

# Structure and content of competitive group compositions in sports aerobics

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**Purpose:** to make the analysis of modern competitive group compositions in sports aerobics.

**Material & Methods:** pedagogical, sociological and methods of mathematical statistics were used. 10 coaches took part in the experimental part; analysis of protocols and video records of competitions of the aged category of children of 9–11 years old, who perform in the nomination of triplets and quintuples (group exercises), is carried out.

**Results:** the content of competitive compositions and the allocated indicators are studied which defined it.

**Conclusions:** the basic structural elements, which characterize competitive compositions, are allocated. Their components, quantity and time of performance are defined. It is established that variety of aerobic contents, spaces, and means of registration, musical compliance and logicity of creation of the whole competitive composition at high quality of performance characterizes teams – winners.

**Keywords:** sports aerobics, competitive composition, group exercises (triplets and quintuples), aged category, 9–11 years old.

## Introduction

Now the growth of complexity of competitive programs, the search of new original elements, bringing of technical skill to the level of virtuosity in the difficult and coordination sports, which are connected with art of movements, the leading tendencies of development. Sportsmen include maximum of elements of the highest difficulty from various structural groups in the programs and carry out them innovative [1; 6; 7; 9, etc.]. At the same time superiority will remain for those sportsmen who will be able to combine various complexities, technically perfect execution in original compositions with special expressiveness and virtuosity. In this case only the esthetic party can serve as that moment which gives a certain advantage to sportsmen.

However the concept “sportsman’s aesthetics”, which is connected with the manifestation of such parties of mastery as expressiveness, culture of movements, efficiency and harmony, artistry and musicality, virtuosity, are among difficult defined, indistinct concepts and need detailed specification and identification of criteria for their assessment [2; 3; 8; 14, etc.].

Questions of identification of objective criteria for evaluation of mastery are consecrated in works of wide range of authors in gymnastic and dancing sports [5; 10; 12; 13, etc.]. These publications are united by one purpose – the aspiration to reduce subjectivity of referee’s assessment. However it remains not clearly how to estimate and increase mastery level in the training process what movements and actions to apply to the achievement of artistry and expressiveness in exercises. This problem can be solved by disclosure of artistic and emotional skill of sportsmen by drawing up competitive compositions.

There are no concrete recommendations about the quantita-

tive analysis of content of competitive exercises in sports aerobics. The general short requirements for drawing up and assessment of contents of programs (exercises) of sportsmen are provided in competition rules on sports aerobics. There are no accurately differentiated concrete criteria for evaluation of indicators of staginess of execution, virtuosity of the sportsman, originality of techniques, complexity and the sequence of execution of exercises. Therefore, the work in this area of the research is urgent.

## Communication of the research with scientific programs, plans and subjects

The research is executed according to the subject of the Consolidating plan of the research works in the sphere of physical culture and sport of MES of Ukraine for 2015–2016 within the subject 2.2.4 “Improvement of mechanisms of management of motive activity of sportsmen”.

## The purpose of the research

To make the analysis of modern competitive group compositions in sports aerobics.

## Research problems:

1. To study theoretic-methodical condition of problem of maintenance of competitive group compositions in sports aerobics.
2. To investigate structural elements of competitive group compositions in sports aerobics.

## Material and Methods of the research

The research was conducted on the basis of MI CCYSS No.

13 of Kharkov. 10 coaches took part in its experimental part, and documentation of age category of children of 9–11 years, competing at competitions to the group program, was investigated (triplets and quintuples). The complex of scientific methods of research was used: pedagogical methods of the research (analysis and synthesis of data of scientific and methodical literature, analysis of documentary materials; analysis of video records; pedagogical observation); sociological methods of the research (poll and questioning); methods of mathematical statistics.

The pedagogical observation was made within the year at the competitions, which are held by the Ukrainian federation of sports aerobics and, in particular, the Kharkov regional federation of sports aerobics and fitness.

2 main starts were seen – Cup and Championship of Ukraine, and also 6 open championships of the Kharkov and Sumy regions. The questioning of coaches, referees is carried out, the corresponding conclusions of protocols of last competitions are studied and drawn.

## Results of the research and their discussion

Pedagogical observations according to video records of official competitions were made for the definition of structure and the maintenance of competitive compositions of triplets and quintuples in the category children of 9–11 years old in sports

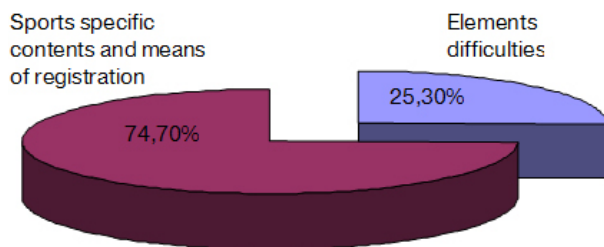
aerobics [4; 11; 15]. The analysis of programs was made on the allocated by us indicators. Requirements for creation of compositions, which are described in competition rules on sports aerobics and special literature on drawing up voluntary exercises in sports views of gymnastics (tab. 1), are the basis for it.

The received results testify to various contents of competitive programs, both on structure of elements, and on time of implementation of the program. The average duration of the program in the age category children of 9–11 years makes 75 seconds that conforms to requirements of modern competition rules. 41 seconds (54,7%) on average from them are the share of basic steps and their versions. 12,9 seconds (17,3%) are allotted on average on transitions and interactions. From 16 to 22 seconds (21,3–29,3%) are allotted on elements of complexity. The expressive movements, jumps of registration and elements of acrobatics have a design character and are carried out on average on 2,47 seconds (3,3%).

Counting percentage ratio of time of performance of different movements in competitive composition, we revealed that 25,3% is required on average on elements of complexity, the rest of the time (74,7%) is taken by the connection of aerobic tracks (CAT), registration jumps, expressive movements, acrobatics elements, transitions and interactions (fig. 1).

**Table 1**  
The indicators, defining the maintenance of competitive compositions of group exercises in sports aerobics for the age category children of 9–11 years

Nº	Group of indicators	Indicators	Detailed description
1	Elements of complexity and combination	Elements of group A	Push-ups, circles and swings over legs, helicopter
		Elements of group B	Emphasis
		Elements of group C	Jumps and jumps with landing in split
		Elements of group D	Balances and flexibility
		Combination from 2 elements	2 elements of complexity combined directly from one or different groups, but from various subgroups (families) with the additional cost of 0,1.
2	Sports specific contents	Elements of the highest cost	Element worth 0,4.
		Basic steps (connection of aerobic tracks CAT)	7 basic steps
3	Means of registration	Transitions and interactions	The ordinary connecting steps which are carried out for preparation for complexity elements (lowerings and rises, transitions, etc.)
		Expressive movements	Accent stop of the sportsman, or the pose executed by part of body, combined with sharp sound effect of music
		Registration jumps	Jumps which have character of registration and do not belong to complexity elements
4	Space (constructions and evolutions)	Acrobatics elements	The elements executed on floor (kind of spins, weak links), on forearms, from A1 to A3, excepting elements with flight phase, are resistant, rise by extension - all from A4 to A7
		Movement (horizontal plane)	Geometrically correct
		Difficult constructions	Movements on the platform (on diagonal, around, forward, back, to the right, to the left). Sharp and exact image of construction (drawing)
5	Musical compliance	Space (vertical plane)	Change of positions and provisions between sportsmen in group (pair work, work on the three, groups in interaction and without)
		Musical compliance	In standing positions on floor or in air
6	Intensity	Rate of execution	Total result of quantity of accent points, dancing and subject elements and number of change of rhythm
			Total result of quantity of movements in unit of time



**Fig. 1. Percentage ratio of time of maintenance of competitive compositions of group exercises in sports aerobics**

Thus, the main maintenance of competitive compositions in sports aerobics is made by “program choreography” – the work of art which is free for creativity. Restrictions are available only from competition rules. It concerns time, sizes of the platform and quantity of the elements, defining complexity for a concrete age.

## Conclusions

The analysis of maintenance of competitive group compositions, allowed defining components, quantity and time of their performance. It is revealed that the most part of time of the whole program is occupied by basic steps (connection of aerobic tracks) and their version – 41 seconds (54,7%), 12,9 seconds (17,3%) are the share of transitions and interactions. The insignificant part of time is almost evenly distributed between other components, having a design character: expressive movements – 0,5 seconds (0,66%), acrobatics elements – 1,2 seconds (1,6%), registration jumps – 0,77 seconds (1,02%). 18,9 seconds (25,3%) are on average allotted on elements of complexity. Thus, the main maintenance of competitive combinations in sports aerobics is made by «program choreography».

Studying of features of creation of competitive compositions in sports aerobics is **in the long term further researches**.

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