

MODEL CHARACTERISTICS OF AVERAGE SKILL BOXERS' COMPETITION FUNCTIONING

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Abstract. *Purpose:* analysis of competition functioning of average skill boxers. *Material:* 28 fights of boxers-students have been analyzed. The following coefficients have been determined: effectiveness of punches, reliability of defense. The fights were conducted by formula: 3 rounds (3 minutes - every round). *Results:* models characteristics of boxers for stage of specialized basic training have been worked out. Correlations between indicators of specialized and general exercises have been determined. It has been established that sportsmanship of boxers manifests as increase of punches' density in a fight. It has also been found that increase of coefficient of punches' effectiveness results in expansion of arsenal of technical-tactic actions. Importance of consideration of standard specialized loads has been confirmed. *Conclusions:* we have recommended means to be applied in training process at this stage of training. On the base of our previous researches we have made recommendations on complex assessment of sportsmen-students' skillfulness. Besides, we have shown approaches to improvement of different sides of sportsmen's fitness.

Key words: boxing, indicator, fight, punches, competition functioning, achievement of results.

Introduction

Analysis of sport functioning show, that, from the point of view of systemic approach, competitions are main and primary component. Trainings are secondary component, which is a mean of preparation for participation in competitions [1, 7, 8, 14, 20, 21, 29, 35]. That is why study of competition functioning's requirements, appropriate structure and content of training process is one of the most topical tasks of sports training's theory and methodic [9, 10, 16, 27, 28, 34].

Many authors [1, 7, 9, 27, 35] note the demand in studying of modern requirements, influencing on competition functioning. The result of such approach is creation of adequate to these requirements technology of qualified boxers' training. From these positions boxer's sport functioning is directed on victory in fight with opponent. The victory is ensured by required level of technical-tactic, physical and psychic fitness. Such fitness is conditioned by individual features of sportsmen; by quality and effectiveness of training process [24, 31, 32, 33, 36, 37].

The researches of elite boxers' competition functioning permitted to mark out comparative characteristics of fights, which were conducted by different formulas of competition functioning and in different periods of development of amateur boxing [8, 11, 18]. On the base of these data characteristics of average skill boxers were outlined. It is purposeful to receive such characteristics by simulation of fights and determination of certain model indicators.

Purpose, tasks of the work, material and methods

The purpose of the research: is to analyze competition functioning of average skill boxers and develop sportsmen's model characteristics for stage of specialized basic training.

The tasks of the research:

- To receive indicators of competition functioning of average skill boxers at stage of specialized basic training;
- To compare indicators of average skill boxers' competition functioning with the best results of elite boxers', received in previous researches;
- On the base of our previous researches to work out recommendations on complex assessment of sportsmen-students' skillfulness. Besides, it was required to show approaches to perfection of different sides of sportsmen's fitness.

Organization and methodic of the research:

We analyzed 28 fights of average skill boxers (first sport grade and candidate masters of sports). All they were students of Lviv State University of Physical Culture. We carried out video recording of boxers'

performances on University Games of Lviv region. When watching video-records we assessed the following technical tactic indicators of competition functioning:

- 1) Total quantity of punches per fight;
- 2) Quantity of punches per round;
- 3) Quantity of punches per minute;
- 4) Quantity of successful punches;
- 5) Quantity of unsuccessful punches;
- 6) Density of technical actions – relation of accurate punches (successful) to duration of fight (in minutes);
- 7) Coefficient of punches' effectiveness – relation of quantity of accurate punches to total quantity of punches per fight;
- 8) Coefficient of reliability of defense – relation of unsuccessful punches to total quantity of punches per fight;

The received data were processed with methods of mathematical statistic with the help of standard computer program, "Statistica 7".

Results of the researches

Analysis of video-records of boxers' fights (see table 1) permitted to receive indicators of average skill boxers' competition functioning. For comparison, in table 1 we give also indicators of elite boxers, received by us as a result of fights at London Olympic games 2012 [8].

Table 1

Indicators of average skill and elite boxers' competition functioning

№	Indicators of competition functioning	Elite boxers	Average skill boxers
		1	2
1	Density of fight (total quantity of punches per fight)	174.17	40.14
2	Quantity of punches per round	58.06	13.38
3	Quantity of punches per minute	19.35	4.46
4	Quantity of successful punches	104.63	20.68
5	Quantity of unsuccessful punches	70.03	19.46
6	DTA (density of technical actions)	35.2	7.2
7	CPE (coefficient of punches' effectiveness)	1.75	0.48
8	CDR (coefficient of defense reliability)	0.62	0.31
9	Interval of attack	10.53	5.31

Difference between indicators of attack and defense actions of both groups' boxers is the following: first grade boxers and candidate masters of sports (average skill boxers) significantly lag behind boxers of world combined teams by indicators of attack and defense actions. This fact is obvious and does not require any confirmations.

Indicators of attack and defense actions of elite boxers can be considered to be model characteristics (see table 1). Among elite boxers combined team of Ukraine should be noted, which in team standing won the first place. In particular these boxers were: Pavel Ishchenko (up to 56 kg), Valiliy Lomachenko (up to 60 kg), Denis Berynychk (up to 64 kg), Taras Shelestiuk (up to 69 kg), Yevgeny Khytrov (up to 75 kg), Aleksandr Gvozdyk (up to 81 kg), Aleksandr Usyk (up to 91 kg). Five sportsmen of the team took prize places. Indicators of these sportsmen are bench marks for sportsmen, who are on stage of specialized basic training. In compliance with these indicators it is necessary to build training of sportsmen-students. In their turn, indicators of sportsmen-students are bench marks for less qualified sportsmen. Here it would be appropriate to present the data of known specialists, who delivered quite in detail approaches to application of model characteristics of the best sportsmen at different stages of boxers' training [4-6, 18, 19].

Among such researches there are works, fulfilled in context of the present research [22, 23]. Results of these researches were used in training of sportsmen-students:

1. Assessment of influence of different factors on power of punch as criterion of competition functioning's effectiveness. It is recommended to train maximal and explosive power of all parts of sportsmen's bodies during fulfillment of general warming up exercises with further transfer of physical qualities in fulfillment of special exercises [23].

2. In training of heavy weight boxers it is necessary to pay more attention to training of quantitative parameters: physical condition; training of maximal strength and speed power; endurance [25].

3. Approaches to usage model characteristics in training process, delivered in works of specialists [4, 5, 6, 26]. In these works attention is attracted to level of general physical fitness and special fitness. It is necessary to consider that factor of physical and special fitness of elite boxers does not change depending on stage of training. At every stage these factors do not depend on each other and are separate sides of general and special fitness. It is recommended to doze evenly load on all factors when dozing loads. It is recommended to use integral marks of different sides of fitness (technical-tactic, psychic, general and special physical fitness).

Besides, in training of sportsmen we used results of our previous researches and appropriate recommendations:

1. Determination of responses of boxers' anticipation under influence of standard specialized loads. In main part of training session boxers improved individual 4-5 punches' series on boxing bag with the task to strike as strongly and quickly as possible (load – 9 rounds, 3 minutes each, with interval 1 minute of rest). After finishing it, boxers fulfilled power exercises with barbell rod and filled ball. We determined regularities of manifestation of every response type in a group of sportsmen and envisaged the ways of their application as criteria for assessment of boxers' psychological condition [18].

2. Increase of sportsmen's skillfulness is manifested as increasing of punches density in a fight. Increase of punches' effectiveness coefficient results in widening of effective technical-tactic actions [20].

3. Correlation between indicators of special and general exercises of sportsmen implied the following: there are confident statistical correlations: a) between power of punches and speed of single movement; b) between power of kicks and indicators of maximal force of muscles (thrust); c) between speed of punches (kicks) and indicators of push of balls (300 g mass); d) between indicators of speed of movement step in combat stance and indicators of punches' speed; e) between indicators of punches' frequency and indicators of frequency of movement (maneuvering) on feet. We also determined means, which it would be purposeful to apply in training process at this stage [22].

Discussion

The received results confirm the data of other authors [27, 19, 35] about importance of orientation of boxers' training on model indicators of more qualified sportsmen. Our researches were fulfilled in compliance with recommendations of well known specialists in boxing [4, 5, 6, 26]. The authors show potentials of simulation of different sides of sportsmen's fitness.

The received results and our earlier researches are in good agreement with approaches of specialists in context of consideration of the following: boxer's bent to certain style of fight [2, 3, 15]; degree of sportsmen's readiness to training session, organism's response to load and activation of recreational processes [11, 12, 30]; degree of training tension, assessment of changes of workability and responsive properties of cardio-respiratory systems [13]; possibility of usage of specialized variable means and methods, permitting to form base of motor conditions and skills [17].

The received results expand general ideas about approaches to training of sportsmen-students with the help of model indicators. They show demand in consideration of anticipation reactions' indicators under influence of standard specialized loads in training process. By results of the researches we found correlation between indicators of special and general exercises for certain stages of training. The obtained coefficients of punches' effectiveness and defense reliability give more general picture about fitness of sportsmen-students.

Conclusions:

Analysis of literature sources witnesses about topicality of further studying of competition functioning of qualified amateur boxers and working out of model characteristics.

On the base of received by us indicators of elite boxers' sport results we created model characteristics for average skill boxers (first sport grade and candidate masters of sports). Such characteristics are recommended to be used in training of sportsmen at stage of specialized basic training.

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Conflict of interests

The author declares that there is no conflict of interests.

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