

# DISCUSSION OF THE RESEARCH RESULTS OF JUDO GAMES AT THE INITIAL STAGE OF LONG-TERM TRAINING

Larisa Masenko

Department of Biological foundations of physical education and sport sciences, Institute of Physical Education and Sports, M.P. Dragomanov National Pedagogical University, Ukraine

**Address for correspondence:**

Larisa Masenko

Institute of Physical Education and Sports, M.P. Dragomanov National Pedagogical University

3/9 Turgenivska St., Ukraine

E-mail: larisa@masenko.com.ua

**Abstract.** The article deals with the effects of improved methods of training 7–12 year old children at the initial stage of long-term training using specialized Judo Games.

Modern methods of training in many sports, Judo in particular, are characterized by early specialization. In this regard there could be observed immaturity of some existing training programs when age-related features of beginners are not taken into consideration, and as a result children's health is suffering unfortunate consequences. Methods of initial Judo training open vast space for perfection and development of this kind of sports.

The author initiated and practiced teaching and training process at the IT (initial training) stage Judo beginners by using Judo games as means of full development of physical features and shaping combat skills. This experiment proved to be actual and practically valuable.

**Key words:** specialized action-oriented games, testing, physical abilities, age-related features, and methods of training, effectiveness

## Introduction

Research of national kinds of combat based on games used as practically applied educational actions proves that effectiveness was achieved not due to fighting technique drills. Individualized actions, their variability, originality of coming into contact with the rival are much more important issues. Only individualized training ensures effectiveness of technical training and competitive activity. The other aspect of game method is an essential ability to intensify educational training lessons owing to their increasing emotionality and removing monotony component – all that plays an important role in beginners training.

The above mentioned initiated the present research. The working hypothesis on which gradual development of purpose and tasks of this work was being built was the following: inclusion of a set of Judo games close by structure to technical actions studied according to color belts program to the educational training process of IT groups of Judo

players would allow to intensify learning and training, increase effectiveness of learning and exercising technical grips – not at account of added time for learning techniques but by using new methods.

In our research we analyzed IT of young judokas. This kind of sport is complex-coordinated, situational, contact – and it considerably influences the entire sportsmen's organism during training and competitions.

During preparation and completion of this thesis the main task has been stated: Working out and selection of games with specialized focus on training Judo-players beginners at the stage of initial learning of color belts technique.

The analysis of scientific methods literature shows that the improvement of sports training depends greatly on correctly carried out physical drilling of sportsmen beginning with the very initial stage of practicing wrestling. It is established that the most correct approach to solving this problem is the necessity to select means and techniques of physical drilling taking into account the specifics of competitive exercises which constitutes the foundation for the method of complex influence.

However, in the existing scientific methods literature there are many cases in which special exercises do not comply with performance targets and do not ensure development of physical features in children which are needed in sports wrestling.

Therefore, we have developed and tested, in the pedagogical experiment, the methods of interconnected development of physical features and shaping of action-oriented combat skills in children beginners, intentionally using specialized Judo games. In the course of the pedagogical experiment the hypothesis about more effective (in comparison with traditional training methods) development of physical features and movement skills in children of IT groups was proven. It is proven that the elaborated methods of using game technique actually affect the development of strength and speed-strength qualities in children-wrestlers better.

As it can be seen, the effective influence of specialized Judo games on development of these physical qualities in trainees is characterized by the fact that a lot of movement actions in those exercises are based on overcoming the resistance of the opponent and to a greater extent ,demand from the trainees demonstration of strength and speed-strength qualities. Researches (Geller et al. 1980; Konovalova 1990; Krepchuk 1987; Stankiavichus 1983 and others) testify the action-oriented games are one of the effective means of influencing strength and speed-strength training of beginner sportsmen.

The results achieved confirm the information existing in literature (Jagello 2000; Geller 1980; Ketelhut 2003; Krepchuk 1987; Rybalko et al. 1986, etc.) about the possibility of effective solution to the issue of training the basics of combat by means of game play.

## Methods

Analysis and generalization of literature on scientific methods has been carried out with the purpose of actual situation of the issue under research, aiming at proving the actuality of the chosen topic. Study of works written by physiologists, psychologists and pedagogues enables us to estimate possibilities and understand age specifics of the chosen age category of children – and to build a training process for the initial training stage based on the data obtained.

To complete our investigation we used pedagogical observation, pedagogical experiment, and methods of mathematical statistics.

To carry out the selected tasks, two groups of children were selected: experimental (12 boys) and control (12 boys), 7–8 years old all of them. The control group was trained on traditional program, the experimental group was trained according to the developed methods accentuated on carefully selected game material.

## Results

At the beginning of the experiment the evaluation of the physical ability by means of fitness level tests which evaluate strength, dexterity, speed, endurance, and flexibility took place. These tests aimed at determining the starting level of children's physical fitness at the beginning of the experiment and, therefore, the forming of homogeneous groups with approximately similar fitness level – to ensure validity of the experiment.

Having analyzed the results obtained, we see that in both, the control and the experimental group, there are no prominent discrepancies in fitness test results ( $P > 0.05$ ) between the boys, and their physical development level is no more than average, someone's low.

We undertook two more similar tests. One of them took place at the end of the first year of the above experiment, and the other one at the end of the experimenting period. The task was to define changes in the physical development level influenced by generally practiced methods of training and methods using Judo games, and their comparison.

In the experimental group the arithmetic average of total and time of exercise in fitness before and after the pedagogic experiment changed at the authentic level ( $P < 0.01$ ) (Table 1).

In the control group the arithmetic average of total and time of exercise in fitness before and after the pedagogic experiment showed positive changes as well, but the denominators of those changes were considerably lower in some elements of physical training than in the experimental group.

Authentically important ( $P < 0.01$ ) changes after the experiment between the experimental and the control groups were observed (time-wise) during shuttle run  $4 \times 9$  m, showings in flexibility, 30 m run, long jumps, standing high jumps, running in place for 10 sec, 5-min run, holding balance position according to Bondarevsky method, dynamic balance at performing turns on gymnastic bench, running to numbered stuffed balls (Table 1).

**Table 1.** Comparative characteristics of the overall physical fitness of children from the experimental group and the control group at the end of the experiment

Number	Control and education tests	Statistical criteria					
		X	m	$\sigma$	n	t-Student	P
1	2	3	4	5	6	7	8
1	running 30 m (sec)	5.2 *	0.08	0.26	12	4.35	P < 0.01
		4.8	0.05	0.16	12		
2	shuttle run 4 × 9 m (sec)	10.5 *	0.120.1	0.4	12	2.56	P < 0.05
		9.8		0.32	12		
3	broad jump (cm)	189 *	1.01	3.34	12	3.57	P < 0.01
		194	0.97	3.23	12		
4	standing jumps (cm)	41 *	0.86	2.87	12	2.45	P < 0.05
		43.5	0.54	1.78	12		
5	running on the spot 10 sec (steps)	57 *	1.65	5.47	12	4.74	P < 0.001
		65.5	0.71	2.35	12		
6	running 5 minutes (m)	1343 *	5.09	16.9	12	2.42	P < 0.05
		1368	8.99	29.84	12		

1	2	3	4	5	6	7	8
7	flexing and stretching of arms (Times)	32 * 32.5	0.75 0.63	2.5 2.1	12 12	0.51	P > 0.05
8	Pull-ups (Times)	11 * 10.4	0.48 0.49	1.6 1.62	12 12	0.87	P > 0.05
9	body flexion for 1 min. (Times)	40.5 * 41.5	1 0.83	3.32 2.75	12 12	0.76	P > 0.05
10	Flexibility (cm)	5.6 * 11.3	0.62 0.45	2.07 1.51	12 12	7.7	P < 0.001
11	static equilibrium, Bondarevsky method (sec)	11.6 * 16.8	0.17 0.15	0.57 0.49	12 12	22.9	P < 0.001
12	dynamic equilibrium when performing gymnastic turns on the bench (sec)	12 * 10.4	0.13 0.07	0.44 0.22	12 12	10.79	P < 0.01
13	run to the numbered medi exercise balls (sec)	11 * 10.4	0.14 0.08	0.47 0.25	12 12	3.78	P < 0.01

\* X – the numerator – performance of the control group, X – the denominator – performance of the experimental group.

Significant changes of the above mentioned showings are the consequence of a long-term application of carefully selected games and exercises aiming at the development of dexterity and speed-strength abilities, which in this age have the most rapid development.

In pull-ups, arm pumping exercises, bending of the body for 1 min, the showings between the experimental and the control group, before and after the experiment, have changed, but not significantly ( $P > 0,05$ ).

The development of strength abilities in the control group was a priority. Altogether it took 70% of the time allocated to general physical drill. Differently, in the experimental group strength parameters were growing because of the game methods and some special exercises. Time allocated for strength development in the experimental group constituted 30 per cent. It shows that, despite the less time spent on strength exercises in the experimental group thanks to innovative methods and without extra physical overwork, children managed to demonstrate almost the same results in development of their strength ability.

## Discussion

Results of the pedagogical experiment showed that specialized action-oriented games are effective means of development of dexterity in young Judo players. Apparently this can be explained by the fact that in game activity movement tasks are carried out every time in new unpredictable and abruptly changing settings under active resistance of the competitor. Wrestlers must react to their opponents' actions quickly and correctly, showing inventiveness, nimbleness etc. at the same time.

A very big impact of the selected games on dexterity development was demonstrated in growth of the following constituents: static and dynamic balance, space orientation. And this is statistically significant priority of parameters in favor of the experimental group.

The results achieved by us correlate with the outcome shown in the works about successful application of action-oriented games in the development of dexterity (Jagello 2000; Geller et al. 1980; Konovalova 1990; Stankiavichus 1983; Vilenskiy 1983 and others).

It is established that methods of using educational Judo games developed by us have positive impact on such a physical quality as flexibility. Therefore, the increase of showings with children from the experimental group

during their performance of control exercises was higher than with children from the control group. We can assume that the more effective development of flexibility by using game technique is explained by the fact that, during the game play, the muscles of trainees are unbraced, resulting in their better elasticity leading to increased flexibility and agility of joints. Analogous results were shown in a number of works (Bompa 1999; Volkov 2002; Deshle 1982; Ivanov 1984; Ketelhut 2003 etc.).

In the course of the experiment conducted a positive impact of Judo games on the improvement of dynamic and static endurance was discovered. In game play, due to its inherent emotionality, trainees are able to display remarkable effort in volume and endurance leading to corresponding progress in the development of endurance. Positive influence of game mode of muscle activity on the development of endurance among sportsmen is being proven by results of Stankiavichus (1983), Krepchuk (1987) and others.

As it was noted, methodology of using specialized Judo games during training of IT groups was applied not only to intentionally develop physical abilities, but, simultaneously, to influence shaping of combat skills, and due to that to more effective mastering of Judo technique according to belt colors.

The results of pedagogical experiment confirm that the wrestlers of the experimental group mastered the technique faster and better. Having analyzed the dynamics of learning technique of color belts participating in Judo games and using traditional methods, and comparing them afterwards, we can claim that elaborated methods of using Judo games is more effective in shaping combat skills in initial training of wrestlers than general accepted methods.

Thus, as a result of the conducted experiment, we have confirmed the hypothesis about a supposition that specialized Judo games have multipart impact on the development of physical qualities and effectiveness of learning techniques at the initial stage of training.

## Conclusions

1. The analysis of literary sources on sports combat allows to establish that the issue of substantiation of methods using specialized action-oriented games aiming at the development of physical qualities and shaping combat skills in young Judo players at the stage of initial sports training are insufficiently developed.

In the literature there are not any recommendations as to rational selection and introduction of Judo games into the structure of educational practical training, nor as to their connection with other training methods. Game material in literature is not generalized or systematized in the respect of Judo. There is no evidence of its effectiveness in fulfilling tasks in the initial training of IT Judo players.

2. The essential shortcoming of traditional technique is severe rulemaking of the training process. This does not allow individualizing technical skills and to bring up variability of movement skills in sufficient volume. Survey and interviewing of trainers allowed to discover the role of the acting program as a must document recommending the specialists to rely upon while choosing the strategy for training children in Judo. Taking into account that such a document cannot fail in influencing shaping methodological views of the trainers, it is important to note the following:

- trainers and teachers are positive about using game method in the process of training children to play Judo. Unfortunately, the majority of the methodical literature on the topic is either poorly adapted or needs additional amendments. In the educational program the list of suggested game methods and their

classification is practically absent. And in methodical literature, which is rare, their classification is not convenient in practical usage;

- in practice, many trainers do not follow recommendations and the official program; the content of training material and its consecutiveness are formed and delivered depending on their professionalism, preparedness and experience;
- in the existing program of Judo wrestling for Children and Youth Sports School and Children and Youth Sports School of Olympic Reserve there is an essential opening for introduction of specialized action-oriented games – without taking time from general material learning. More so, introduction of game methods positively influence the emotional state of young sportsmen. This helps to stabilize contingent and effectiveness of learning technical and tactical actions.

3. It is determined that the general amount of time allocated to educational-training lesson for perfection of physical qualities of sportsmen-beginners and learning technical and tactical activity with the help of specialized movement games should be (depending on current tasks) from 24 to 45 minutes. Organizational methodical specifics of the game shaped lessons allows to use specialized games as short time tasks (30–60 seconds), high (sometimes maximum) intensity tasks, with repeated maximum 3-5 times – aiming at the increase of speed qualities of the trainees; long-term tasks (from 3 to 10 min), aiming at the increase of perseverance.

4. It is observed that the most notable pedagogical functions of game complexes in initial training of Judo players are: creation of lasting interest in Judo wrestling, increase of physical preparedness and formulating of combat skills.

5. It is proven that specialized Judo games as set of games – tasks of multidirectional influence – very effectively influence the development of movement qualities of children in the experimental group. It is especially clearly seen in a comparative analysis of coordination parameters ( $P < 0.01$ ), flexibility ( $P < 0.01$ ), speed ( $P < 0.01$ ), and speed-strength abilities ( $P < 0.01$ ).

6. As a result of the experiment carried out, the boys from the experimental group achieved higher results in learning technique of throws on color belts, despite the fact that in this group the allocated time for learning grips and tackles was less than in the control group. The positive influence of specialized action-oriented Judo games on quality and speed of learning the program of white and yellow belts is statistically accurately proven is ( $P < 0.01$ ). Growth of showings characterizing level of mastering combat skills in the experimental group was in average 42.1% (white belt) and 24.9% (yellow belt) higher, than in the control group. This proves that the study of the technique by using games- judo, more effective than the traditional form of learning.

Positive dynamics of speed in learning educational material on white and yellow belts using specialized action-oriented Judo games has been noted ( $P < 0.05$ ).

7. Based on the analysis of performed competitions between control and experimental groups it can be said that individualization and variability of technical and tactical actions of the experimental group contribute greatly to the structure of their preparedness. Statistically proven distinction ( $P < 0,05$ ) is observed in relation to all parameters of technical and tactical preparedness: activeness in combat, variability, effectiveness and ability to deliver good results.

8. The most rational thing is consecutive learning of game tasks. In games of any orientation, at the beginning, the main elements are basically touch games, further game tasks are gradually becoming more complicated using grips, jostles, throws off balance, with movements similar by structure to technique learned according to program

on a specific belt. Later training tasks being more advanced by introduction of games solving episodes of combat choosing the most rational way of solving the given task. The methods offered can be used everywhere at the initial stage to improve effectiveness of long-term training of children Judo players of 7–12 years old, those who are training in sections of Children and Youth Sports School and Children and Youth Sports School of Olympic Reserve, and may be of use for teachers of physical training of common secondary schools to develop motor activities and formulate broad movement base, psychological preparation for future loads in the process of perfection of sports mastership, formulation of technical base, working out individual learning tasks and further professional growth of young Judo players.

At present, the issue of health orientation of the initial stage of physical condition of young sportsmen is rather acute and it demands further studying. Thus, the prospects of further research are in fuller development of current methods oriented to individualization of learning and training tasks and game play methods which with the help of pedagogical influence will enable to adjust initial individual abilities to given norms of children's health parameters.

## Acknowledgements

The author thanks M.P. Dragomanov National Pedagogical University and Spartak sports school for providing facilities for this research.

## References

- Bompa T. Periodization Training for sports. Champaign, IL: Human Kinetics. 1999; 259
- Deshle S.A., Cherniyaev V.V. Development of dexterity of primary schoolchildren. Physical culture at School. 1982; 8.
- Eganov A.V. Methods of elementary education in judo: a textbook for coaches working with beginner judokas. Ural State. Univ Phys. culture. Chelyabinsk: [nc]. 2008. 283.
- Geller Ye.M., Rudnitskiy V.I., Raspopov S.N. Social pedagogical functions of games in training of young wrestlers. Abstract from VI Scientific conference. Tallinn.1980; 69–70.
- Ivanov M.A. Game method as a factor of increased effectiveness of special training of young female gymnasts. Author's abstract. Dis. cand. ped. sci. M. 1984; 14.
- Jagello W. Wydolnosc fizyczna ogolna mlodych judokow na tie rozwoju somatycznego. Roczniki Naukowe AWF Warszawa 2000 t. XXXIX: 91–112.
- Ketelhut R. Judo for children. Engaging manual for girls and boys. Transl. from Germ. M. Teppa-Спорт. 2003; 88.
- Konovalova I.A. Effectiveness of the game method in training of groups of young swimmers. Author's abstract. Dis. cand. ped. sci. M. 1990; 22.
- Korovin S.S. Using special sports games in sports training of young gymnasts. Cheliabinsk. 1983; 84.
- Krepchuk I.I. Complemented impact of action-oriented games on physical qualities and combat skills of young wrestlers at the initial stage of training. Author's abstract. Dis. cand. ped. sci. Minsk. 1987; 214.
- Rybalko V.M., Krepchuk I.I., Geller Ye.M. Classification of specialized game methods in sports wrestling. 1986; 1: 10–12.
- Stankiavichus L.A. Effectiveness of action-oriented games in cultivating of movement qualities of primary schoolchildren at physical culture lessons. Author's abstract. Dis. cand. ped. sci. Kyiv. 1983; 23.
- Vilenskiy Yu.M., Dubovis M.S. Games in sports wrestling. Kyiv, Zdorov'ya. 1977; 87.
- Volkov L.V. Theory and methods of child and youth sports. Kiev. Olympic Literature. 2002; 294.

**Cite this article as:** Masenko L. Discussion of the Research Results of Judo Games at the Initial Stage of Long-Term Training. Central European Journal of Sport Sciences and Medicine. 2015; 10 (2): 109–115.

