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THE ASSESSMENT AND COMPARISON OF MOTOR PERFORMANCES AND TECHNICAL SKILL LEVEL OF SOCCER PLAYERS AFTER 3 MONTHS TRANSITION PHASE

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Abstract:
The active rest phase is the transition period of annual training planning. In Turkey, especially in amateur sports clubs, there exists a transition period of four or four and a half months, and this period, in general, passes with passive rest. In such a long passive period of time, soccer players experience significant losses in their technical and motor performances. The objective of this research presented, is to study the effects of a soccer training programme on some physical and technical skills of children that put through an eight weeks of soccer training, and to compare the findings to the motor performances and technical skills of children that spent the twelve weeks of transition period with passive rest. Children' soccer technical skill levels was tested by using wall passing and dribbling, and physical condition levels by using standing long jump and the flamingo balance tests. After eight weeks of training, the results of pre and post tests were compared and found significant differences. At the end of twelve weeks of transition phase, between the all results of the post and permanence tests, statistically significant differences in the negative direction was found.

Keywords: soccer, skill training, training planning, transition phase

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1. Introduction

The yearly training planning in football involves three different training periods: preparation, competition and transition. The preparation period refers to the time from the start of the first trainings to the first formal football match. The training load is high in this period. General development exercises are emphasized while the primary emphasis is on improving maximal strength (Kuipers 1998, Bangsbo 1994, Grosser et. al., 2004). The competition period involves improving biomotor abilities and psychological factors related to the sport branch, reinforcing the technical traits and tactics, maintaining general physical condition, developing theoretical knowledge levels of the players and providing them with experiences. In this period, physical preparation is acknowledged as the critical point of players' productivity (Bompa, 2001). In general, the content of the trainings is relieved in terms of the load and exercises related to the type of the competition. The content is maintained, but the intensity can be increased (Grosser et. al., 2004). During the transition period, the goal refers to a comprehensive physical and psychological renewal. Also referred to as an active recreation period, it includes general developmental training and different sports activities. Additionally, regeneration exercises are practiced; the content and intensity are decreased. Players may receive medical therapies, or they may undergo a change of place or climate. However, the performance level of the players should not decrease too rapidly (Grosser et. al., 2004).

In Turkey, amateur soccer teams hang out a four or five months of transition phase. Training Science emphasises, that some properties of a sportsman hanging out for such a long period of passive rest, will be reduced by 50%, approximately. The sportsman, having such a loss in his organic properties starts playing preparatory matches after 15 days. This is followed by ostentatious tournaments and then the league matches. This is not a healthy scheduling, because a sportsman lost 50% of his capacity, needs at least six weeks, actually eight or ten weeks normally, to recover (Renklikurt, 1996). In this study, children underwent an eight-week (three days a week) soccer skills training.

2. Material and Methods

2.1 Participants

This study was an experimental work examining the effects of a twelve week transition phase on some biomotoric and skill developments of children. Attendants were 34 boys of 11-13 years old age group of children, living in Edirne.

2.2 The Measurement Procedure

In this study, more than one measurement devices were used:

A. Body Weight and Height Measurements

The body weight of children was measured by an electronic scale, the accuracy of which was 0,1 kg, while their heights were measured by a device of 0.01 meter of accuracy.

B. The Wall Pass Test

On a ground suitable for passing, a square was drawn 3 meters away from the wall. Test lasted 30 seconds. Kicking the ball, the ball's hitting the wall and coming back into the square was regarded as a ''cycle''.

C. The Dribbling (Slalom) Test

Along a 27,5 m long line traffic towers were placed in 1,5 m spacings and start and finish lines were marked. The pupil waited behind the start line with the ball, and by dribbling after the out commend tried to reach the finish line in the shortest time he can.

D. Standing Long Jump Test

The pupil was ordered to squat down with toes behind a marked line, and then jump forward without taking step. At the point, where he felt down the distance from his hell to the marked lines was measured. Two trials allowed, and the best result was registered.

E. Flamingo Balance Test

The pupil tried to stand up as long time as he can on his preferred foot. At each time, he lost his balance the test brought, and the chronometer is stopped. When the pupil started trying again, the chronometer was restarted. The number of successful trials recorded.

2.4 Statistical analysis

After the data collection process, the analyses done by using the Windows Pack SPSS 15.0 in computer environment, descriptive statistics, one-sample T test and ANOVA.

3. Results

Table 1: The Arithmetic Mean Values and Standard Deviations for the Height Variable

	Mean	Std Dev	N
Height (Pre test)	1,49	5,09	34
Height (Post test)	1,50	5,05	34
Height (Permanence test)	1,51	5,06	34

For the height variable, the arithmetic mean value and standard deviation of the pre, post and permanence test results were 1,49±5,09 cm, 1,50±5,05 cm and 1,51±5,06 cm, respectively. Studying the descriptive statistics, an increase was found between the mean values for the height variable.

Table 2: The ANOVA Results for the Height Variable

	Sum of Squares	Df	Mean Square	F	p	Sig.
Between Subjects	2538,74	33	76,932			
Measure	50,40	2	25,204	213,838	.000	1-2, 1-3
Error	7,77	66	0,118			2-3
Total	2596.91	101				

According to the Table-2, a significant difference was found between the test results (F=213,838, p<0,001). There also were significant differences between the mean values of in-pair comparisons of the test results.

Table 3: The Arithmetic Mean Values and Standard Deviations for the Body Weight Variable

	Mean	Std Dev	N
Body weight (Pre test)	41,49	5,12	34
Body weight (Post test)	41,95	4,94	34
Body weight (Permanence test)	42,97	4,91	34

The arithmetic mean values and standard deviation for body weight variable were 41,49±5,12 kg, 41,95±4,94 kg and 42,97±4,91 kg, respectively. Studying the descriptive statistics, an increase between the pre test, post test and permanence test results was found.

Table 4: The ANOVA Results for the Body Weight Variable

	Sum of Squares	Df	Mean Square	F	p	Sig.
Between Subjects	22,205	33	,673			
Measure	39,117	2	19,559	34,940	.000	1-2, 1-3
Error	36,946	66	,560			2-3
Total	98,268	101				

According to the Table-4, a significant difference between the points for the body weight variable was found (F=34,940, p<0,001). Significant differences between in-pair comparisons of the mean values of the test results were also found.

Table 5: The Arithmetic Mean Values and Standard Deviations for Wall Pass Variable

	Mean	Std Dev	N
Wall pass (Pre test)	9,41	1,10	34
Wall pass (Post test)	13,18	1,11	34
Wall pass (Permanence test)	11,53	1,10	34

The arithmetic mean values and standard deviations for the wall pass variable were found to be 9,41±1,10 kicks, 13,18±1,11 kicks and 11,53±1,10 kicks, respectively. The descriptive statistics show, that there was a decrease between the post and permanence test results, while there existed an increase between the pre and permanence test results.

Table 6: The ANOVA Results for the Wall Pass Variable

	Sum of Squares	df	Mean Square	F	p	Sig.
Between Subjects	32,765	33	,993			
Measure	242,196	2	121,098	169,557	.000	1-2, 1-3
Error	47,137	66	,714			2-3
Total	322,098	101				

Studying Table-6, we saw a significant difference between the test points (F=169,557, p<0,001). There, also existed significant differences between the in-pair comparisons of the mean values.

Table 7: The Arithmetic Mean Values and Standard Deviations for Dribbling Variable

	Mean	Std Dev	N
Dribbling (Pre test)	33,51	4,81	34
Dribbling (Post test)	24,36	4,61	34
Dribbling (Permanence test)	26,44	4,31	34

For the dribbling variable, the arithmetic mean values and standard deviation for the dribbling variable were found to be 33,51±4,81 sec. for the pre test, 24,36±4,61 sec. for the post test and 26,44±4,31 sec. for the permanence test. Studying the descriptive statistics, we saw, that there was a favorable decrease between pre test and post test, while an unfavorable increase between the post test and the permanence test.

Table 8: The ANOVA Results for the Dribbling Variable

	Sum of Squares	df	Mean Square	F	p	Sig.
Between Subjects	82,045	33	2,486			
Measure	1563,602	2	781,801	376,361	.000	1-2, 1-3
Error	137,099	66	2,077			2-3
Total	1782,746	101				

According to the Table-8, there was a significant difference between the test results (F=376,371, p<0,001). There, also were significant differences between the in-pair comparisons of the mean values of the dribbling variable.

Table 9: The Arithmetic Mean Values and Standard Deviations for the Standing Long Jump Variable

	Mean	Std Dev	N
Standing long jump (Pre test)	1,59	0,80	34
Standing long jump (Post test)	1,64	0,83	34
Standing long jump (Permanence test)	1,63	0,86	34

The measurements for the standing long jump variable, the pre test, post test and permanence test results were found to be 1,59±0,80 cm, 1,64±0,83 cm and 1,63±0,86 cm, respectively. Studying the descriptive statistics, a favorable change was found between the pre test and the permanence test, while there was an unfavorable decrease between the permanence and post tests.

Table 10: The ANOVA Results for The Standing Long Jump Variable

	Sum of Squares	df	Mean Square	F	p	Sig.
Between Subjects	87,917	33	2,664			
Measure	416,385	2	208,192	88,118	.000	1-2, 2-3, 1-3
Error	155,935	66	2,363			
Total	660,237	101				

According to the Table-10, a significant difference was seen between the test results (F=88,118, p<0,001). In in-pair comparisons there also existed significant differences.

Table 11: The Arithmetic Mean Values and Standard Deviations for the Flamingo Balance Test Variable

	Mean	Std Dev	N
Flamingo balance (Pre test)	5,21	2,40	34
Flamingo balance (Post test)	4,59	1,54	34
Flamingo balance (Permanence test)	4,94	1,41	34

The measurements for the flamingo balance test variable were found to be 5,21±2,40, 4,59±1,54 and 4,94±1,41 for the pre test, post test and permanence test, respectively. Studying the descriptive statistics, a favorable increase between the pre test and the post test, while there was an unfavorable decrease between the post and permanence tests.

Table 12: The ANOVA Results for The Flamingo Balance Test Variable

	Sum of Squares	df	Mean Square	F	p	Sig.
Between Subjects	32,309	33	,979			
Measure	6,529	2	3,265	4,476	.007	1-2, 2-3
Error	48,137	66	,729			
Total	86, 975	101				

According to the Table-12, there was a significant difference between the test results (F=4,476, p<0,001). Between the in-pair comparisons of the averages, significant differences were found between the pre test and the post test averages, and between the post test and permanence test averages, also.

4. Discussion

A. Anthropometric measurements

The height averages collected from the 11-13 years old age group of attendants were 1,49±5,09 cm for the pre test, 1,50±5,05 cm for the post test and 1,51±5,06 cm for the permanence test. In this study weight averages were 41,49±5,12 kg, 41,95±4,94 kg and 42,97±4,91 kg, for the pre test, post test and permanence test, respectively. It is thought that the reason for the significant increase in the participant students' stature values stemmed from the regular training program and their position in the developmental period. Although children continue to get taller and gain weight, the developmental pace has considerably decreased compared to both pre and post periods. Height-wise, children grow about 5cm and gain about 2.6kg yearly (Kocaoluk and Kocaoluk, 1998, p.2647). Considering the average height and weight values of the children, it is indicated that age variable is quite influential on height of children who are in the developmental period.

B. The Wall Pass Test

The wall pass test averages of attendants were 9,41±1,10 kicks for the pre test, 13,18±1,11 kicks for the post test and 11,53±1,10 kicks for the permanence test. The attendants' wall pass kick averages were observed to increase starting from the pre test towards the post test. This increase can be construed as a positive effect of the 2 months regular

fundamental technical soccer training on children's wall pass kicking progression. There exist similar studies in the literature. Musa (2006) in his study with the primary school pupils found significant differences between the pre test and post test results for shooting to the wall. In another study, significant differences were found for the pre test and post test results related to the quick wall passing exercise (Kurban, 2009). In this study, considering the wall pass kicking averages of the children afterwards a 12 weeks of transition period, a decrease compared to the post tests averages was observed and this decrease was found to be significant. In other words, soccer technical skills training were effective on children's' passing abilities and this effect was lost significantly at the end of the transition period.

C. The Dribbling Test

Attendant pupils' averages for the dribbling test were 33,51±4,81 sec, 24,36±4,61 sec and 26,44±4,31 sec for the pre test, post test and permanence test, respectively. According to the analyses, with 8 weeks soccer technical training provided a significant positive difference in abilities of children can be said. There exist studies supporting these findings. Musa (2006) found significant differences, an he compared the pre test and post test results in his study. Malina et al. (2005) applied a basic techniques test related to football considering the maturing period of athletes and their results pointed out that the chronological age and training age in football significantly increased the success of dribbling test. The permanence test applied after a 12 weeks period of rest we observed an increase in the average dribbling times of the children, and taking studying the average times for the permanence test, this increase was statistically significant. This showed that the children's achievements were significantly lost in this 12 weeks transition period.

D. Standing Long Jump Test

In this study the standing long jump test averages were 1,59±0,80 cm, 1,64±0,83 cm and 1,63±0,86 cm for the pre test, post test and permanence test, respectively. It was seen, that the standing long jump averages of children exhibit an increase from the pre test towards post test. This increase can be construed as the 8 weeks of training programme affected the children's standing long jump skills positively. Standing long jump is a parameter indicating explosive force. In literature, it is proven that explosive force can be improved through training. However, it is observed that the findings related to jumping performance among children and the studies assessing the explosive force indirectly are inconsistent. The research evidence in literature indicates that both chronological age and biological age affect jumping performance (Baguet et al., 2004). It was seen in the permanence test applied at the end of a 12 weeks period of rest following the 8 weeks of soccer skill training, the standing long jump averages of the

children was decreased significantly compared to the post test averages. And this decrease was regarded as significant ($p<0.05$). All those shoved that children lost their achievements during the 12 weeks transition period.

E. Flamingo Balance Test

Balance is a mechanical condition indispensable for the motor function, as it ensures the stability of positions (posture) and the orientation of movements in space; hence, it is required in daily, professional, and sports activities (Cordun, 2009). In the study presented, the averages of the flamingo balance test were found to be 5,21±2,40 trials, 4,59±1,54 trials and 4,94±1,41 trials for the pre test, post test and permanence test, respectively. Studying the results, a decrease was seen in the flamingo balance test averages of children from the pre test to the post test. This decrease in the number of trials was construed as a favorable effect of the 8 weeks training programme. After 12 weeks of transition period, there observed an increase in the flamingo balance test averages of the group. When the results of the permanence test were studied, this increase in the flamingo balance test averages was found to be statistically significant. This showed that the achievements of children were significantly lost in the 12 weeks transition period.

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