

## COMPARATIVE ANALYSIS OF MOVEMENTS ACTIVITY WITH AND WITHOUT BALL IN TRAINING OF 11-15 YEARS OLD YOUNG FOOTBALLERS OF DIFFERENT PLAYING LINES

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**Abstract.** Motive activity of young footballers of different playing lines of business is considered. For research is served the actions of players aged 11-15 years (n=93). The analysis of motive activity of footballers is presented with ball and without on the stage of base pre-treatment. The value of motive activity is appraised for competition activity of footballers. The necessity of development of specific capacity of footballers is certain. It is set that dimension of motive activity of 11 years footballers (20 persons) includes slow runs - from 23,9 to 25 minutes; accelerations on different distances - from 3 to 3,4 minute; jerks - from 2 to 3,4 minute; jumps and fight for a ball - from 0,9 to 1,1 minute. On the average for training (90 minutes) footballers running during 45 minutes (from them 4 minutes of contiguities with ball).

**Keywords:** football, players, training, ball, endurance.

### Introduction

A present stage of development, football is characterized by a large scope of motion activity, high speed of movement and by participation of practically every player both in defense and in attack [3]. As a result, adversary instantly puts a player, who captured the ball, in strict conditions of time and space deficit.

The stage of initial training in football is a period of fundamental preparation and its efficiency and purposefulness will to a large extent determine the whole period of further players' improvement. It has already established that even at early stages of training young sportsman must clearly understand main tactic and technical techniques and the technology of their using [4]. Numerous observations of football players' of different qualification and age games revealed that tactics of any game inevitably strengthen the requirements to training "game without ball", to football players' technical skillfulness and to game with ball [10].

In this connection the problem of physical efficiency and accuracy of footballers' tactic and technique actions with ball and footballers' movements without ball has become ever more acute. The less footballers make mistakes, executing actions with ball, the more often and appropriately they take acute and favorable positions, moving on football field, the more they have opportunities for creation and realization of tactic intentions, leading to victory.

That is why the problem of young footballers' movement actions in its full scope, both in training and in competitions takes an important place in a number of actual sports research directions.

In connection with the above said, this problem has significant theoretical and practical meaning for preparation of full-fledged football reserve in Ukraine.

The research has been carried out as per plan of scientific and research works in the sphere of physical culture and sports for 2011-2015 on subject 2.3 "Scientific and methodological fundamentals of perfection of football sportsmen's training, considering the peculiarities of competition activity".

### Purpose, tasks of the work, material and methods.

*The purpose of the work* is analysis of young, 11-15 years old, footballers' movement activity scope with and without ball in training.

#### *The methods of research:*

1. Analysis of scientific and research literature on the studied problem.
2. Pedagogical experiment.
3. Pedagogical observations.
4. Statistical processing of the obtained data.

### Results of researches.

By the present time a lot of researches of footballers' movement activity in competitions have been fulfilled. As a result data about character and scope of players' action with and without ball have been obtained.

Football relates to kinds of sports in which greater part of players' activity is running load of different speeds. Running of footballer is composed of different forms of movement (traveling, accelerations, jerks to different directions). It often starts from different positions, with sharp changing of rhythm and race [8].

Actions with ball are very important forms of movement which are applied in game. Exactly they determine the specificity of this kind of sports and differentiate it from the other kinds. As it is known, the main forms of football movements are kicks, stops, dribbling, dodging, side throw-in, goal-keeper technique. Ball passes are the fundamentals of group and team playing. They determine the race of game, attacking and defensive combinations' speed [1, 3, 4, 11-13]. The character of passes influence on the style of team's playing. Goal kicks are the most essential element of game. They condition efficiency of game and the number of goals.

In the period of game a footballer has in average from 34 to 70 contacts with ball and summarized time of direct contact is about 135 – 165 seconds. It was established that centerline footballers hold ball the most frequently, and central fullbacks – the least frequently [7].

At modern stage of football development a trend to universalizing of footballers is traced, there is an intention to level the boundaries between the duties of fullbacks, half-backs, and forwards. One of the main principles of universalism is 'interchangeability of different lines' footballers: fullbacks should be skilled in attacking and forwards – in defense. [9].

For mastering of main tactic points one should clearly imagine which requirements are lodged to footballers depending on their role in game. As it is known all footballers are differentiated into goalkeepers, back line players, center line players and forwards by their functional duties [3].

In training of footballers of certain age coach shall consider morphological and functional capabilities of the trainers [1]. Main demand of juvenile age is connected with the process of puberty. It is characterized by intensive development of endocrine system, significant neurohormonal reconstructions and intensive development of all physiological systems of teenager's organism.

In this period significant psychological changes occur. High emotionality, unbalanced state of mood, unmotivated actions, hot temper, exaggeration of own abilities take place. The source of this is – intensive physical development, puberty, appearance of the so-called feeling of maturity [1, 9].

Methodologically correct sports trainings of teenagers influence positively on formation of trainees' organisms. It manifests in double way, both: as morphological changes like growth of anthropometric properties and as functional shifts like increased efficiency.

Teenagers' organisms are quickly adjusted for work. It is explained by better mobility of nervous processes, that is why warming-up shall take not more than 8-10 minutes [1, 8, 9, 10].

Thus, by 11-15 years age, boys' organisms have mainly formed.

General endurance of young footballers is growing with age. And this growth is uneven. With insufficient its growth at initial training stage (8-10 years old) it is changed by sharp growth in age groups from 11 to 15 (specialization stage). After 16 (stage of sports perfection), general endurance race reduces. Increase of aerobic component of endurance, connected with its natural growth and with influence of training and competition loads, ends, mainly by 20-21 years old age.

Essential dynamics of speed endurance is observed at 12-15 years age. Natural growth of speed endurance ends by 18 years age and equals to 90-95% of adult footballers' endurance [10].

Coming out from the above said, e conducted comparative analysis of motion activity scope with and without ball of different game roles (only field players) of young footballers of Road physical culture and sports club "Locomotive" (Kiyev). We conducted it on example of training class directed to development of special endurance. As means there were used: playing and tactic and technique exercises (football on small sites with shortened number of players; kicking goals after dribbling; dodging of stands; ball passes in movement in pairs; in groups of three; games in "square" – 4x2, 5x3, 4x2 on sites of different areas).

Table 1

*Motion activity scope of 11 years old footballers*

Game role	Motion activity scope (min.).										
	With ball						Without ball				
	passes	stops	dribbling	dodging	kicks	Other actions	Slow trveling	Accelerations at different distances	jerks	Jumps and fight for ball	Pauses between exercises
Fullback	0,2	0,15	0,51	1,12	0,21	1,1	25	3	2	1	10
Halfback	0,27	0,19	1,14	1,21	0,24	1,19	23,9	3,4	2,7	1,1	10
Forward	0,24	0,16	1,1	1,17	0,3	1,1	24	3,1	3,4	0,9	10
Total	Fullback: With ball– 3.29 min Without ball– 41 min			Halfback: With ball– 4.24 min. Without ball– 41.1 min			Forward: With ball– 4.07 min. Without ball– 41.4 min.				

The scope of motion activity of young (11 years old) footballers (20 persons), on example of training class, directed to development of general endurance showed that their motion activity without ball consists of slow traveling from 23.9 to 25 minutes; accelerations at different distances – from 3 to 3.4 minutes; jerks – from 2 to 3.4 minutes; jumps and fights for ball – from 0.9 to 1.1 min. See table 1.

In average, during training class (90 minutes) young footballers (11 years old) are running for 45 minutes, including 4 minutes of contacts with ball.

The scope of motion activity of 12 years old footballers (19) persons showed, on example of training class, directed to development of general endurance, that their motion activity is higher than of younger players: slow traveling– from 24.1 to 24.9 minutes; accelerations at different distances – from 3.2 to 3.4 minutes; jerks –from 2.05 to 3.8 minutes; jumps and fights for ball – from 0.9 to 1.1 minutes. See table 2.

Table 2

*Motion activity scope of 12 years old footballers*

Game role	Motion activity scope (min.)										
	With ball						Without ball				
	passes	stops	dribbling	dodging	kicks	Other actions	Slow traveling	Accelerations at different distances	jerks	Jumps and fight for ball	Pauses between exercises
Fullback	0,21	0,16	0,53	1,2	0,23	1,2	24,9	3,2	2,05	1,05	10
Halfback	0,29	0,21	1,2	1,29	0,29	1,21	24,1	3,4	2,7	1,1	10
Forward	0,24	0,19	1,1	1,3	0,32	1,17	24,3	3,3	3,8	0,9	10
Total	Fullback : With ball– 3.53 min Without ball– 41.2min.			Halfback: With ball – 4.49 min. Without ball– 41.3 min			Forward: With ball– 4.32 min. Without ball– 42.3 min.				

Slow traveling became more seldom because the time for accelerations and jerks increase. Total time of direct contact with ball is from 3.53 to 4.49 minutes.

The scope of motion activity of 13 years old young football players (18 persons) showed that their motion activity without ball a little bit higher than of 11-12 years old boys: slow traveling – from 24.1 to 24.7 minutes; accelerations at different distances – from 3.27 to 3.5 minutes; jerks – from 2.5 to 3.9 minutes; jumps and fights for ball – from 0.86 to 1.17 minutes. Total time of direct contact with ball is from 3.57 to 4.61 minutes.

Motion activity of 14 years old young football players (18 persons) is, out of the questions, higher than of their younger colleagues: slow traveling – from 24.5 to 24.7 minutes; accelerations at different distances – from 3.41 to 3.55 minutes; jerks – from 2.25 to 3.95 minutes; jumps and fights for ball – from 0.9 to 1.17 minutes. Total time of direct contact with ball is also higher, i.e., from 4.2 to 4.92 minutes.

Table 3

*Motion activity scope of 15 years old footballers*

Game role	Motion activity scope (min.)										
	With ball						Without ball				
	passes	stops	dribbling	dodging	kicks	Other actions	Slow traveling	Accelerations at different distances	jerks	Jumps and fight for ball	Pauses between exercises
Fullback	0,35	0,31	1,25	1,2	0,35	1,4	24,6	3,49	2,45	1,21	10
Halfback	0,41	0,38	1,41	1,48	0,46	1,41	24,2	3,57	3,09	1,27	10
Forward	0,39	0,34	1,32	1,7	0,42	1,47	24,1	3,57	4,15	1,05	10
Total	Fullback: With ball– 4.86 min. Without ball– 41.75 min.			Halfback: With ball– 5.55 min. Without ball– 42.13 min			Forward: With ball– 5.64 min Without ball– 42.87 min				

Total time of direct contact with ball of 15 years old footballers (18 persons) is 4.86 – 5.64 minutes. From 90 minutes of training time 45-49 minutes belongs to motion activity (table 3). In the base of the conducted observations, it has been determined that from total scope of actions, which a player carries out during training, 20% belongs to ball passes, 7% to dribbling, 4% to dodging, 2.5% to kicking goals, 5% to other actions.

It has also been determined that centerline players hold ball the most frequently and central full and halfbacks – the least frequently.

#### Summary.

Analysis of literature and results of pedagogical observations show that it is necessary to study motion activity and reliability of execution of technique and tactic players' actions of different roles in youth teams. Motion activity of players both of 11 years old and 15 years old includes great scope of movements without ball. The character of young players' movements varies by speed and by direction. Regarding the reliability of execution of individual and group tactic and technique actions, it should be noted that young football players (11-12 and 12-13 years old) yield to their elder associates in reliability of ball passes.

In training process more attention should be paid to the development of specific efficiency of the players of all roles (except goalkeeper), which permit to maintain motion activity and reliability of attacking and defensive tactic and technique actions' fulfillment on high level.

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