DOI 10.31392/NPU-nc.series15.2023.03(161).09
УДК: 796.8.032:796.015.134/136(045)

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IMPROVEMENT OF TECHNICAL AND TACTICAL ACTIONS IN OLYMPIC TYPES OF MARTIAL ARTS

На сучасному етапі розвитку спортивних єдиноборств в Україні та у світі важливе значення набувають актуальні питання науково-методичного забезпечення системи багаторічної підготовки спортсменів-єдиноборців, починаючи з раніх етапів тренування. Спеціалістам зі спортивних єдиноборств необхідно проводити пошук найбільш раціональних та ефективніших засобів та методичних підходів до формування й удосконалення техніко-тактичного арсеналу спортсменів. Метою такого підходу буде покращання ефективності та результативності змагальної діяльності єдиноборців.

Головною метою дослідження є оцінка ефективності використання методики навчання та удосконалення контратакуючих техніко-тактичних дій на прикладі тхеквондо ВТФ. Під час дослідження були використані наступні методи дослідження: абстрагування, аналіз і синтез, моделювання, педагогічне спостереження, педагогічний експеримент, аналіз змагальної діяльності, методи математичної статистики.

В результаті аналітично-дослідної роботи встановлено ефективність методики навчання та удосконалення контратакуючих техніко-тактичних дій тхеквондистів на етапі спеціалізованої базової підготовки.

Визначено найбільш ефективні схеми ускладнення навчання й удосконалення контратакуючих технічних дій, які виконуються у відповідь на атакуючі технічні дії суперника з різної відстані та різною швидкістю.

Перспективи подальших досліджень у обраному напрямі наукової розвідки полягають у розробці програми удосконалення контратакуючих дій тхеквондистів з урахуванням індивідуального стилю ведення змагального поєдинку.

Ключові слова: *спортивні єдиноборства, техніко-тактичні дії, тхеквондисти, атакуючі дії, контратакуючі дії, етап спеціалізованої базової підготовки.*

Prikhodko Volodymyr, Moskalenko Natalia, Mykytchyk Olha, Chykolba Hennadii. Improvement of technical and tactical actions in Olympic types of martial arts. *At the current stage of the development of martial arts in Ukraine and in the world, urgent issues of scientific and methodological support of the system of multi-year training of martial arts athletes, starting from the early stages of training, are gaining importance. Martial arts specialists need to search for the most rational and effective means and methodical approaches to the formation and improvement of the technical and tactical arsenal of athletes. The purpose of such an approach will be to improve the efficiency and effectiveness of the competitive activity of martial arts athletes.*

The stage of specialized basic training in sports martial arts acquires great importance in connection with the creation of prerequisites for the further improvement of sports skills of young athletes, increase of the level of special work capacity. Also, at this stage, the individual fighting style is formed, as well as the technique and tactics of the Taekwondo WTF are improved.

Technical and tactical training in Taekwondo WTF is a process of forming the technique of performing special exercises, techniques and their various combinations. Technical training is aimed at studying the widest range of technical actions and forming the skills of performing actions necessary for Taekwondo WTF, different in direction, amplitude and other characteristics. The means of technical training are the technical actions of Taekwondo WTF (according to the classification of techniques), which include offensive, defensive and contact-attacking technical-tactical actions.

The main goal of the study is to evaluate the effectiveness of using training methods and improving counterattacking technical and tactical actions using the example of Taekwondo WTF. The following research methods were used during the study: abstraction, analysis and synthesis, modeling, pedagogical observation, pedagogical experiment, analysis of competitive activity, methods of mathematical statistics.

As a result of the analytical and research work, the effectiveness of the training methodology and improvement of counterattacking technical and tactical actions of taekwondo athletes at the stage of specialized basic training was established.

The most effective schemes for complicating training and improving counter-attacking technical actions, which are performed in response to the opponent's attacking technical actions from different distances and at different speeds, have been determined.

Prospects for further research in the chosen direction of scientific research consist in the development of a program for

improving the counterattacking actions of taekwondo athletes, taking into account the individual style of conducting a competitive match.

Key words: *martial arts, technical-tactical actions, taekwondo athletes, attacking actions, counter-attacking actions, stage of specialized basic training.*

Statement of the problem and its connection with important scientific and practical tasks. Modern trends in the development of sports of higher achievements require systematic improvement of the organizational and methodical foundations of sports training at all stages of long-term training. The need to improve the system of training athletes in martial arts is determined by a number of circumstances and conditions that significantly affect the structural and functional organization of the educational and training process [5, 12, 15, 16].

At the modern stage, matches in various types of martial arts are fast and active, referees encourage continuous attacking and counter-attacking actions. This requires martial arts athletes to quickly solve technical and tactical problems and use various options of attacking, counter-attacking and defensive actions. Experts believe [1, 6, 7, 9, 14] that the basis of high sports achievements of athletes is the technique of motor actions, which is formed at the initial stages of long-term training and is improved throughout the athlete's sports career.

The theory and methodology of technical and tactical training of young martial arts athletes does not always take into account the changes that occur in the content and conditions of competitive activity. The rules of competitions in various types of Olympic martial arts are quite often changed in order to increase the popularity and spectacle of the sport [11, 13, 16]. One of the reasons for such changes is also the task of avoiding monotony in the performance of technical and tactical actions in a competitive match.

Specialists in the field of martial arts [2, 3, 13] claim that the technical and tactical training of young athletes in its development lags behind qualitative changes in the training system and does not fully meet the requirements of modern competitive activity. An insufficiently developed general theoretical concept of the use of means and methods in the technical and tactical training of young martial arts athletes was also revealed [3, 5, 16].

In modern scientific and methodical literature, not enough attention is paid to the problem of teaching methods of attacking and counter-attacking actions and their improvement in sports martial arts at various stages of long-term training of athletes [1, 7, 8, 13].

That is why the problem of improving technical and tactical actions in martial arts is urgent and requires further scientific and practical research by scientists and coaches.

Analysis of recent research and publications. The latest data of scientific and methodical literature and research in the field of Olympic martial arts, in particular in Taekwondo WTF, determined that the use of technical and tactical actions in a competitive match has increased significantly [2, 4, 7, 8]. With the increase in the number of effective execution of attacking actions, the ability of a taekwondo athlete to perform counter-attacking actions acquires great importance.

One of the most important components of the application of counterattacking actions in Taekwondo WTF is the speed of reaction [2, 3]. Special studies [2, 3, 6] have proven that one of the most effective methods of improving the reaction speed is to increase the information capacity of signals and extract so-called pre-signals from them.

In order to develop and improve such a specific ability of young taekwondo athletes, the coach-teacher needs to apply a set of theoretical, ideomotor and special motor tasks that will be closely related to the performance of a tactical task in the conditions of an educational or training match. It is also necessary to optimize the technique itself in the technical and tactical training of taekwondo athletes through the wide use of repeated, variable, game and competitive training methods. The use of these methods is never contested, but clearly these issues have not been fully developed [1, 5, 15]. In relation to certain types of martial arts, in the training manuals and scientific and methodological literature [2, 6, 7], questions about the use of specific methods in the process of technical and tactical training of young athletes are either absent, or they are presented in terms of general recommendations and are not fully characterized methods and means of their application.

The purpose of the study is to evaluate the effectiveness of using training methods and improving counterattacking technical and tactical actions using the example of Taekwondo WTF.

Objectives of the study:

1. To study the current state of the problem of training methods and improvement of counterattacking actions of young taekwondo athletes.

2. To develop and experimentally substantiate the effectiveness of the method of training and improving the counterattacking actions of young taekwondo athletes at the stage of specialized basic training.

The object of the study: the training process of young taekwondo athletes.

Subject of research: means and methods of technical and tactical training of young taekwondo athletes at the stage of specialized basic training.

Research methods and organization. The research was conducted in the period from November 2020 to February 2021 at the base of the Bars sports club (Dnipro). 24 taekwondo athletes (boys aged 12-13) took part in the pedagogical experiment. The qualification of athletes is the first youth category, the third sports category - according to the requirements of the Taekwondo WTF training program for DYUSH, SDYUSHOR, ShVSM and SNZSP [7].

The following methods were used when solving research tasks: analysis of scientific and methodological literature and documentary materials; pedagogical observation; pedagogical experiment; expert evaluation; analysis of competitive activity; methods of mathematical statistics.

Presentation of the main research material. To solve the tasks, the main groups of counterattacking actions were selected. Special counterattack actions from various classification groups of technical and tactical techniques were selected from

these main groups. As a result, we chose 8 main options for performing counterattacking technical actions in combinations with various step movements:

1. Step movements – a side kick to the middle level from the near leg (to the opponent) – shortening the distance to the opponent – entering the clinch.

2. Step movements - a side kick to the middle level from the near leg (to the opponent) - a direct side kick to the upper level with the same leg - breaking the distance from the opponent.

3. Step movements - side kick to the upper level from the near leg (to the opponent) - side direct kick to the upper level with the same leg - shortening the distance to the opponent - entering the clinch.

4. Step movements - a side direct kick to the middle level from the near leg (to the opponent) - a side direct kick to the upper level with the same leg - breaking the distance from the opponent.

5. Step movements - a direct kick from the top-down to the upper level from the near leg (to the opponent) - a side direct kick to the middle level with the same leg - shortening the distance to the opponent - entering the clinch.

6. Step movements - a direct kick from the top-down to the upper level from the near leg (to the opponent) - a side direct kick to the upper level with the same leg - breaking the distance from the opponent.

7. Step movements - a direct kick from a turn to the middle level - a side direct kick to the upper level with the same leg - breaking the distance from the opponent.

8. Step movements - a side kick from a turn to the upper level - a side kick to the upper level with the same leg - shortening the distance to the opponent - entering the clinch.

It should be noted that the step movements were used by the athletes only in case of necessity, depending on the situation that developed during the match on the task of the coach-teacher.

After choosing the composition of counterattacking actions and clarifying their features, we applied generally accepted methods of training technical actions - the method of training as a whole and in parts.

For the implementation of repeated and interval methods, we have chosen movement tasks for performing counterattacking actions in response to attacking technical actions, which are performed by athletes at different speeds and with different distances between opponents (short, medium, long).

Varying the speed of execution of various options of attacking technical actions was carried out at the signal of the trainer-teacher. Varying the distances was carried out by changing the distance between the athletes in the starting position. At the same time, a distance of 1.5 extended leg lengths between the athletes was taken as a long distance, 1 extended leg was a middle distance, and 0.5 an extended leg was a short distance.

The analysis of scientific and methodological literature and research in the field of Olympic martial arts [2, 3, 4, 10, 14] proves that for the implementation of effective counterattacking technical actions, the level of development of such motor qualities as speed, explosive power and various types is important coordination abilities. We did not set ourselves the task of developing special methods for the development of these abilities. We decided to limit ourselves to checking the effectiveness of our chosen methods of developing physical qualities from among those already developed and those that are widely used in various types of martial arts at various stages of improving the technical skills of athletes [2, 6, 8, 15].

The pedagogical experiment lasted 18 weeks (9 weeks at each stage). 2 equal groups (control, experimental) were formed, consisting of taekwondo players who are at the stage of specialized basic training.

Classes in both groups were held 5 times a week for 2 academic hours. The content of classes in both groups was different. The control group trained according to the Taekwondo program of the WTF for DYUSSH, SDYUSHOR, ShVSM and SNZSP [7]. Taekwondo athletes of the experimental group trained according to a specially developed methodology. A common feature was that both groups planned to study one counterattacking action during one week in strict accordance with the sequence of their study chosen and justified by us. The programs of the 1st and 2nd stages of the pedagogical experiment consisted of 9 weekly cycles.

After the completion of each stage, we monitored the results of the specially developed and verified test and compared the results of the control competitions.

The content of the test was to perform counter-attacking technical actions in response to the attacking technical actions of the opponent from a medium distance using eight different options of strikes at the middle or upper level. Counter-attacking technical actions were performed by taekwondo athletes in an undefined order at high speed and with full force.

The results of the performance of technical and tactical actions were evaluated by 3 judges:

1) kicks to the middle level - 2 points;

2) kicks from the reversal to the middle level - 4 points;

3) kicks to the upper level - 3 points;

4) kicks from the reversal to the upper level - 5 points.

In the case of a successful counterattack, these evaluations were given with a positive sign, and in the case of an unsuccessful counterattack, with a negative sign. The peculiarity of conducting control competitions between groups was that they were of a team nature and were held in accordance with the provision that stimulated the performance of counter-attacking technical actions.

The analysis of the dynamics of the sports and technical results of the two control competitions (Table 1), at the end of each of the training stages, proved the superiority of the athletes of the experimental group ($p<0.05$), which confirmed the legitimacy and effectiveness of the training methodology and the improvement of counterattacking technical and tactical actions, which was applied in this group.

Table 1

Dynamics of sports and technical results of control competitions of young taekwondo athletes

Indicators of competitive activity	Control group (n = 12)			Experimental group (n = 12)			p
	I stage	II stage	Total	I stage	II stage	Total	
The number of wins	9	7	16	11	17	28	<0,01
The number of draws	11	7	18	9	6	15	>0,05
The number of defeats	10	16	26	10	7	17	>0,05
The number of completed counterattacks	6	7	13	9	14	23	<0,01
Total effectiveness of counterattacks (points)	21	24	45	39	66	105	<0,01
Average effectiveness of one counterattack (point)	4,2	4,0	4,1	4,3	4,7	4,5	<0,05

It should be noted that the method of training and improving counterattacking technical and tactical actions using the example of taekwondo can be integrated into other types of martial arts.

Conclusions and prospects of further investigations in this direction.

1. To develop the ability of taekwondo athletes to effectively perform counterattacking technical actions in the conditions of competitions, it is advisable to form in them the effect of generalized transfer of the ability to perform counterattacks, using training in specially selected motor complexes.

2. At the first stage of training, it is advisable to use the fragmentation method. The motor part of the counterattacking action and special ideomotor training in recognizing initial favorable situations should be especially highlighted, while not allowing fragmentation of the integral counterattacking technical action during complex training.

During the second stage of training, it is advisable to use a holistic method with helical complications, with variations of different speeds of performing attacking technical actions and the distances at which they are performed.

3. The following scheme of complicating work at the second stage of training is the most expedient and effective:

- improvement of the counter-attacking technical action, which is performed in response to an attack from a medium distance with successive alternation of medium and high speeds of execution of the attacking technical action;
- improvement of counterattacking technical actions, which are performed in response to an attack from a medium distance with successive alternation of high and medium speeds of execution of an attacking technical action;
- improvement of counter-attacking technical actions, which are performed at high speed of the opponent's attacking technical action with successive alternation of long, medium and short distances.

4. At all stages of training, it is advisable to build an educational and training process using the game method, specific mobile games, special speed-strength exercises and the method of training with a conditional opponent, gradually increasing the number of allowed methods of attacking technical actions.

Prospects for further research consist in the individualization of the approach to the implementation of the ability of martial arts athletes to perform counterattacking technical actions in the conditions of competitive activity.

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