

Impact of special skill exercises on harmonic abilities and passing skills in junior footballers

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ABSTRACT

The aim of the present study was to identify the effect of special skill exercises on the harmonic abilities and passing skills of junior football players. The present study had an experimental design, in which 28 junior football players were recruited as sample for the study. Participants were randomly allocated into experimental and control groups. Control group participants carried out exercises, guided by their coach. Experimental group participants received exercises prepared by the researchers. The implementation of the exercises took 4 weeks, at a rate of 3 sessions per week. The duration of each session was 30-35 minutes. The researchers concluded that the special skill exercises positively impacted the junior footballers of the experimental group to develop some harmonic abilities and passing skills.

KEYWORDS

Special skill exercises; Coordination abilities; Basic football skills.

1. INTRODUCTION

Football is one of the most popular games with a distinct and prominent stature, widely spread in different countries across the world. Experts have worked on various scientific methods by conducting the research experiments to improve the efficiency and overall performances of the players in all the domains like physical skill, psychological, tactical, and cognitive domains. Every domain has its own unique method of training and practice and the scientific methods were used for all the categories of the players starting from juniors to higher levels (Abdel-Fattah and Hassanein, 1997).

The junior and cubs' category is one of the critical times in the life of the novice players, since it is the starting point in the player's marching. This is the primary base of the foundation. Good preparation and advance training in the starting years of their carrier will make them proficient in all aspects of their game (Ali, 2008).

In the football, physical performance of the players is associated with the various harmonic abilities. Harmonic abilities differ in their impact and control over each skill of the game. The lack of possession of the player (initiated or advanced) for those abilities is reflected as the weak level of performance in their game. The balanced development of the harmonic abilities is one of the key aspects of the training process of the players. Every coach must consider and develop special exercises as a part of their training and preparation for the game of the players (Abdel-Ethawi, 2002).

The skill of passing the ball to the next team player is one of the key skills that every player should possess. The team whose players are expert in passing the ball accurately, will have more chances of getting good results. They can pass the ball using their feet, head or chest to build an attack and perhaps shoot on the goal. Hence, the present study is based on the preparation of players by special exercises to develop some harmonic abilities and passing skills for junior football players.

To the best of researcher's knowledge in the game of football, the researcher noticed that the development of basic skills in football, including the skill of diversified passing, requires the use of many combinatorial abilities. Hence, their training should include exercises for the development of these harmonic abilities. These combinatorial abilities act as the core of the playing skills of the football players. Researcher also noticed the lack of focus on the specific exercises for developing these combinatorial capabilities associated with skill performance during educational or training units. This could be the probable reason behind the low level performance of the players. Hence present study was aimed to prepare special skill exercises to develop some of the harmonic abilities and passing skills of football youth to serve the coach to reach a better level (Al-Khashab and Al-Hayani, 1999).

The aim of this study was to identify the impact of special skill exercises on some of the harmonic abilities and passing skills of junior football players. The research hypothesis was that the special skill exercises would positively develop harmonic abilities and passing skills in the junior football players analyzed.

2. METHODS

The present study had an experimental design in which participants were allocated into two groups: experimental group and control group.

2.1. Participants

Summer football school youth under 15 years in Dhi Qar Governorate 2020 constituted the research community for the current study in which the total number of members was 42. Out of which, 28 youth were selected as the participants for the study. Participants were randomly allocated into two groups with $n=14$ in each group. Allocation of participants was done by lottery method. In the present study, 3 goalkeepers and 8 pilot participants were excluded along with the 3 individuals who did not attend the pre-test (Ali, 2008; Baseer, 1999).

2.2. Homogeneity and parity

The researchers conducted tests to check the homogeneity of the sample and parity between the two groups, as shown in Tables 1 and 2. In Table 1, all values of the variation coefficient were lower than 30%, which confirms the homogeneity of the sample in the variables studied. In Table 2 it was checked that there were no statistically significant differences between the experimental and control groups ($p>0.05$ in all variables).

Table 1. Characteristics and homogeneity of the sample

Variation coefficient	Standard deviation	Arithmetic mean	Measuring unit	Variables
4.26%	0.61	14.32	Year	Age
2.68%	4.22	157.48	cm	Height
3.21%	1.81	56.35	kg	Weight

Table 2. The equivalence of the two research groups in the study variables

P value	T value	Experimental group		Control group		Variables
		SD	Mean	SD	Mean	
0.14	1.947	0.698	8.122	0.671	8.070	Agility (sec)
0.12	1.89	1.03	12.066	0.842	12.761	Compatibility (sec)
0.84	0.781	2.47	49.48	3.11	48.62	Balance (degree)
0.31	0.22	0.94	4.13	1.12	4.04	Kinesthetic sensation (cm)
0.66	0.516	0.38	2.91	0.41	2.83	Short pass (score)
0.13	0.191	2.816	11.05	3.18	10.824	Medium pass (score)
0.51	0.387	2.39	28.87	2.48	29.24	Long pass (meters)
0.11	0.901	1.03	4.94	0.83	5.27	Wall pass (number)

2.3. Instruments

The material used in this study was: medical scale, whistle, manual stopwatch, footballs, nylon cones and poles, small goals, flags or banners, and ground ladder.

The most critical harmonic abilities which affect the skill of passing the football among players were determined by reviewing available literature. The tests used to measure these harmonic abilities were: agility Test (running between the poles), compatibility test (numbered circles), balance test (moving above the marks), and kinetic sense test (it evaluates the sense of horizontal distance). The tests used to measure passing skills were: short pass (accuracy of the short pass towards a small goal at a distance of 10 m), medium pass (accuracy of the medium pass towards three circles drawn on the ground for a distance of 20 m), long pass (accuracy of the long pass for a distance higher than 20 m), and wall pass (bouncing handling on the wall for 20 seconds).

2.4. The exploratory experience

The researchers conducted an exploratory experiment on a sample from the community of origin. These samples are 8 juniors to verify the stability of the tests through the test application and re-applying them after five days of application. As well as ensuring its objectivity by setting up two arbitrators to record the test scores and find the correlation coefficient between them. The results were that the correlation coefficients were high, which achieves stability and objectivity (Baseer, 1999).

2.5. Special skill exercises

Followed by the review of existing literature and other scientific sources, researchers also consulted some specialists having expertise in the game of football. Researcher obtained their opinion on physical education and football. The researcher prepared special skill exercises based on the gathered information from all the sources to achieve the the research objectives, aiming to develop some of the combinatorial abilities and passing skills for juniors football (Lazam, 2005).

2.6. Field research procedures

Pre-Tests

The baseline assessment and testing was done on weekends (Friday and Saturday). Testing was done at specialized training center stadium (summer) in Dhi Qar Governorate (El-Din, 2005).

Special skill exercises

Followed by the baseline assessment and testing, and establishment of homogeneity and equivalence of the sample, the basic experiment was initiated by the researcher. Experiment was conducted for a period of four weeks, with three academic units per week, specifically on Saturday, Monday and Thursday, and 12 academic units.

Special skill exercises prepared by the researchers were applied to the participants of the experimental group only. In contrast, the control group participants received training and exercises determined by the coach or trainer. Participants in each training unit performed special skill exercises for 30-35 min/session. During the exercises, the training units focused on developing harmonious abilities and integrating them with the diversified passing skills in football game. Also, through special skill exercises, position of junior players was constantly changed diversifying the passing and providing feedback when needed (Al-Rubaie and Al-Mawla, 1998).

Post-tests

The post-tests were conducted after successful completion of the training modules for compatibility abilities and passing skills in football. The tests were conducted on Sunday and Monday 21-22/6/2020 AD under the same circumstances in which the pre-tests were conducted (Al-Khashab and Al-Hayani, 1999).

2.7. Statistical analyses

Statistical analyses were carried out with the Statistical Package for the Social Sciences (SPSS), version 24, by computing arithmetic means, standard deviations, coefficients of variation, t tests for correlated samples and t tests for independent samples, following the guidelines of Lazam (2005).

3. RESULTS AND DISCUSSION

Table 3 shows the differences between pre and posttests in the control and experimental groups. The results showed that the p value of four variables of the control group was higher than the value of the significance level (0.05), which indicates that there were no significant differences in these variables in the control group. In the experimental group, there was a significant difference ($p < 0.05$) between pre and post test in all the variables.

Table 3. Differences between pre and post tests in the control and experimental groups

P value * $p < 0.05$	T value	Post-tests		Pre-tests		Variables	Groups
		SD	Mean	SD	Mean		
0.82	0.732	0.47	7.91	0.671	8.70	Agility (sec)	Control group
0.47	0.34	0.35	12.13	0.842	12.761	Compatibility (sec)	
0.15	1.63	2.61	50.16	3.11	48.62	Balance (degree)	
0.11	1.32	0.75	3.91	1.12	4.04	Kinesthetic sensation (cm)	
0.001*	4.61	0.36	4.022	0.41	2.83	Short pass (score)	
0.000*	8.92	2.58	17.27	3.18	10.824	Medium pass (score)	
0.000*	6.43	1.73	31.82	2.48	29.24	Long pass (meters)	
0.000*	5.77	1.07	7.06	0.83	5.27	Wall pass (number)	
0.000*	4.41	0.36	6.47	0.698	8.122	Agility (sec)	Experimental group
0.000*	6.22	0.73	9.76	1.03	12.066	Compatibility (sec)	
0.000*	9.77	3.36	58.57	2.47	49.48	Balance (degree)	
0.000*	8.43	0.88	2.78	0.94	4.13	Kinesthetic sensation (cm)	
0.000*	7.92	0.43	5.18	0.38	2.91	Short pass (score)	
0.000*	13.67	1.94	23.32	2.816	11.05	Medium pass (score)	
0.000*	10.31	1.49	34.71	2.39	28.87	Long pass (meters)	
0.000*	7.83	1.33	9.143	1.03	4.94	Wall pass (number)	

Statistical analysis of the findings revealed that no significant differences were found between pre and post-tests of the harmonic abilities tests of the control group. The authors attributed the lack of coaches' interest in using special skill exercises that targeted these abilities related to the skill performance in football players. The basic training, i.e. inaccurate and unstructured training, leads to the improper development of playing abilities among players. The negligence of the organizations is also somewhat responsible for poor performances of the players as an individual or in the team game. The organizations in which curricula is based on the scientific foundations "result in an increase in the individual's performance ability as a result of performing physical exercises for several days and weeks by imprinting the body's organs on the optimal performance of those exercises" (Abdel-Ethawi, 2002).

Table 3 also shows significant differences between the pre-and post-test results in the harmonic abilities and the diversified passing in football for the experimental group and in favor of the post-tests. The researcher stated that special skill exercises effectively developed harmonic abilities that helped the players in improving their passing skills in the game. Findings of the study are in accordance with the study conducted by Hammand in 1994. Authors stated that physical exercises

along with the key consideration to the development of harmonic abilities increase playing capabilities among players and improve their overall performance.

The researcher also believed that one of the reasons behind the development in the experimental group's level was the high number of repetitions of the harmonic and skill exercises. It is possible that the improvement in the passing skills was related to the increased repetitions within training units during the research period under the researcher's supervision and the trainer's implementation (Hassanein, 1995). The repetition of the exercise several times enables the player to perform in a better way. Baseer (1999) indicated that special skill exercises give the players the harmonic factor and increase the ability to integrate abilities and skills. Skill performances are characterized by speed, fluidity and good skill performances in a way that suits playing situations (Saleh, 1994).

4. CONCLUSIONS

With the findings of the present study, researchers concluded that special skill exercises significantly developed combinatorial harmonic abilities and improved the passing skills of young football players. Therefore, special skills exercises are recommended to be incorporated in the training program of players of different ages.

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AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

FUNDING

This research received no external funding.

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