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## THE ROLE OF ONE ASPECIFIC TRAINING PROTOCOL IN A SPECIFIC TECHNICAL AND COORDINATIVE TEST FOR SOCCER IN YOUTH MALE FOOTBALLERS

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### Abstract

**Objective.** The aim of this study was to examine the results of a specific technical and coordinative soccer protocol programme, using two different groups of young footballers, one control group and one training group.

**Methods.** The study was performed on two amateur under 16 soccer teams both with 18 players with the method of pre-post test. Before starting the specific training protocol, for both groups was performed a specific technical and coordinative test, in order to obtain objective data. One team was used like Control Group (CG) and other like Training Group (TG), and performed a specific technical and coordinative protocol (STCP). After one month at the end of the specific training protocol, was performed a post-test.

**Results.** TG in Pre-Test showed an average time of  $18,2 \pm 2,3$  seconds and  $78,1 \pm 21,0$  juggles, in Post-Test recorded an average time of  $16,5 \pm 1,7$  seconds and  $83,5 \pm 15,8$  juggles. CG in Pre-Test showed an average time of  $19,2 \pm 1,6$  and  $66,2 \pm 22,3$  juggles, in Post-Test recorded an average time of  $18,4 \pm 1,4$  and  $70,6 \pm 20,2$  juggles. Between Pre and Post test, TG shows a percentage increase of 6% in Time, with a P-value of 0,018 (significant for  $p < 0,005$ ) and 6% in juggling, with a P-value of 0,390 (non-significant for  $p < 0,005$ ). CG shows an increase of 4% in Time with a P-value of 0,144 (non-significant for  $p < 0,005$ ) and 6% in juggling, with P-value of 0,279 (non-significant for  $p < 0,005$ ).

**Conclusions.** Collected data show that, the STCP can be considered can produce significant improvements in travelling time in a specific technical and coordinative test, talking about juggling ability no significant improvements were detected. This study showed that is possible to obtain coordinative and technical improvements with the use of a specific training protocol in youth footballers

**Key Words:** technical and coordinative test, soccer, pre-post test, specific training protocol.

### Introduction

Football has shown to be a physical activity capable of increasing motor and cognitive growth in young. This sport stimulates not only technical elements that can develop during workouts or games, but also motor growth in fact, understood as the baggage of coordinating experiences, movements, and the capacity of attention. Especially in modern football, what is required most are a high level of athletic qualities, called conditional skills such as strength, endurance and speed. However, to use these

skills in an optimized way, will be necessary to demonstrate a high-level motor coordination. In fact, the coordination skills determine the general and fine quality and the efficiency of the movement itself and its conditional quality (Schmidt, and Wrisberg, 2007). Take as an example a crucial aspect in football, the changes of direction. To perform better the changes of direction, of course athletes need to have a high level of strength in lower body, but even a high level of motor control and coordination. For this reason, from an early age, it will be crucial to work on coordination, both specific and non-specific.

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As regards strength training, at young age, it will be possible to work with exercises of muscular resistance and coordination, like core training (Deprez et al, 2015). The use of these specific training techniques included in the classic sport specific routine, can help young athletes to improve their specific and non-specific coordination skills, and consequently help them in using their physical ability such as speed, strength and the resistance in an economic and appropriate way. However, it remains to be proved objectively as the use of these training techniques can bring improvements to young athletes. To objectify any improvements or worsening it will be necessary to use one or more tests (Vestberg et al, 2012). Aim of this study is to try in an objective way, if the use of a specific type of technical and coordination training, can make clear and significant improvements.

### **Methods**

The aim of this study was to examine the results of a specific technical and coordinative soccer protocol programme, using two different groups of young footballers, one control group and one training group. The study was performed on two amateur under 16 soccer teams both with 18 players with the method of pre-post test. Before starting the specific training protocol, for both groups was performed a specific technical and coordinative test (Campolo, Sassi, and Venturi, 2010, Fig. 1), in order to obtain objective data. After one month at the end of the specific training protocol, was performed a post-test. The study group was made of 36 players derived from two amateur under 16 football teams, one group was used as control group (CG) and another as training group (TG). Study protocol during 4 weeks, in

this period TG and CG were following the same trainings programme (4 sessions for week), except for 15 additional minutes for each session, of a specific technical and coordinative protocol (STCP) that was added to training programme of TG. The STCP included specific and aspecific items, in particular training programme was scheduled as following: 2 sessions for week of core training (total amount 30 minutes for week) and 2 sessions for week of technical circuit with ball (30 minutes for week), for a total amount of 4 hours of additional training. One week before starting the protocol was performed the pre-test in order to detect objective useful for ending comparison. Every player performed 3 times the test, in order to obtain data more accurate and less affected by case, and average of detection was taken in consideration, same protocol was used for post-test. The used test was taken from (ref) and it is composed like this:

- A; Test start with players at center of the square with 30''seconds for juggling the ball;
- B; finished 30'' after the whistle of coach, players have to skip the stakes on the ground;
- C; after stakes, players have to take the ball and drizzle the cones;
- D; stop the ball after last cone and jump the obstacle, touching the cone and run back to point A;
- A2; test ending with another 30'' second of juggling.

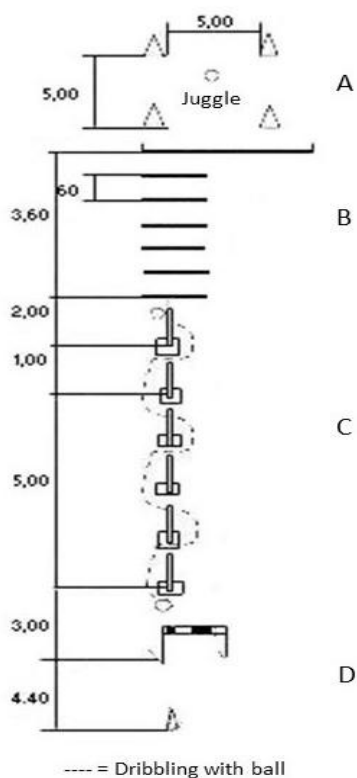


Fig. 1 Scheme of Technical and coordinative test ((Campolo, Sassi, and Venturi, 2010)

Parameters that were taken into consideration were: total number of juggle (J) made in A and A2, and total traveling time (TT) that was recorded from the end of first 30'' seconds of juggling and stopped when the player come back in the square in part A2. Data from pre-test and post-test were collected in an excel spreadsheet, in order to make the necessary calculation.

## Results

The aim of this study was to examine the results of a specific technical and coordinative soccer protocol program, using two different groups of young footballers, one control group and one training group. The study was performed on two amateur under 16 soccer teams both with 18 players with the method of pre-post test; one team was the CG and other the TG. Training protocol lasted 1 month; improvements were recorded with the Post Test, comparing data with previous results. Tables 1 and 2 shows data from Pre-Post tests. TG in Pre-Test showed an average time of  $18,2 \pm 2,3$  seconds and  $78,1 \pm 21,0$  juggles, in Post-Test recorded an average time of  $16,5 \pm 1,7$  seconds and  $83,5 \pm 15,8$  juggles. CG in Pre-Test showed an average time of  $19,2 \pm 1,6$  and  $66,2 \pm 22,3$  juggles, in Post-Test recorded an average time of  $18,4 \pm 1,4$  and  $70,6 \pm 20,2$  juggles. Between Pre and Post test, TG shows a percentage increase of 6% in Time, with a P-value of 0,018 (significant for  $p < 0,005$ ) and 6% in juggling, with a P-value of 0,390 (non-significant for  $p < 0,005$ ). CG shows an increase of 4% in Time with a P-value of 0,144 (non-significant for  $p < 0,005$ ) and 6% in juggling, with P-value of 0,279 (non-significant for  $p < 0,005$ ). Collected data show that, the STCP can be considered can produce significant improvements in travelling time in a specific technical and coordinative test, talking about juggling ability no significant improvements were detected. Both groups TG and CG recorded improvements between Pre and Post Test, but only TG obtained significant change. Players were divided even by role in order to better determine the individual differences and relative increments after the STCP. In Pre Test, role that recorded better value travelling time and juggling

were CM, in Post Test FO showed better value in traveling time and CM in juggling. In the Pre Test of CG, GK showed better value in travelling time and FO in juggling, in Post Test, FO recorded better values in traveling and juggling.

TRAINING GROUP

Athlete	Role	PRE		POST	
		Time (s)	Juggle Tot	Time (s)	Juggle Tot
1	DE	17,3	103	15,53	87
2	DE	21,5	81	17,04	82
3	DE	19,8	51	16,13	78
4	DE	17,6	67	17	77
5	DE	17,0	73	16,12	83
6	DE	22,8	91	19,23	91
7	DE	17,4	72	15,78	92
8	DE	16,1	80	16,58	87
9	DE	15,6	92	14,2	91
10	FO	20,5	37	16,88	60
11	FO	16,6	105	15,16	93
12	GK	18,2	57	16,55	62
13	GK	19,4	41	19,07	44
14	MD	21,2	77	19,18	87
15	MD	14,1	102	13,05	94
16	MD	15,7	103	14,42	117
17	MD	17,9	88	16,76	91
18	MD	18,4	86	18,24	87
<b>Average</b>		<b>18,2</b>	<b>78,1</b>	<b>16,5</b>	<b>83,5</b>
<b>Dev St.</b>		<b>2,3</b>	<b>21,0</b>	<b>1,7</b>	<b>15,8</b>

Table 1; Data from Pre-Post Tests from Training Group

CONTROL GROUP

Athlete	Role	PRE		POST	
		Time (s)	Juggle Tot	Time (s)	Juggle Tot
1	DE	18,1	56	17,93	62
2	DE	19,9	37	19,53	39
3	DE	17,6	61	17,42	68
4	DE	18,8	63	17,8	77
5	DE	20,7	100	20,1	100
6	DE	21,4	80	20,87	80
7	DE	20,4	37	20,2	45
8	FO	16,6	92	16,21	84
9	FO	18,7	102	17,78	106
10	FO	22,3	75	17,3	70
11	FO	17,0	55	17,16	63
12	GK	19,2	28	18,67	46
13	GK	17,0	85	16,69	98
14	MD	18,7	50	18,02	56
15	MD	20,4	66	19,5	63
16	MD	20,3	83	20,02	85
17	MD	19,3	42	19,1	44
18	MD	18,8	80	17,6	84
<b>Average</b>		<b>19,2</b>	<b>66,2</b>	<b>18,4</b>	<b>70,6</b>
<b>Dev St.</b>		<b>1,6</b>	<b>22,3</b>	<b>1,4</b>	<b>20,2</b>

Table 2; Data from Pre-Post Tests from Control Group

## Conclusion

The aim of this study was to examine the results of a specific technical and coordinative soccer protocol program, using two different groups of young footballers, one control group and one training group. The study was performed on two amateur under 16 soccer teams both with 18 players with the method of pre-post test; one team was the CG and other the TG. A specific training protocol was performed on the TG for 1 month, in order to detect objective data was performed a specific technical and coordinative test, with the protocol Pre-Post. TG shows a percentage increase of 6% in Time, with a P-value of 0,018 (significant for  $p < 0,005$ ) and 6% in juggling, with a P-value of 0,390 (non-significant for  $p < 0,005$ ). CG shows an increase of 4% in Time with a P-value of 0,144 (non-significant for  $p < 0,005$ ) and 6% in juggling, with P-value of 0,279 (non-significant for  $p < 0,005$ ). Collected data show that, the STCP can be considerate can produce significant improvements in travelling time in a specific technical and coordinative test, talking about juggling ability no significant improvements were detected. This study showed that is possible to obtain coordinative and technical improvements with the use of a specific training protocol in youth footballers. Future studies could be more specific in define which kind of specific exercises can give more improvements. Could be interesting even to use different ages and category, and to enlarge the protocol time.

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