

# Improvement of sports preparedness of young taekwondists

**Konstantin Ananchenko**  
**Rusudan Arkaniya**

*Kharkiv State Academy of Physical Culture, Kharkiv, Ukraine*

**Purpose:** to prove the directions of improvement of sports preparedness of young taekwondists for the purpose of improvement of results of their competitive activity and technical-tactical skill.

**Material & Methods:** the following methods are used during the research: theoretical analysis and synthesis of scientific and methodical references; pedagogical supervision, poll of 19 leading experts and experts on taekwondo and 24 young taekwondists, questioning; analysis of video records of competitive activity of young taekwondists; method of tests; method of expert evaluations; pedagogical experiment; timekeeping; modeling.

**Results:** it is proved that the directing activity of a coach gains the exclusive value for the improvement of sports skill and the increase of efficiency of the training process of young taekwondists, on the one hand, and, on the other hand – the use of the correcting information at the purposeful self-checking of taekwondists; negative tendencies in the modern training process of young taekwondists are defined.

**Conclusions:** the use of complex of the specialized trainers and the method of a circuit training allows teaching quite really young taekwondists attacking and defensive actions, promotes the essential improvement of sports preparedness of young taekwondists; the assessment procedure of sports preparedness of young taekwondists has to consider elements of the productive and often applied technical actions in competitive duel meets.

**Keywords:** taekwondo, taekwondist, trainings, competitive technique, specialized trainers.

## Introduction

The analysis of competitive activity of young taekwondists demonstrates that it take place in constantly changeable conditions, at deficiency of time and need to make the decision in the conditions of counteraction of the opponent [2, p. 30]. Young taekwondists in duel meets use basic methods more often several times, than all others. The analysis of such researches indicates the need at the corresponding stage of sports preparation to improve the basic technique taekwondo and to introduce the corresponding amendments in programs of development and improvement of special physical training of taekwondists. The achievement of the maximum indicators of competitive activity is directly connected with the total amount of training loads which reached critical values for today [3, p. 45]. The last forces coaches and sportsmen to look for more effective ways of preparation. At the initial stages of long-term preparation the sports result is defined by perfection of movements which make the basis of technical technique of taekwondo [7, p. 56]. Being based on results of the scientific research, it is possible to claim that the progress of performance of young taekwondists at competitions, generally depends on ability technically correctly to perform rather simple attacking and defensive operations, from ability quickly and in due time to move and consider distance to the rival.

The modern level of sporting achievements in taekwondo demands the purposeful organization of long-term training of young sportsmen, the search of more and more effective organizational forms, means and methods of educational and training work, and also control of level of preparedness as the instrument of management and planning of the training

process. Our research was based on the works of K. V. Ananchenko, 2014 [1]; N. V. Boychenko, 2015 [2]; S. V. Pavlov, 2006 [5]; S. L. Pakulin, 2015 [6]; A. S. Rovnyi, 2004 [7] and other scientists. The analysis of scientific literature found the insufficient development of problem of improvement of the training process of taekwondists, taking into account the level of their preparation [9]. The relevance of our research is explained by the increase in requirements what are presented to the level of technical-tactical and physical fitness in modern taekwondo and shortcomings of the operating technology of assessment of preparedness of young sportsmen.

Speed of performance of techniques constantly grows in modern taekwondo, their efficiency due to use of different preparatory actions increases, are developed new technical-tactical connections that allow to win victory, change competition rules [4, p. 69]. Therefore the scientific perspective of improvement of sports preparedness of young taekwondists is very urgent, needs special researches.

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

The research is executed according to the Built plan of the research works of Kharkiv state academy of physical culture for 2011–2015 on the subject “Individualization of the training process of the qualified wrestlers”.

## The purpose of the research:

to prove the directions of improvement of sports preparedness of young taekwondists for the purpose of improvement

of results of their competitive activity and technical-tactical skill.

## Material and Methods of the research

The following methods are used during the research: theoretical analysis and synthesis of scientifically-methodical references; pedagogical observations, polls, 19 leading experts and experts on taekwondo and 24 young taekwondists, questioning; the analysis of video records on the competitive activity of young taekwondists; method of tests; method of expert evaluations; pedagogical experiment; timekeeping; modeling.

## Results of the research and their discussion

Thanks to influence on all behavior of young taekwondists of sharp emotional experiences, the objective complexity are created in the system of long-term preparation of taekwondists (K. V. Ananchenko, 2014 [1]). Tactical skill of a sportsman grows together with age from one training to another for years of regular trainings as there are a lot of trainings by the loadings and conditions are equated to conditions of competitions. Holding trainings by the equivalence often exceeds tension of competitive activity. It was established in a number of researches that the higher class of skill of a sportsman is, the higher the rate of his cerebration is. Perception speed, processing of information which arrives the action choice in reply in many respects depend on specifics of sport, where imaginary search of possible actions in reply, both in defense, and in attack enters first of all. A sportsman should count mentally possible options and to choose from them the most expedient in the shortest periods. Quality of decisions, which are made depends on experience of the person, therefore possibility of the choice of the decision, its speed and efficiency, are not equivalent at a boy-beginner, who just began to be engaged in taekwondo, and the mature master who devoted to this type of single combat several years.

Tactical preparation or the solution of technical-tactical tasks is one of the main problems in the system of preparation of taekwondo. The fast assessment of situation and adoption only of the correct decision is required from a sportsman. All this occurs in the conditions of rigid counteraction of the rival who wishes to use the slightest delay for carrying out counter-reception. At the same time very strict requirements are presented to mentality of a sportsman for which satisfaction the whole complex of special psychophysiological qualities where perceptual, psychomotor, intellectual and other qualities enter is necessary. Mental firmness – reliability of functioning of all systems in the conditions of deficiency of time is one of the main.

One of major factors that exerts serious impact on preparation of a taekwondist, is ability not only to comprehend deeply, but also to quickly switch the attention from one venue to another, to find interconnection in these venues and to make logically justified decision according to situation which quickly changes.

The work on improvement of tactical thinking ranks high among means and methods of preparation of young taekwondists, in our opinion. Of course, the solution of quickly tactical tasks in single combats in general and in taekwondo, in particular, by the specifics considerably differs from variety of

options in sports. However tactical preparation in taekwondo has the specific features which need to be improved from the first years of training of wrestling.

Use of complex of the specialized trainers and method of circular training allows to teach completely really a young taekwondist to the attacking and defensive actions – quickly, effectively and without injuries. The most effective is use of training devices by the method of circular training at study to the attacking actions. The technique of improvement of the attacking actions is calculated on use of trainers in the mode of high-speed and power endurance, for stabilization of parameters of the main physical action [9].

The number of negative tendencies is observed in the modern training process of young taekwondists:

1. The training process practically does not consider results of control of sports preparedness at different stages of annual training cycle.
2. The lack of the only thought among specialists in the question of development of means and methods of increase in efficiency of performance in the course of competitive activity.
3. The insufficient clearness of the purposes and tasks for each stage of preparation of young taekwondists.
4. The separation of techniques of assessment and to control of preparedness for competitive activity.
5. the weak interconnection between results of control and process of optimization of preparedness of young taekwondists.

In our opinion, the assessment procedure of sports preparedness of young taekwondists has to consider elements of productive and often usable technical actions in competitive duel meets. As a result of the analysis of modern competitive activity of taekwondists, it was revealed by us that sportsmen carry out the essential number of kicks in sparring generally by four technical actions – they are “pit-chagi”, “dvid-chagi”, “dolio-chagi” and “nerio-chagi”. They make more than 86,3% of total of the blows estimated by referees in the surveyed by us 127 duel meets.

These kicks are used by taekwondists generally in all attacking and counterattacking actions as is the most productive in competitive duel meets. It is explained by the insufficient level of technical, tactical and mental conditioning of young taekwondists, the low level of modeling of competitive activity.

We made 8 weeks experiment within the main pedagogical experiment for the purpose of definition of efficiency of modeling of competitive activity of taekwondists by means of interval running loadings and throws of a dummy. Performance of enough big volumes of uniform cross run (to 60 km for week in the first part of the experiment and to 40 km in the second) was characteristic feature of training of taekwondists of the control group (CG). The reliable increase in indicators of endurance according to all three tests (method of execution of kicks was registered by hands and legs, maneuvering method of execution, complexity of technique) (at the same time reliability of differences ( $p < 0,05$ ), at the same time as at representatives of CG only one indicator in uniform run on 3000 m is raised at the end of the experiment at sportsmen of EG. During the comparison of final data, EG yielded the reliable highest results, than control, in run on 3000 m ( $p < 0,05$ ), in the test with performance of kicks and the running test ( $p < 0,05$ ).

It demonstrates that ability to resist to fatigue during performance of interval high-intensity loadings considerably grew at sportsmen of EG as a result of modeling of motive activity.

Indicators of competitive activity of taekwondists of EG and CG before and after the experiment are provided in tab. 1. Sportsmen of both groups participated in the championship of the Kharkiv region at the end of the experiment. The activity of maintaining duel meet, what reliable decrease in number of the real attacks and increase in interval of the attack testifies to, reduced at representatives of CG ( $p < 0,05$ ). Against the background of increase in number of the estimated attacks ( $p < 0,05$ ) and increases in efficiency of the attack ( $p < 0,05$ ), reduced efficiency of defense ( $p < 0,05$ ). Besides, the number of the won collisions with considerable advantage and the number of preventions decreased, but reliable changes are not defined.

The analysis of results of competitive activity of sportsmen of EG demonstrates that they observe the growth of all indicators ( $p < 0,05$ ), but at the same time the number of preventions didn't change. In general it is possible to state the following: modeling of motive activity of wrestlers against the help of sprinting and performance of kicks in the interval mode promotes the increase in opportunity to resist to fatigue during performance of uneven intensive loadings [8, p. 118] that in turn is positively displayed on the efficiency of their competitive activity.

The fundamental difference of technique of study, which is offered from traditional, is that taekwondists fulfilled the new mode of motive activity in couples with use of the trainer "Tu-

lub" and the computer program "Attack" from the very beginning by the time of achievement of the planned result on trainings. The correction of characteristics of the shock movement and biodynamic indicators of the kick was carried out selectively with emphasis for work of shoulder girdle and pelvis. The main results of the experiment (tab. 2) demonstrate that the qualitative party of the educational-training process raised considerably, time for preparation was reduced, the operational thinking of sportsmen and the technique of the attacking actions in taekwondo improved.

The permanent growth of number of competitions demands from the sportsman of the considerable development of special physical qualities and competent tactical skills of maintaining duel meet. The high importance of mental conditioning at each stage of study is caused by the special importance of the attitude of the young taekwondist towards results of performance at competitions of any level.

## Conclusions

1. The scientific perspective of improvement of sports preparedness of young taekwondists needs special researches. The relevance of the conducted research grows also in the connection with modernization of mechanisms of assessment of actions of young taekwondists during duel meets and the lack programmatically-standard materials which allow estimating the level of their sports preparedness. Studying of mechanisms of control and assessment in the system of sports training of young taekwondists is of great importance as the foundation for sports skill is laid in the course of development of basic bases of technique and the main motor

**Table 1**  
Indicators of competitive activity of young taekwondists of EG and CG before and after the experiment

Indicators	CG		EG	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Number of the real attacks	6,03±0,08	5,52±0,087	5,6±0,12	6,4±0,1
The number of the estimated attacks	2,4±0,11	2,5±0,09	2,6±0,06	3,7±0,09
Attack interval (s)	54,5±0,75	55,8±0,94	37,5±0,8	49,1±0,9
Efficiency of the attack (%)	39,8±0,9	45,3±1,1	46,4±1,1	57,8±1,3
Efficiency of defense (%)	46,4±1,0	43,1±0,9	41,3±1,0	65,6±1,2
Number of flawless victories	3,12±0,1	3,0±0,12	3,12±0,11	5,38±0,13
Number of preventions	1,3±0,04	1,2±0,03	1,6±0,05	1,2±0,057

**Table 2**  
The main of result of the experiment

Group	Statistics	Time of performance of a kick without rotation, s	Time of performance of a kick with rotation, s	Kick speed without rotation, $m \cdot s^{-1}$	Kick speed with rotation, $m \cdot s^{-1}$	Force of the shock movement without rotation, kG	Force of the shock movement with rotation, kG
CG	$\bar{X} \pm m$	1,68±0,12	1,43±0,29	1,60±0,32	1,62±0,27	68±4	81±5
EG	$\bar{X} \pm m$	1,15±0,04	0,77±0,15	2,41±0,25	3,35±0,44	77±5	94±6
	Growth	0,53	0,66	0,81	1,73	9	13
	$t_{cr}$	13,75 $p < 0,05$	7,2 $p < 0,05$	6,13 $p < 0,05$	12 $p < 0,05$	4,7 $p < 0,05$	3,2 $p < 0,05$

**Note.** Coefficient at  $n=12$ ,  $f=2,07$  by the  $t$ -criterion of Student.

abilities are formed. In modern practice test standards are the main tool of technology of control and assessment in taekwondo, however now they have no due scientific and metrological justification as the only approach to the importance of different types of preparation concerning the level of sports qualification of young taekwondists is not developed.

2. Use of complex of the specialized trainers and method of circular training allows to teach completely really young taekwondists to the attacking and defensive actions, promotes the essential improvement of sports preparedness of young taekwondists.

3. The assessment procedure of sports preparedness of

young taekwondists has to consider elements of productive and often usable technical actions in competitive duel meets.

## Prospects of the subsequent researches in this direction

In the next time perspective researches concerning the development of algorithm of the integrated assesment of sports preparedness of young taekwondists, which considers mistakes, which are made at the demonstration of elements of method of execution of kicks and tactics of maintaining duel meet, and allows to carry out the assessment of preparedness for the competitive activity more objectively.

**Conflict of interests.** The authors declare that there is no conflict of interests.

**Financing sources.** This article didn't get the financial support from the state, public or commercial organization.

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Received: 08.11.2016.

Published: 31.12.2016.

**Konstantin Ananchenko:** *Kharkov State Academy of Physical Culture: Klochkovska Street 99, Kharkov, 61058, Ukraine.*

**ORCID.ORG/0000-0001-5915-7262**

**E-mail: ananchenko\_@bk.ru**

**Rusudan Arkaniya:** *Graduate Student, Kharkov State Academy of Physical Culture: Klochkovska Street 99, Kharkov, 61058, Ukraine.*

**ORCID.ORG/0000-0002-5138-8370**

**E-mail: uchito.batji@gmail.com**