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Needs Analysis in Preparing Playing Technique Skills Tests for Adolescent Football Athletes

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ABSTRACT

This research aims to develop a test for football-playing techniques for teenagers aged 16-20. The process involves analyzing technical skills components, conducting expert focus group discussions (FGD), developing test types, conducting first and second trials, and analyzing the results. The first trial involved 30 players and a bivariate correlation test, followed by 75 players and factor analysis. The results will be used to determine priority techniques for developing youth football technique test instruments. The research aims to improve football skills among teenagers. The result of factor analysis showed variables LLP2 (0.814), RSho2, (0.178), LSho2 (.683) on the first factor, while the variables RLP2(0.557), CP2(0.776) on the second factor. Conclusion: Left long passing (LLP), proper shooting (RSho), and left shooting (LSho) are the priority, while right long passage (RLP) and control passing are the second priority.

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INTRODUCTION

Football is a collaborative sport played by two teams, including eleven players. Football is a team sport. The football game necessitates fundamental aptitudes and methodologies that are intricately interconnected (Mesnan & Supriadi, 2022). The essential soccer skills encompass dribbling, passing techniques, stopping tactics, shooting, heading balls, and throwing-in techniques (Afrizal & Soniawan, 2021).

In the past, there was limited monitoring of objective technical analysis for talent development (Kelly et al., 2020). Ali (2011) highlights the lack of studies on skill execution in academic literature despite the widely recognized significance of skill execution in

football performance. Recently, there has been a surge in interest from practitioners, leading researchers to concentrate on technical testing and match analysis statistics (Archer, Drysdale, and Bradley, 2016; Forsman *et al.*, 2016; Pedretti *et al.*, 2016).

Recent studies have demonstrated that modern football's technical requirements have greatly escalated (Barnes et al., 2014). Moreover, there is a clear correlation between higher ball possession and favorable outcomes (Gómez et al., 2018; Liu et al., 2016; Yang et al., 2018). Furthermore, research conducted by Gómez *et al.* (2018) has consistently demonstrated that players from successful teams always have a higher number of technical actions than players from less successful teams. Thus, assessing unopposed technique and skill behaviors in youth football is crucial from a talent development standpoint. This can be achieved by employing technical tests and match analysis data to measure these fundamental attributes. Such assessments will aid in implementing more effective development strategies to attain senior-level expertise.

METHODS

This research is a type of developmental research, not descriptive analysis, because the aim of descriptive research is only to create a systematic, factual, and accurate description of the facts, characteristics, and relationships between the phenomena being studied. (Prasanti, 2018). Meanwhile, development research is a step or process in developing new products or improving existing outcomes and can be accounted for (Titing, Hidayah, and Pramono, 2016). So, in this research, we will develop types of football playing skills test instruments for football players in general into a series of football playing skills test instruments specifically for youth football players aged 16 - 20 years, which are by the characteristics of actual youth football training and matches. The development procedure is to conduct a focus group discussion (FGD) with football experts consisting of 3 football lecturers and three youth football coaches. The results of the FGD will recommend techniques to be developed with statistical tests. The first trial involved collecting data on 30 football players and then processing the data using a bivariate correlation test. Next, V. The second trial was carried out by collecting data on 75 football players. The results of the second trial were analyzed using factor analysis. The factor analysis results will be used as a reference for determining priority techniques in developing youth football technique test instruments.

RESULTS AND DISCUSSION

Result

This research aims to develop a youth football technique test instrument. The first step was to conduct an FGD with three football lecturers (academics) and three football coaches (non-academics) to determine the techniques to develop technical tests specifically for teenagers. The results of the FGD recommend that there are ten techniques developed for the teenage technique test, namely right long passing (RLP),

left long passing (LLP), proper shooting (RSho), went shooting (LSho), and Control Passing (CP). Following are the test results that have been obtained

Table 1.
Results of the first trial

No	Variable	N	Mean±SD	Min	Max
1	RPL (meter)	30	21.28±4.72	12	30.30
2	LPL (meter)	30	14.47±2.73	10	21
3	RSho (detik)	30	5.06±0.72	3.72	7.41
4	LSho (detik)	30	5.52±0.75	3.62	7.69
5	PC (kali)	30	8.26±1.92	5	12

Table 1 shows the mean and standard deviation for 30 players who performed the right long passing (RLP), left long death (LLP), proper shooting (RSho), left shooting (LSho), and Control Passing (CP) tests. Because the test results are expressed in different units, the data will be transformed by changing it to a T score. (Ananda & Fadhli, 2018; Priguno & Hadiprajitno, 2013).

The transformed data was then analyzed using a bivariate correlation test. However, before the bivariate test, the data was tested for normality using the Shapiro-Wilk test. The normality test is used as a prerequisite for parametric tests. (Mishra et al., 2019; ORCAN, 2020). Following are the results of the bivariate tests that have been carried out.

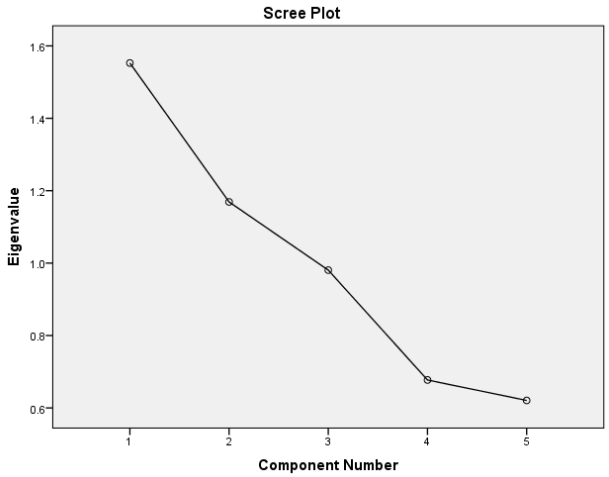
Table 2.
Bivariate correlation test results

No	Variable	N	*p*(sig)	R
1	RLP	30	0.000*[p]	0.483
2	LLP	30	0.000*[p]	0.612
3	RSho	30	0.004*	0.344
4	LSho	30	0.002*	0.360
5	PC	30	0.008*	0.315

*[P]there is a correlation with the Pearson test; *There is a correlation with the Spearman Rank test

Table 2 shows the RLP and LLP variables with a significance value of $p<0.05$, which was carried out using the Pearson test (parametric). Meanwhile, the variables RSho, LSho, and PC also showed a significance value of $p<0.05$ but were carried out using the Spearman Rank test because the data was not normally distributed. These results indicate that all variables can be continued in the next test.

The next test was the second trial on 75 youth soccer players. The techniques tested were all right long passing (RLP), left long passing (LLP), proper shooting (RSho), left shooting (LSho), and Control Passing (CP). Like the first step, the data from the second trial is transformed into a T score. The T score data was then analyzed using factor analysis to determine the priority technique used as a particular test for teenagers. The results of factor analysis are presented in the following figure.



Ficture 1.

Based on factor analysis, there are two components whose eigenvalue is > one and can explain 31.054% of the variation for factor 1 and 23.378% for factor 2. If the two are combined, they can explain 54.431%. After determining two elements, the next step is to determine the factors in factors 1 and 2. The action in determining which variables are included in the aspects is to look at the most significant correlation value between the variables and the factors (components) that are formed. The results are as follows.

Table 3.

Factor analysis results

Factor	Variable
1	LLP2 (0.814), RSho2 (0.178), LSho2 (0.683)
2	RLP2 (0.557), CP2 (0.776)

Based on the results of the factor analysis, it was concluded that the left long passing (LLP), proper shooting (RSho), and left shooting (LSho) techniques were the priority. In contrast, the second priority was the good long passing (RLP) and control passing (CP) techniques.

Discussion

The research shows that left-long passing is an important technique used as a test instrument for youth football. The kicking method is the most frequently employed tactic in football games since it is a defining feature of the sport. A football player with good ball-kicking skills who can be used to shoot the ball towards the goal, clean up or sweep the ball from the defense area straight to the front, which defenders typically do to break up an opponent's attack, and perform a variety of kicks. Consequently, football players must be proficient in accurately and adequately kicking the ball (Doewes, Elumalai, and Azmi, 2022). In this context, "kicking" refers to executing long passes. Passing is transferring the ball to a teammate using a specific technique. A practical key will facilitate the acceptance of our proposal by our acquaintances. The passing pattern in football is a fundamental aspect of the team's strategic conduct (Khaustov, Bogdan, and Mozgovoy, 2019).

Accurately executing a long pass to the intended recipient on the right side is a challenging task. Several elements, such as the opponent's constant blocking, concentration, and feeling, can significantly impact accuracy. From a functional perspective, long passing greatly facilitates long-distance ground or aerial passes that aim to reach the opponent's goal (Doewes, 2016). Precise passes will facilitate teammates' reception or conversion of goals against the opponent's goal. Furthermore, a lengthy aerial kick demonstrates high efficacy; if the ball rebounds upwards, it is highly improbable that the adversary will fail to intercept it. The long passage plays a crucial function, requiring rigorous training and development. The essential elements of the long-passing method include the supporting foot, the kicking leg (either right or left), the movement of the leg swing, the visual focus, the specific part of the ball being kicked, and the posture following the kick. To achieve optimal results when executing a long pass in football, one must possess a robust physical condition and a thorough understanding and mastery of the correct kicking technique (Doewes, Elumalai, and Azmi, 2022).

A model and a range of training exercises and assessment tools are required to enhance the proficiency of lengthy passing procedures. In actuality, there are still issues with the tests employed today. Just one 4 × 4meter target square model is used in the Sukatamsi long passing accuracy test apparatus. Although Bobby Charlton's long-passing test instrument has undergone advancements, the goal sizes—4 m^2, 6 m^2, and 8 m^2—have been utilized (Mubarok, Narlan, and Millah, 2019). Thus, developing a circular model long-passing accuracy test instrument is required. It is essential to prepare the tool with validity and reliability. Validity and dependability are necessary to guarantee the integrity and caliber of measuring devices (Mohajan, 2017).

The principle that a football game is determined by scoring more goals than the opponent is indisputable (Danurwindo et al., 2017). The game of football lacks significance in the absence of goals. Furthermore, a header or deflection is used apart from serving as a symbol of luck or diversion. According to Nusri *et al.* (2018), accurately shooting the ball into the opposition's goal is crucial for scoring. Participants must successfully direct the ball into the opposition goal to secure victory in the game. Scheunemann (2014) argues that a player's ability to pass and dribble proficiently is rendered insignificant if they lack the skill to shoot accurately. Moreover, proficient shooting skills are undeniably crucial in football, as the game aims to score goals (Scheunemann, 2014).

When taking a shot, there is no benefit in exerting excessive force on the ball if it is not aimed accurately (Mielke, 2003). Therefore, accuracy is a crucial factor in determining the success of shots. According to Astuti (2019), if a player fails to hit the target, they cannot score a goal. The optimal shooting range is near the front line of the penalty box goal (Nusri, 2018). Typically, athletes undergo a shooting skills assessment to evaluate their proficiency in football shooting. The media shooting abilities test encompasses a range of numbers, from the lowest to the maximum value. Test instruments indirectly assess a person's abilities by evaluating their reaction to a stimulus or question. The shooting abilities can still be performed manually as testers

are required to create and delineate the target's direction for the test shape on the wall. At now, numerous shooting test equipment assess the precise movement of the shot's target (Mesnan & Supriadi, 2022)

CONCLUSION

Five soccer technique test instruments are suitable for teenagers aged 16 – 20. Left long passing (LLP), proper shooting (RSho), and left shooting (LSho) techniques are the priority, while right long passing (RLP) and control passing (CP) techniques are the second priority. This research recommends that coaches apply this research to select teenage soccer athletes. Researchers also hope further feasibility tests will be conducted on the technical test instruments.

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