Original Article

Development of special physical qualities skilled kickboxers various style of competitive activity

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Abstract. The individual approach is an important and effective solution in improving the modern system of athletes’ preparation. This is repeatedly confirmed by scientific data and facts in various sports, in particular in combat sports. This approach also has advantages in kickboxing. In particular, it is important to take into account individual styles of competitive activities ("knockout style", "tempo style", "play style") when constructing the physical preparation of kickboxers. Considering the versatility and special advantages at the ring of athletes each of these styles, it is worth paying attention into their individual skill profiles when planning a training process.

Aim: to increase the level of special physical qualities of skilled kickboxers various styles of competitive activity. The proposed author's program for constructing kickboxers' special physical preparation on the basis of taking into account various styles of competitive activity allowed to obtain generally higher results in the level of manifestation of physical qualities in comparison with the traditional program of physical preparation in this kind of sport. As a result, there were observed the advantages of the experimental group athletes for the indices of "hand dynamometry" (weaker hand) – 6.03% and "pull ups in 30s" – 8.07% (р≤0.05) from the respective indices of the control group athletes. The author's approach to the construction of the physical preparation program contributed in general, to significant increase in the results of control exercises, which determine the level of special physical qualities development; higher relative indices of their increments; absence of the expressed negative direction of training loads. The traditional approach has also demonstrated its effectiveness, but in relation to the author's approach the results of physical qualities development level were lower.

Keywords: individual approach, physical preparation, program, kickboxer.

Introduction

Increasing of sport masters’ level is one of the priorities task for high-skilled athletes, especially at the stages of maximum realization of individual capabilities and preservation of their achievement. The preparation of athletes in combat sports is a multicomponent system. All of its sections (physical, technical, tactical, psychological, etc.) are in strict interaction, although each component solves particular range of tasks (Frolov, 1976; Horskov, 1983; Briskin, 2016).

According to experts’ opinion, improving the quality of qualified athletes’ preparation is interconnected not only with the introduction of effective means and methods in the training process, but also using of different approaches to increase the level of athletic skill. In this regard, the preparation of the athlete for higher achievements becomes very important. One of the most rational approaches, which determine its effectiveness, is recognized as an individual approach (Rusanov, 1985; Stepanov, 2009; Hutsul, 2015).

A number of studies indicate that the problem of using the individual approach in the training of athletes in combat sports was devoted large number of publications (Kalmykov, 1983; Kravchenko, 1998; Ilnytskyy, 2018). Competitive activities were studied by using an approach, which developed in a large number of scientific works (Nykyforov, 1987; Maryan, 2013; Pityn, 2017).

It is known that the degree of factors significance, which determines the peculiarities of specific efficiency manifestation of athletes’ various styles, is not the same. Therefore, disparaging attitude to the data received has negatively affects to effectiveness of athletes’ preparation in general and to success of performances in competitive activities (Taimazov, 1981; Tumanian, 2006; Zadorozhna, 2018).

Thus, one of the important tasks of kickboxers’ preparation at the present stage is to achieve the optimal level of physical preparedness in accordance with the individual inclination to tempo, strength fight or outplaying. In this approach, the process of forming the necessary physical potential is based on the account of the motor abilities kickboxers various styles of competitive activities ("tempo style", "knockout style", "play...
physical preparedness at the specialized basic training stage by taking into account the dominant structure and basic training stage in kickboxing was studied; the content of their technical and tactical actions was checked.

for the athletes' preparation from kickboxing and the program of qualified athletes' preparation at the specialized skills are the maximum strength, speed, speed and strength qualities and special endurance. These qualities most often determine the effectiveness of kickboxers’ competitive activities. This indicates that in the modern theory and practice of preparation highly skilled athletes there is a contradiction between the improvement of special kickboxers’ physical preparation and the lack of consideration various styles of competitive activities at the specialized basic training stage. This forms the actual scientific and practical task.

The purpose of the research: to increase the level of special physical qualities of skilled kickboxers various styles of conducting competitive activities.

Materials and Methods:
- theoretical analyze and generalization of literary sources (the search for information and clarification of the scientific research problem validity was conducted);
- analysis of documentary materials (the structure and content of the program and normative requirements for the athletes’ preparation from kickboxing and the program of qualified athletes’ preparation at the specialized basic training stage in kickboxing was studied);
- pedagogical experiment (the effectiveness of the program for increasing the skilled kickboxers’ special physical preparedness at the specialized basic training stage by taking into account the dominant structure and content of their technical and tactical actions was checked).
- methods of mathematical statistics (used to processing empirical results at different stages of research).

It is established that according to the curriculum for sports schools with kickboxing for the second year of training, there are generally 1352 hours. There are 444 hours of which allocate for special physical preparation. At the third year of study, the volume of workload is 1456 hours. There are 454 hours of which – for special physical preparation.

The specificity of conducting a pedagogical experiment and involving contingent of various sports clubs in kickboxing allowed us to calculate the volume of experimental and standardized (traditional) programs at the rate of 450 hours for athletes' special physical preparation per year.

The pedagogical experiment was carried out on the sports clubs’ bases which cultivate kickboxing. Namely the athletes of the experimental group had training at SC "Fasters" (Lviv) and athletes of the control group - at the SC "Muay Thai" (Lviv). To the comparative pedagogical experiment were trained 40 qualified kickboxers who were at the specialized basic training stage and had the sport qualification "Candidate to the master of sports of Ukraine". The age of the researched participants in this part was from 17 to 19 years. Distribution of athletes for membership to the sport clubs has shown a certain discrepancy among representatives of various styles of competitive activities. The control group represented 5 kickboxers of "tempo style", 7 – "knockout style" and 8 with domination of "play style", respectively. In the experimental group, the ratio was follow: 6 kickboxers of "tempo style", 6 – "knockout style" and 8 – "play style".

The total duration of the pedagogical experiment was 9 months (from April 1, 2015 to February 6, 2016). Within this period, were foreseen two preparatory periods (April-August 2015 and September 2015 – January 2016). Namely, the construction of annual preparation had two macrocycles with identical program content of special physical preparation in them.

The main differences proposed by us in the experimental program were the following:
- taking into account the specifics of conducting competitive activities by an athlete for the exercises selection for special physical preparation in the preparatory period of the macrocycle;
- differentiation of preparation means by taking into account individual features of kickboxers’ competitive activity;
- change in the volume ratio of special physical exercises in which 40% of the time allocated for improving the special physical qualities, exercises perform jointly by all athletes, 30% – differentiated by the dominant common features for certain styles of competitive activities and another 30% – purely for representatives of individual styles of conduct competitive activities;
- increasing of the general intensity of exercises for special physical preparation, which corresponds to the specifics of the implementation technical and tactical actions in the competitive activity of kickboxing, that achieved through the use of integrated orientation exercises (combination of influence on physical, tactical and technical preparedness);
- preservation of the preparation direction for the corresponding years of training at the specialized basic training stage with the observance of the allocated volume for general physical, technical and tactical preparation and other sections of qualified kickboxers’ preparation.
To the definition and study were involved indicators of individual manifestations of special physical qualities, complex manifestations of special physical qualities and psychophysiological indicators.

Separate manifestations of special physical qualities:
• maximum strength of the hand muscles. Hand dynamometry was used as a test for determining this manifestation of strength. The standardized procedure was used with the help of the wrist dynamometer. It has done with both hands, since the competitive activity involves the effective possession of two-handed techniques. At the same time, the results of stronger hand gave us reason to consider this hand the leading one. By method, the result was recorded with a value of 1 kg and in three attempts. The protocol recorded only the best of these attempts. There were used kilograms of strength (kgs) as unit of measurement.

• explosive strength of the upper and lower extremities muscles. Throwing ball on the distance sitting, legs cut. Weight of the ball is 2 kg. This is a sufficiently standardized and widespread test to control the explosive strength of upper extremity muscles (Rusanov, 1985; Ostianov, 2001). It performed with two hands from behind the head, starting position sitting on the floor, legs cut. To determine the result, the distance from heels to the point of landing was scored. This indicator was calculated in centimeters (cm). It was suggested to perform two mandatory attempts, after which the athlete decided on whether or not to complete the third attempt.

A jump in length from place as a control exercise which designed to determine the explosive strength of the legs muscles. Widely recommended in scientific and methodical literature (Ostianov, 2001; Ilnytsky, 2018) associated with the athletes’ physical preparation, especially athletes in combat sports. For it performance, the athlete should be so that the socks are on the same line. After the preparatory actions, one athlete had to push his legs and land as far away from the line as possible. The result was determined in cm from the line of socks to the jump and to the line of contact with the heels of the base when landing. There were proposed two attempts for implementation.

• speed and strength endurance. Push ups in the emphasis lying in 30 seconds. The time duration of the exercise points to a speed and strength character with elements of special endurance for kickboxing. At the signal, the athletes performed push ups and independently determined the optimum tempo of exercise performance while maintaining the exercise rhythm. Observance of technique was determined visually and all mistakes reported to the athlete. There was fixed number of executed clicks, best of two attempts.

Pull ups on the bar in 30 seconds. This test also widely recommended by combat sports experts. It gives information about possibilities of other muscles groups while maintaining the speed and strength character of work (Rusanov, 1985; Ostianov, 2001). There were offered to carry out pull ups the maximum number of times for time interval, which had been given. Effective performance was counted when athlete returned to the starting position (the hinge with straightened arms in the elbows). The technique of performing the exercise was not strictly regulated, which gave the athlete the opportunity to increase their result by involving additional muscular efforts. The main thing was the need of dynamic performance. Exercise was carried out in one attempt. But if the athlete was dissatisfied with the result or arose other objective circumstances (hand breaking, incorrect starting position, etc.), he could repeat the attempt. Measurement was carried out in number of done times.

Results.
According to the algorithm of pedagogical observation, which was carried out within the pedagogical experiment, indicators of the hand dynamometry (the stronger and weaker hand), throwing ball, jump in length from place, push ups and pull ups (both exercises are performed in 30 seconds) were included to the group of special physical preparedness.

According to the results of the pedagogical experiment and implementation of the program for improving the special physical preparation of skilled kickboxers various styles of competitive activities at specialized basic training stage, it was clarified the existence of a number of differences in the effectiveness of its implementation (as described in Table 1).

**Table 1**

<table>
<thead>
<tr>
<th>Control exercises</th>
<th>Style of competitive activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>before pedagogical experiment after pedagogical experiment</td>
</tr>
<tr>
<td></td>
<td>EG (n=6)</td>
</tr>
<tr>
<td>Hand dynamometry, kgs stronger hand</td>
<td>45,00±4,33</td>
</tr>
<tr>
<td></td>
<td>43,00±4,33</td>
</tr>
<tr>
<td>Throwing ball, m weaker hand</td>
<td>12,70±0,63</td>
</tr>
<tr>
<td>Jump in length from place, cm</td>
<td>181,17±6,83</td>
</tr>
<tr>
<td>Push ups (in 30 seconds), number of</td>
<td>25,67±1,44</td>
</tr>
<tr>
<td>times</td>
<td>19,50±0,83</td>
</tr>
</tbody>
</table>

Notes: EG – experimental group; CG – control group.
Skilled kickboxers of "knockout style" at the stage of specialized basic training, who represent various groups in the pedagogical experiment, have differences in the level of changes in the special physical preparedness on its separate indicators.

Among the representatives of the control group there were positive changes in the results of the exercise "hand dynamometry" (the stronger and weaker hand), "throwing ball", "jump in length from place" and "push ups". At the same time, these changes were reliable in certain cases, namely for the results of "hand dynamometry" (for both hands), and "jump in length from place". Under these control exercises, gains were from 2.71 to 7.69% (p≤0.05) among skilled kickboxers at the specialized basic training stage.

A number of indicators were subject to changes within the range of 0,32-3,08%, but did not reach statistical reliable (p>0.05).

We note that among the representatives of the control group of "knockout style" there is one (p≤0.05) worsening result of control exercise. This is observed for the results "Pull ups in 30 s" and amount 12.62% (p≤0.05).

Result deterioration of skilled kickboxers control group of the "knockout style" is associated with the athlete's efforts (p≤0.05) to demonstrate their own strength endurance. That is, during the implementation they retained the strength to continue the exercise, but failed to ensure the implementation of the speed component. Probably the lack of preparedness sufficient level for this manifestation of special physical qualities did not give an opportunity to distribute strength "on a distance" rationally.

For representatives of the experimental group "knockout style" there is a higher efficiency of the implementation corresponding control exercises, aimed at identifying individual manifestations of skilled kickboxers' special physical qualities.

There were recorded reliable increases (p≤0.05) in most results of control exercises. Among them, as in the case of control group representatives, there are those who are more likely to be exposed to training effects ("hand dynamometry" (the stronger and weaker hand), "throwing ball", "jump in length from place"). Grow by results of these control exercises ranged from 3.54 to 12.96% of the initial level of skilled kickboxers' preparedness at the specialized basic training stage.

The other two control exercises, which were aimed to determine the level of speed and strength endurance development are moderate (p>0,05) changes in the direction of growth or decrease in result (3,90% from the initial level for "push ups in 30 s" and – 5.13% for "pull ups in 30 s", respectively).

This structure changes of control exercises effectiveness for described group we associate with certain adaptation processes. According to them, we see possible positive trends while continuing the training effects of the experimental program.

Consideration of changes and comparison of qualified kickboxers’ indicators at the specialized basic training stage of "tempo style" pointed to such features of the author's program effectiveness, which provided special physical preparation improving, taking into account the individual characteristics of athletes (as described in Table 2).

### Table 2

<table>
<thead>
<tr>
<th>Control exercises</th>
<th>Style of competitive activities before pedagogical experiment</th>
<th>Style of competitive activities after pedagogical experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EG (n=6)</td>
<td>CG (n=7)</td>
</tr>
<tr>
<td>Hand dynamometry, kgs</td>
<td>45,33±3,56</td>
<td>44,29±2,61</td>
</tr>
<tr>
<td></td>
<td>stronger hand</td>
<td>stronger hand</td>
</tr>
<tr>
<td></td>
<td>43,00±2,67</td>
<td>41,43±2,20</td>
</tr>
<tr>
<td></td>
<td>weaker hand</td>
<td>weaker hand</td>
</tr>
<tr>
<td>Throwing ball, m</td>
<td>13,68±0,65</td>
<td>12,57±1,11</td>
</tr>
<tr>
<td>Jump in length from place, cm</td>
<td>186,33±7,33</td>
<td>192,57±11,92</td>
</tr>
<tr>
<td>Push ups (in 30 seconds), number of times</td>
<td>25,67±1,89</td>
<td>25,71±1,88</td>
</tr>
<tr>
<td>Pull ups in 30 seconds), number of times</td>
<td>16,83±3,28</td>
<td>18,57±2,08</td>
</tr>
</tbody>
</table>

Notes: EG – experimental group; CG – control group.

As a result of the implementation author's and traditional approaches to the formation of special physical preparation content could be confirm that the representatives of the control group, this style of competitive activities succeeded to improve the results of most control exercises. Exception, as well as in the case of "knockout style", were the results of "pull ups in 30 s", where the results of athletes decreased (p>0.05).

However, the representatives "tempo style" of the control group on the results of the standardized program implementation reliably (p≤0.05) increased their results in control exercises "hand dynamometry" (the stronger and weaker hand) at 5.81% and 6.21% respectively, "throwing ball" – 1.59%, and "push ups" – 7.78%.

This indicates on efficiency of standardizing the special physical preparation process for representatives of this style competitive activity. In its arsenal and manner of conduct, it is possible to consider that this style
combines most of the elements and, accordingly, the ensuring structure of their performance on the side of individual physical manifestations is wider.

Among the representatives of "tempo style" at the experimental group also recorded increase in the results of control exercises. This is characteristic to all, without exception.

However, the level of significance that is sufficient for pedagogical research was achieved only in two cases. This applied a "hand dynamometry" (weaker hand) where growth was 13.18% (p≤0.05) and "jump in length from place" − 4.83% (p≤0.05). In other cases, despite the absolute and relative growth rates, a sufficient level of significance has not achieved. The growth of the results occurred in the range from 1.22 to 9.56% at p>0.05. This indicates that the author's tactic for program construction for the "tempo style" has several advantages. There was a balanced effect on various manifestations of athletes’ special physical qualities, with priorities for the manifestation of blasting strength among them.

After the pedagogical experiment implemented, the situation has changed insignificant. In several control exercises, the preference of representatives "tempo style" experimental group was recorded. This includes exercises such as "hand dynamometer" (weaker hand), "throwing ball " and "pull ups in 30s". The advantage of exercises results was 9.59, 7.79 and 13.55% respectively (p<0.05).

Another group of skilled kickboxers at the specialized basic training stage were athletes of "play style" (as described in Table 3).

Table 3

<table>
<thead>
<tr>
<th>Control exercises</th>
<th>Style of competitive activities</th>
<th>before pedagogical experiment</th>
<th>after pedagogical experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EG (n=8)</td>
<td>CG (n=8)</td>
<td>EG (n=8)</td>
</tr>
<tr>
<td>Hand dynamometry, kgs</td>
<td>stronger hand</td>
<td>45.25±4,75</td>
<td>46.75±3,44</td>
</tr>
<tr>
<td></td>
<td>weaker hand</td>
<td>42.25±3,81</td>
<td>43.00±3,25</td>
</tr>
<tr>
<td>Throwing ball, m</td>
<td></td>
<td>12.33±0,71</td>
<td>13.23±0,87</td>
</tr>
<tr>
<td>Jump in length from place, cm</td>
<td></td>
<td>187.38±2.28</td>
<td>185.25±7.25</td>
</tr>
<tr>
<td>Push ups in 30 seconds, number of times</td>
<td></td>
<td>28.63±2.78</td>
<td>26.63±1.63</td>
</tr>
<tr>
<td>Pull ups in 30 seconds, number of times</td>
<td></td>
<td>18.13±0.91</td>
<td>18.25±1.56</td>
</tr>
</tbody>
</table>

Notes: EG – experimental group; CG – control group.

The effectiveness of the standardized and author's approaches to the content of skilled kickboxers’ special physical preparation at the specialized basic training stage has been confirmed. It has done on the basis of comparison of the data of certain groups representatives (control and experimental) and their comparison at different stages of the pedagogical experiment.

There are established reliably increases by implementation of a standardized ("traditional") program for improving the athletes’ special physical qualities of "play style" representatives of the control group. According to the calculations, reliably changes in the preparedness level occurred in two control exercises, such as: "hand dynamometry" (weaker hand) − 4.65% (p≤0.05) and "jump in length from place" − 2.50% (p>0.05). The results of other control exercises have confirmed low increments (p>0.05), in the range from 2.08 to 2.67%. However, there are some negative tendencies for results reducing of control exercises "push ups in 30s" and "pull ups in 30s" (result reducing on 0.47 and 4.79% at p>0.05). The analysis of skilled kickboxers’ indicators at the specialized basic training stage of "play style" from the number of experimental group representatives confirmed following. For all control exercises, without exception, there have been positive changes. They have reached the highest level in such control exercises: "hand dynamometry" (stronger and weaker hands) − 7.18 and 10.06%; "throwing ball" − 6.39%, and the "jump in length from place" − 3.47%. Reliability of the results (p≤0.05) observed in all cases.

The indicators of control exercises "push ups in 30s" and "pull ups in 30s." did not reach the critical level of reliability (p>0.05), but tended to change. The results increases were 1.31 and 1.38%, respectively.

Thus, it could be confirmed that for the representatives of "play style" experimental group, the advantage of introducing the program of special physical preparation under the author's approach is realized in a greater number of positive changes in the preparedness of certain key kickboxing physical qualities, a greater amount of over-critical level (p≤0.05) permissible for pedagogical research.

For objective comparison of the data representatives of skilled kickboxers control and experimental groups at the specialized basic training stage "play style", was conducted an analysis of the initial and final preparedness levels of these subgroups.

It is established that at the initial level there are no reliable differences, according to results of all control exercises. Fluctuations on the side of the experimental or control group representatives do not exceed 0.69 – 7.30% of the level other group, at p> 0.05.
At the same time, after the completion of pedagogical experiment, the formation of a clear advantage (p<0.05) was determined by the results of the control exercise "push ups in 30s" (increase was 8.62%) on the side of the experimental group representatives.

Certain trends have also been identified for other control exercises, but they have not acquired critical values. The advantage ranged from 1.03 to 5.44% in favor of skilled kickboxers "play style" among the representatives of the experimental group. And only in one case there is a certain advantage (p>0.05) on the side of the control group representatives. These are the results in the control exercise "throwing ball" (2.96% of the results level of the experimental group representatives). It should be emphasized that this advantage had greater value before pedagogical experiment, although it was also unreliable.

Summing up the skilled kickboxers’ preparedness at the specialized basic training stage and its changes at different stages of the pedagogical experiment, it should be emphasized on the more positive influence of the author's program of special physical preparation. Its content takes into account individual needs and requirements of competitive activities to the skilled kickboxers’ preparedness that use in their activity complex of technical and tactical actions of "play style".

Generalizing the results of the pedagogical experiment on the various blocks of information, which relate to skilled kickboxers different styles of competitive activity at the specialized basic training stage; we compared the resulting data increases (as described in Table 4).

**Table 4**

Comparison of percentage increments of special physical qualities indicators skilled kickboxers different styles of competitive activities at the specialized basic training stage during the period of pedagogical experiment (%)

<table>
<thead>
<tr>
<th>Control exercises</th>
<th>Style of competitive activities</th>
<th>&quot;Knockout style&quot;</th>
<th>&quot;Tempo style&quot;</th>
<th>&quot;Play style&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand dynamometry, kgs</td>
<td>EG (n=6) CG (n=5)</td>
<td>EG (n=7)</td>
<td>EG (n=8)</td>
<td>EG (n=8)</td>
</tr>
<tr>
<td>stronger hand</td>
<td>12.96*</td>
<td>7.69*</td>
<td>5.81*</td>
<td>7.18*</td>
</tr>
<tr>
<td>weaker hand</td>
<td>10.85*</td>
<td>4.59*</td>
<td>6.21*</td>
<td>10.06*</td>
</tr>
<tr>
<td>Throwing ball, m</td>
<td>3.54*</td>
<td>0.32</td>
<td>1.22</td>
<td>1.59*</td>
</tr>
<tr>
<td>Jump in length from place, cm</td>
<td>4.60*</td>
<td>2.71*</td>
<td>4.83*</td>
<td>3.47*</td>
</tr>
<tr>
<td>Push ups (in 30 seconds), number of times</td>
<td>3.90</td>
<td>3.08</td>
<td>7.78*</td>
<td>1.31</td>
</tr>
<tr>
<td>Pull ups in 30 seconds, number of times</td>
<td>-5.13</td>
<td>-12.62*</td>
<td>-9.23*</td>
<td>1.38</td>
</tr>
</tbody>
</table>

Notes: EG – experimental group; CG – control group; * – p≤0.05.

According to the received data it could be confirmed that the proposed program for improving the special physical preparation of skilled kickboxers at the specialized basic training stage is not inferior to the effectiveness of the standardized approach to special physical preparation.

In all subgroups, depending on the style of competitive activities, there are indicators of separate physical qualities that have increased reliably and those that have not reached critical values. This happened in representatives of both groups (control and experimental).

In general, it was recorded that the traditional program led to a reliably changes in the special physical preparedness of separate manifestations physical qualities in nine cases. They mostly relate to the control exercises "hand dynamometry" (stronger and weaker hands) and "jump in length from place". The reliably increases in the effectiveness of these control exercises ranged from 2.71 to 7.69% of the initial preparedness level. At the same time, for representatives certain styles of competitive activities ("knockout" and "tempo"), there was a reliable decrease in preparedness for indicators of "pull ups in 30s" in 12.62 and 9.23% respectively at p≤0.05. This confirms on significant disadvantages of taking into account the needs of certain stylistic features in conducting competitive activities by athletes. For the "players" this tendency was preserved, however, it did not reach critical values (4.79% at p> 0.05).

In contrast, at representatives of different styles competitive activities from the experimental group recorded an increase in eleven cases. Relative values of the results growth were from 3.54 to 13.18% compared to the initial level.

Most of the recorded results are inherent in such control exercises as "hand dynamometry" (stronger and weaker hands), "throwing ball" and "jump in length from place". Positive as we consider is that with the implementation of the author's special physical preparation program succeeded to avoid negative results for the manifestations of speed and strength endurance, in particular in the exercise "pull ups in 30s". Despite the different direction of changes, they remained in the zone of unreliability (-5.13−5.41% of the initial level at p> 0.05).

**Discussion**

It is certified that standardized program of special physical preparation for skilled kickboxers at the specialized basic training stage does not lead to positive changes in the preparedness of athletes for various
(separate) manifestations of physical qualities. There is influence on physical qualities that require relatively less cost to result achieve and receive influence from number of development external factors.

However, in general, the representatives of experimental group ("knockout style") showed an increase in the effectiveness of more control exercises (4 against 3 in the control group), generally achieved higher absolute and relative values of increments, and did not suffer reliably decrease the result of the exercise "pull ups in 30 s." that is available among the skilled kickboxers of the control group.

Comparison the data of pedagogical observations on separate indicators special physical preparedness of skilled kickboxers’ different groups at the specialized basic training stage of the "knockout style" made it possible to draw a conclusion that there is no reliably difference between athletes. Limit values that would confirm the probable advantage of control or experimental groups representatives are absent (p>0.05). All values are in the range of 0.13 to 4.00% relative to the result of another group. The exception is the indicator of control exercise "pull ups in 30 s", where skilled kickboxers "knockout style" of the control group at the initial level surpassed their colleagues from the experimental group by 5.64% (p≤0.05). However, after implementation of the program, these indicators came to approximately the same level (difference 2.70% at p> 0.05)

In other cases, the advantage representatives of «tempo style» particular group were not significant and ranged from 0.19 to 3.65% at p>0.05.

This points to the advantage of the applied author's approach to the formation of special physical preparation content on the basis of the skilled kickboxers’ individual characteristics, in particular, the dominant in their competitive activities. Also, it should be confirmed that the use of the author's program for special physical preparation improving allowed the athletes "tempo style" from the experimental group to avoid a certain decrease in the results that are present for the control group representatives.

In our view, the application of a standardized approach to the construction of special physical preparation program by the minimum consideration of the skilled kickboxers’ needs from the side of competitive activities requirements, leads to a decrease in the subjective feelings of strength distribution during the time of corresponding performance control exercises. This could significantly affect at the special endurance and its manifestation in competitive activity conditions, that is, on the athletes’ results of specified style. For representatives of this style competitive activities, according to a significant number of combat sports experts, one of the main tasks is the correct and proportional distribution of efforts throughout the competition. Representatives of this style rarely have the opportunity to early termination duel.

Thus, the effectiveness of the author's approach to taking into account the individual characteristics of skilled kickboxers at the specialized basic training stage in improving their special physical preparation is certified at several levels: more positive growth of the control exercises results from definition the level of special physical qualities development; higher relative indices of control exercises results increments; absence of the expressed negative direction of training loads, in particular in the part of special (speed and strength) endurance.

Conclusions.

After conducting a pedagogical experiment and implementing special physical preparation programs for skilled kickboxers at the specialized basic training stage, was found the formation of certain advantages of experimental group representatives according to such indicators as the results of "hand dynamometry" (stronger and weaker hands) – 6.03% (p≤0.05) and "pull ups in 30s" – 8.07% (p≤0.05) from the corresponding indicator athletes of control group.

As follows, in the process of comparing the effectiveness of a standardized (traditional) and experimental special physical preparation programs of skilled kickboxers at the specialized basic training stage, was found an advantage in intra-group indicators in favor of experimental group representatives, in particular, higher absolute and relative increments of results; the advantage between group indicators for separate manifestations of special physical qualities.

References


