpretation
0.00 - 0.50	Poor Reliability
0.51 - 0.75	Moderate Reliability
0.76 - 0.90	Good Reliability
0.91 - 1.00	Excellent Reliability

Result

The assessment result were then analyzed using V-Aiken to determine the validity of the developed instrument, followed by ICC analysis to determine the reliability results.

Table 3. *Result of instrument validation using V-Aiken*

Grain	Assessment				S1	S2	S3	S4	∑s	n(c-1)	V	Description
	I	II	III	IV								
1	4	5	5	4	3	2	3	3	11	16	0.69	Medium
2	5	5	4	3	4	4	4	3	15	16	0.94	Tall
3	4	5	5	5	4	4	4	4	16	16	1.00	Tall
4	5	4	5	5	4	3	4	4	15	16	0.94	Tall
5	5	5	5	4	4	4	3	3	14	16	0.88	Tall
6	4	5	5	4	4	4	4	4	16	16	1.00	Tall
7	4	5	4	5	3	3	2	2	10	16	0.63	Medium
8	5	5	5	4	4	4	3	3	14	16	0.88	Tall
9	4	4	5	5	3	4	4	4	15	16	0.94	Tall
10	4	5	4	4	4	4	4	4	16	16	1.00	Tall
11	5	5	3	4	3	3	3	3	12	16	0.75	Medium
12	4	5	5	5	4	3	3	3	13	16	0.81	Tall
13	5	5	3	5	4	4	4	4	16	16	1.00	Tall
14	5	5	4	5	4	3	3	4	14	16	0.88	Tall
15	4	5	4	5	4	3	4	4	15	16	0.94	Tall

Table 4. *V-Aiken average results*

V	Description
0.88	Tall

Based on the data, the average V value was 0.88, while using 4 ratters with a scale of 1 to 5, the V table value was 0.79. These results show that the content validity of the developed instrument is valid and can be used.

Table 5. *Reliabilitas with interclass correlation coefficient (ICC)*

Intraclass Correlationb		95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.483a	.230	.742	4.844	14	42	.000
Average Measures	.789c	.544	.920	4.844	14	42	.000

The table shows that the reliability test results with ICC indicate an average measurement score of the 0.789. this score is considered good when interpreted in terms of ICC test results. Based on data collection and expert assessment results, the test instrument for identifying skill above average and creativity in soccer players was obtained from four aspects of assessment, namely anthropometric tests, biomotor tests, skill tests, and intelligence tests.

Table 6. *Anthropometric test assessment aspects*

Assessment Aspect	Description
Height	Height is an important factor for soccer players; proportional height (taller) will be more advantageous in terms of reaching high balls.
Weight	Body weight is closely related to the proportionality of a soccer player's body; being overweight will affect a soccer player's performance.

Table 7. *Aspects of biomotor test assessment*

Assessment Aspects	Description
Speed Acceleration: 20 meter sprint	The ability to run quickly from a stationary position is needed in a match. The higher the intensity.
Agility: Basic Movement	Used to assess physical abilities, particularly agility, speed, coordination, and power. These three aspects are essential to support a player's performance in the game.
Power: Triple Hop Jump	Tests to determine power, speed, and balance (lower body). Power is needed to kick the ball in the goal, speed is needed to outrun opponents, and balance is needed when competing for the ball in the air.
Power: Upper Body	Used to measure upper body strength using a basketball. Aimed at measuring goalkeepers.
Speed Maximum: 40 meter sprint	Measures maximum speed (the ability to run quickly from a stationary position, which is essential in the game). Explosive movements are required in many techniques in soccer.
Beep Test	Every sport requires aerobic energy, including soccer. Aerobic capacity is the foundation for developing the anaerobic alactic and anaerobic lactic energy systems.

Table 8. *Skill test assessment aspects*

Assessment Aspects	Description
David Lee Test	Measures speed in ball control (dribbling, control, passing). Basic passing techniques are absolutely essential in soccer. With good dribbling and control skills, players will have no difficulty when pressured by opponents.
Juggling Ball	Measures the ability to control the ball in the air. Good juggling skills indicate good ball feeling.

Table 9. *Aspects of intelligence test assessment*

Assessment Aspects	Description
Culture Fair Intelligence Test (CFIT)	Tests that do not use verbal stimuli but rather images and can be administered individually or in groups. These tests measure fluid intelligence, which is the ability to reason, learn new things, and solve problems based on available information.

Discussion

Football achievement is determined by the process of talent identification and development from various talent scouting (Williams et al., 2020). Talent identification best on skill above average and creativity in youth football athletes begins with designing an instrument model that suits the characteristics and needs of young people. The mechanism for identifying gifted children can be seen from three aspects, namely skill above average, task commitment, and creativity (Renzulli, 2012). This process involves the preparation of test component is developed based on relevant theories and practices to ensure that the tests can accurately measures talent.

This study focuses on instruments developed for young soccer players to measure anthropometric, physical, skill, and intelligence tests. The effectiveness of talent identification test instruments in soccer remains a subject of scientific debate (Primasoni et al., 2024). Therefore, the development of valid methods and instruments is very important and necessary in order to recruit talented athletes (Jokuschies et al., 2018). Then, the four aspects were validated by 5 expert judgments consisting of four sports practitioners and 1 psychology practicioner. After the data is assessed, instrument validation is carried out and intraclass correlation coefficient reliability is carried out so that the instrument developed has a high level of feasibility. The validity tests results showed an average calculated V value of 0.88 when using 4 ratters with a scale of 1 to 5, and a table V value of 0.79 thus content validity of the instrument was declared valid. While the reliability test results showed an intraclass correlation coefficient (ICC) of 0.789, which is considered good.

Conclusion

Based on the results of the talent identification research on skill above average and creativity for soccer atlhetes, it has been proven to be valid and reliable in measuring the potential of athletes from the aspects of anthropometric tests, biomotor tests, skill tests, and intelligence tests. Therefore, this instrument can be used to measure skill above average and creativity in soccer athletes. The ease of implementation, clarity of instructions, and novelty of the test formula also add to the advantages of this instrument, making it effective and efficient for soccer academies and sports practitioners. Each aspect of the test, namely anthropometric test, physical test, skill test, and intelligence test, can be used to assess athletes' potentional with high accuracy and precision, ensuring that this instrument is capable of comprehensively identifying athletes' talents. In addition, this instrument can be applied to male and female athletes without significant differences, demonstrating its suitability for widespread use in the process of searching for talent of recruiting talented athletes in Indonesia. However, for future development, it is necessary to follow up by adding psychological aspects to create a new comprehensive formula.

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