

# Topics of doctoral and postdoctoral dissertations devoted to judo in period 2000-2016 – the overall analysis of works of Russian experts

## Authors' Contribution:

- A Study Design
- B Data Collection
- C Statistical Analysis
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## Abstract

### Background and Study Aim:

The part of specialists think that the accumulated wide scientific knowledge of judo has not become the object of profound scientific analysis. Growth of judo popularity in the world (mainly in sport dimension) inclines scientists to constantly seek new, effective and scientifically grounded means and methods of sportsmen's training for competition functioning. One of the main barriers to the promotion of a global scale modern scientific knowledge about the judo are published important works on natural languages difficult due to the spelling (in Japanese, Russian, etc.). The aim of this article are the preferences topics of doctoral and postdoctoral theses on judo defended in Russian Federation universities in the period 2000-2016.

### Material and Methods:

We analysed 67 dissertations (58 doctoral and 9 postdoctoral) of Russian scientists for period from 2000 to 2016, which had been devoted to different topics of judo training and competition functioning. The systematic structural analysis of dissertations based on sport sciences and sciences of martial arts experts opinion.

### Results:

Out of 6 important topics dominates "T1" sportsmen's tactic skilfulness, formation of high sport motivation, raising judo athletes' general workability during trainings and competitions (32 dissertations) and "T2" sportsmen's morphological functional and psycho-physiological characteristics, professional personality's progress of judo athletes, increase of young people's physical potential and defensive abilities (16 dissertations). (only 3) The least work (after 3) concerns: "T5" the problems of educations of coaches' and referees' and "T6" adolescents' suitability for judo on the base of their morphological functional indicators and physical condition.

### Conclusions:

Comparative analysis of Russian dissertations devoted to different aspects of sport judo will significantly enrich modern sport science and can become a starting point for further scientific researches in the field of science of martial arts.

### Key words:

barriers for judo, comparative analysis, science of martial arts, structural analysis

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**Candidate works** – according to Russian nomenclature means PhD thesis.

**Doctoral dissertation** – according to Russian nomenclature means postdoctoral dissertation (or habilitation).

**Doctor** – according Russian system postdoctoral dissertation (or habilitation).

**Judogi** – is the formal Japanese name for the traditional uniform used for judo practice and competition [50].

**Kumi kata** – gripping methods (*is one of the most important elements of modern judo, establishing a good grip and negating your opponents grip can be what wins or loses you a match*).

**Kumi-uchi** – *grappling* [51].

**Randori** – sparring in judo in which both participants practice attacking and defending [51].

**Sambo** – is a Russian martial art and combat sport. The word "SAMBO" is an acronym for **SAMozashchita Bez Oruzhiya** – literally translates as "self-defence without weapons". Sambo is relatively modern since its development began in the early 1920s by the Soviet Red Army to improve their hand-to-hand combat abilities. It was intended to be a merger of the most effective techniques of other martial arts. The pioneers of Sambo were Viktor Spiridonov and Vasili Oshchepkov. Oshchepkov died in prison as a result of the Great Purge after being accused of being a Japanese spy. Oshchepkov spent several years living in Japan and training in judo under its founder Jigoro Kano [52].

## INTRODUCTION

Specialists note that judo is a kind of sport with deep traditions and wide volume of accumulated knowledge in judo schools throughout the world. Besides, they note that modern scientific base and the most significant scientific works have not been deeply analysed yet [1]. Wanton growth of sport achievements in judo requires from world specialists to constantly seek new means and methods of effective work with sportsmen [2, 3]. Indeed, for better development of Olympic sport judo it is necessary to constantly enrich general base of analysis of recent scientific works' effectiveness, which contain technical-tactic aspects of sportsmen's training and analysis of advanced judo athletes movements on competitions [4]. It is known that for successful performances at international competitions judo athletes shall have excellent physical fitness. However, besides physical fitness success of wrestler's performance is determined by other factors of not less importance: tactical fitness, tactical skilfulness and etc.

There is a lot of scientific works, devoted to these aspects of elite judo athletes training. Ziv et al. [5] thinks that for noticeable increase of competition functioning effectiveness additional researches of successful anti-stress and anti-anxiety strategy are required as well as perfection of sportsmen's psychological training. Such approach is especially important for judo athletes, who use different lucky charms as symbols of their success [6]. Green C. [7] also says about demand in more detail study of traumatism reasons at competitions. Pocecco et al. [8] shares this opinion. This author asserts that comprehensive knowledge about traumas' risk at competitions is the base for working out effective strategies of traumatism's prophylaxis and prevention in judo. Some scientists think that it is necessary to conduct more deep researches between athletes' weight categories [8-9]. Besides, it is necessary to analyse the following: influence of sportsmen's age on their performances' effectiveness in different weight categories [10]; characteristics of sportsmen's morphological functional indicators' correlations and their influence on sportsmanship [11-13]; mathematical models of elite judo athletes' individual combat styles [14, 15].

Certain attention is paid to details of junior judo athletes' training. For example, Bliznevsky et al. [16] think that for junior judo development it is important to form active attitude of 12-13 years'

judo athletes' to competition period. Not less important element in training system is determination of ability to be trained [17]. The authors found that in young wrestlers' aerobic power, muscular endurance and body composition influence on training and competition effectiveness. In this case, special significance is acquired by optimal construction of general training process that facilitates comprehensive and proportional development of physical qualities [18].

As one can see from the above presented material, modern judo offers wide field of researches for scientists. However, structural analysis and synthesis of already received knowledge about different aspects of elite judo athletes' training are of not less importance.

The aim of this article are the preferences topics of doctoral and postdoctoral theses on judo defended in Russian Federation universities in the period 2000-2016.

## MATERIAL AND METHODS

Time period from 2000 to 2016 was taken for the research. For this period Russian scientists prepared 67 dissertations: 9 postdoctoral thesis (in Russian "doctor") and 57 doctoral thesis (in Russian "candidate works"). These dissertations elucidate different aspects of judo athletes' training for competition and effective application judo training means and methods in educational process of highly qualified specialists for different fields of professional activity. Systemic and structural analysis of the mentioned dissertations permitted to divide them in groups by topics. Scientific comparison with the works of leading foreign specialists permitted to find contradictions in scientific views of Russian scientists on current problems of modern judo.

Four international experts of sport science and/or science of martial arts (from Poland, Russia, Ukraine) has classified this work criteria for allocation.

Analysis of topics permitted to mark out some main directions of Russian scientists' scientific researches in sport judo: the first (**T1**), the most significant direction includes problems of judo athletes' competition preparation and training; the second scientific direction (**T2**) includes

works, devoted to increase physical, psychological and social level of Russian judo athletes; the third direction (T3) deals with methodic of formation of judo basic throws and ways of increasing techniques effectiveness; the fourth direction (T4) is devoted to determination of judo role in physical education of persons – students of Russian Federation educational establishments; the fifth direction (T5) included works, devoted to preparation of coaches' and referees' personnel; the sixth scientific direction (T6) dealt with selection of children in judo schools and circles.

## RESULTS

Most of dissertations (19 of which: 17 doctoral, 2 postdoctoral thesis) defended in 2006 and 2007, whereas in 2014-2016 none (Table 1).

### Topic 1

Almost half scientific works (n = 32) are devoted to the following topic: sportsmen's tactic skilfulness, formation of high sport motivation, raising judo athletes' general workability during trainings and competitions. In part of the researches it is offered to build competition training period, considering judo athletes individual features. In several works it was offered to train sportsmen for competitions, basing on modeling.

The main idea of Russian scientists' works, devoted to judo competition training is individualization of judo training process. They offer

to form judo athletes' competition readiness by training their individual features, which determine physical and technical-tactic fitness [19]. Levitskiy A. [19] studied competition functioning of young sportsmen from reserve of Russian combined team. The author notes that competition readiness of Russian judo athletes is insufficient for achievement high sport results. In the frames of Russian combined judo team's training for Olympic Games in Sydney more than 10 000 tests were conducted, in which 500 sportsmen participated. Athletes' physical condition and their technical-tactic skilfulness were registered. The author recommends considering sportsmen's vestibular potentials when composing training plans. Individual increase of vestibular load is accompanied by wrestlers' fulfillment of combinations in judo. It will facilitate formation steady motor skill of complex technical-tactic action [19].

The position, announced by Levitskiy A. [19] is shared by: Maksimov D. [20] who offers to use technology of combat sports athletes physical training individualization in preparatory period; Mitskevich E. [21], stressing on as soon as possible implementation of methodic of judo athletes' training process individual management; Chibchik Yu. [22], offering usage of individual approach methodic, considering physical and technical tactic fitness.

Maksimov D. [20] says that significant increase of aerobic and power potentials of combat sports

**Table 1.** Chronology of Russian scientists' works, devoted to judo in period from 2000 to 2016

Topic symbol	Number of dissertations for the studied period (from 2000 to 2016)																	Total
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	
T1	2d1c	2d	1d 2c	2c	1c	2c	1d 5c	3c	3c	2c	1c	2c	1d 1c	-	-	-	-	32
T2	1c	-	-	2c	-	2c	1c	1d 4c	1c	1c	2c	-	1c	-	-	-	-	16
T3	-	-	1c	-	2c	-	-	1c	-	2c	-	-	-	1c	-	-	-	7
T4	-	-	1d	-	-	-	2c	1c	-	-	1c	-	1c	-	-	-	-	6
T5	-	-	1c	1c	-	-	-	-	-	-	-	-	-	1c	-	-	-	3
T6	1c	-	-	-	-	-	-	-	1c	1c	-	-	-	-	-	-	-	3
Total	5	2	6	5	3	4	9	10	5	6	4	2	4	2	-	-	-	67

Notes: d doctoral dissertation; c PhD thesis.

athletes upper limbs muscles is realized at the accounts of static-dynamic and interval training. Such kinds of training are oriented on cultivation local strength and endurance. To such conclusions the author came, working with members of Russian sambo and judo combined teams during 3 years.

Mitskevich E. [21] fulfilled assessment of training process effectiveness in Byelorussia judo combined team during 5 years. 19 sportsmen participated in his researches. The author thinks that for high sport results it is necessary to realize individual planning of loads for four years' cycle of athletes' training for Olympic Games. The planning shall compulsory consider methods of sportsmen's functional state express-control.

Chibchik Yu. [22] attracts attention to demand in individual approach to training of junior judo athletes beginners. Formation of sportsman's individual combat style shall be the final result. The researches were being conducted during 7 years (2002-2009) and 30 wrestlers participated in the researches. Training of sportsmen's physical qualities and technical-tactic fitness, considering their personality's features, were accented.

Russian specialists offer to pay special attention to increase elite judo athletes' workability before competitions and to application pedagogic means and methods for perfection of elite judo athletes' training reliability. Trutnev P. [23] offers to use control with electric cardiogram in judo training process. Such control of endured by sportsmen load permits to objectively and precisely assess judokas fatigue and rise training process effectiveness. The researches were being conducted during 12 years with participation of 412 sportsmen.

Frolov V. [24] worked out model of training session, oriented on perfection of judo wrestlers' technical-tactic skilfulness. In the author's opinion it is necessary to train technical actions in conditions of repeated short-lasting background loads. Intensity of such loads shall be high. The work with maximal power shall take 10-15 seconds. Rest intervals shall be 45 seconds. It can solve the problem of technical actions' fulfilment quality reduction caused by physical fatigue, which is characteristic for competition loads.

The researches of Ananchenko K. [25] prove that elite judo athletes' training shall be built on

the base of analysis of trainings video records. Insufficient level of most of Russian judo athletes' readiness to compete with foreign opponents as per changed competition rules is noted by some Russian scientists [26, 27]. Unfortunately, scientific analysis of Russian scientists' dissertations did not show any works, devoted to problems of gaining and reducing weight by judo athletes.

## Topic 2

This topic consists of 16 dissertations (1 post-doctoral and 15 PhD theses). works, which deal with the following: sportsmen's morphological functional and psycho-physiological characteristics, professional personality's progress of judo athletes, increase of young people's physical potential and defensive abilities by application of judo trainings in formation of physical, psychological and social characteristics. Big thematic block of them regards the following problems: defensive capacity of rising generation and working out preliminary military training programs. In the researchers' opinion it is necessary to realize complex pedagogic impact on physical and moral growth of youngsters, who train at judo circles. It will permit to increase the level of their fitness for military service. Elipkhanov S. [28] tested 110 persons of pre-induction age (15-17 years) during 2 years. The purpose of these researches was to develop program of pre-induction age judo boys' physical and moral-will training. It was found that judo training increase significantly physical (strength, endurance, flexibility) and moral-will (resolution, firmness, courage) qualities of young people. In the author's opinion these qualities are the main for successful service in Army.

The works of scientists prove the fact that judo trainings are effective mean of comprehensive physical development [29]. Other researches are devoted to physical, functional and psychological-pedagogic fitness of young people (from 7 to 20 years' age) for competition and further professional and social functioning. He scientists think that sports are an educational medium, which has great potential of social-pedagogic influence. Systemic application of sport training means for complex influence on man results in appearing of self-confidence, weakening anxiety, aggressiveness, formation of communicability. Thus all these results in feeling of person's social-psychological security [30]. In his works Chermit Z. [28] determined that potential of judo trainings

permits to form the feeling of comfortable existence in society and reduce children's tendencies to troubles, anxiety and strife.

The only doctoral dissertation of this topic is devoted to searching methodic of combat sports athletes personal growth control. The main reason of hindering such growth is the absence of effective educational system in acting training process [31]. In period from 2002 to 2007 Rotenberg A. [31] was studying 198 (15-19 years age) judo boys in sport schools of Moscow and Sankt Petersburg. The purpose of his researches was to create pedagogic system of sportsmen's personality's growth. This work showed that main reason of inhibition of young sportsmen's personality's growth is absence of coaches' educational activity. So practicing of special educational measures in combat sports athletes training process is demanded. Such measures shall be directed at formation of athletes motives for sport activity and their support. Other Russian scientists also say about demand in motivation for sport activity training since the earliest age [16, 32].

More than one third of researches in this topic are devoted to functional state of young judo sportsmen. The scientists were interested in morphological-functional characteristics of junior judo athletes' organisms, their heart contracting functioning and circulatory dynamic indicators. Such works, devoted to objective assessment of trainees' health are the compulsory component of judo training process's quality rising. Construction of training process in physical education and sports system shall be based on modern representative methodic of health's analysis and assessment as well as on prognostication of sport efficiency [33]. Andronova L. [33] proves that junior judo wrestlers (10 years age) have individual aspects of heart rhythm's vegetative regulation. It requires individual approach to every child and presence of objective methodic for scientific prognostication of sportsmen's physical potentials.

Many scientists note that it is necessary to increase the volume of aerobic training for boys in judo. Trainings without control can worsen sportsmen's condition significantly Osipov A. [34] found that trainings without control or without usage of informative and objective applied load's assessment result in the most unfavorable myocardium reactions to physical load.

### Topic 3

This topic includes 7 dissertation works, devoted to seeking efficient methodic of formation of correct techniques' fulfilment by judo athletes of different qualification. This direction of Russian scientists' researches represents formation of trainees' correct techniques' fulfilment and growth of judo athletes' technical fitness. Good increase of sportsmanship shall be facilitated training of individual opponent's judo gripping methods and techniques (*kumi kata* or *kumi-uchi*).

Aliev E. [35] notes that main part of judo duel is taken by attempts to realize convenient gripping. This time is 80-95% of duel period. The author offers to train sportsmen's special technique in the form of individual arsenal of gripping. These researches covered 3 groups of 17-19 years age sportsmen. Each group consisted of 12 persons. The purpose of these researches was increasing of sportsmen's technical-tactic fitness. For realization of this purpose time of struggle for gripping was increased at every training session as well as the quantity of training duels (*randori*). Great number of actions forced judo athletes to choose the most convenient methods and techniques of gripping during attack and defence.

Russian scientists [36, 37] think that strengthening of own gripping and restriction of opponent's *kumi kata* are one of main conditions of formation of various throws' arsenal and success in techniques' training. Sovmiz A. [37] offers to use power impact on opponent at the cost of optimal direction of own body's falling, when fulfilling throws. Such impact shall substantially restrict freedom of opponent's defensive holds and create favourable conditions for proper technique's realization. The researches involved 48 judo athletes. It was shown that such impact permits to take significant advantage in throw technique's effectiveness. Mekertych'yan A. [36] thinks that increase of judo techniques' fulfilment effectiveness can be possible with the help of sambo techniques' principles. It means that freedom of opponent's *kumi kata* can be restricted by holding his judogi.

Unfortunately these tasks are solved by most of Russian judo athletes by physical strength instead of technical skilfulness, as it is pointed by Parkhomovich G. [38]. It should also be noted that recent changes of judo competitions rules substantially limit variability of hold as well as

reduce scientific significance of researches in this field.

A lot of works are devoted to methodic of basic judo throws training: on the base of bio-mechanical correction and imitation exercises; application of basic circular movements – twisting of opponent to different sides for him to lose balance.

Podoruev Yu. [39] offers to assess again the structure of judo athletes movements in techniques' fulfilment. In his opinion a number of throws with complex coordination is overfilled with excessive differently directed movements. The author offers to compensate judokas non fitness for proper such throws' fulfilment by including some lead-up exercises in training process. Such exercises shall imitate throws' structure but exclude possibility of psycho-motor loads. In its turn it shall exclude in-coordination of judo athletes specialized movements when fulfilling throw.

Baev I. [40] thinks that it is necessary to use circular movements in training beginners to judo techniques. Such movements imply traveling of hold point of opponent by arch on bigger part of trajectory (twisting). It was found that application of such movements ("wave", "pendulum", "sphere rocking down") facilitates quality indicator' increment of techniques fulfilment. The researches embraced junior judo athletes and beginners of 10-12 years at initial stage of techniques' training.

Forcing opponent to lose balance for further throw is a compulsory condition for successful mastering judo techniques. Osipov A. [41] advises to spend more time just for training and mastering of techniques. For this purpose it is recommended to shorten time for training general physical qualities.

#### Topic 4

This topic consists of 6 works, dealing with organization and implementation sport-oriented physical education, based on judo, in different educational establishments.

Russian scientists' studies of judo potential in physical education of different educational establishments' students offer to more actively apply judo trainings for improvement physical fitness and health. Ponarina O. [42] thinks that introduction of regular judo trainings in students' physical education will serve as proper health formation

technology. Effectiveness of judo trainings' impact on students' physical (somatic) and moral health has been proved. Experimental groups' students demonstrated significant increase of lungs' vital capacity, heart beats rate, speed and general endurance as well as flexibility indicators. In such groups physical culture (physical education) classes were conducted in the form of judo trainings. In experiment 120 boy students (19-20 years age) participated. The experiment lasted 3 years. On the base of the research data the author recommends judo trainings as the base of health projecting technology for students [42].

Yakovlev A. [43] offers to use judo training influence in schoolchildren's physical education. The recommended program contains the course of judo technical-tactic training, physical training and list of control tests. The scientist says that judo trainings favourably influence on schoolchildren's organisms. The researches were conducted in comprehensive school (age of schoolchildren was 8-10 years). Total number of tested was 90 persons. Physical culture classes were conducted in the form of judo trainings. Improvement of the following schoolchildren's physical indicators was registered: body length, chest circumference, hand dynamometry. Besides, improvement of functional indicators was found: heart beats rate and vital capacity of lungs.

#### Topic 5

The problems of coaches' and referees' training shall be recognized as insufficiently studied by Russian scientists in the field of judo. For recent 16 years only 3 candidate dissertations (PhD theses) have been published on these problems. Two of them were devoted to training of coach personnel. They elucidate the questions of coaches' professional-pedagogic progress, based on diagnostic of personal indicators and realization of interconnection with sportsmen during their performances [44]. Purakhin N. [44] fulfilled questioning of 86 strongest judo sportsmen and coaches. The purpose of the questioning was knowledge about important personal-pedagogic qualities of successful judo coach. The questioning showed that these qualities include: ability to plan training process, insistence on high standards, even temperedness, communicability, industry.

Only one work was devoted to increase of referees' training effectiveness. It was based on the

system of referees' training management [45]. It should be recognized that in this direction there is a substantial gap. Trofimov A. [45] offers to conduct seminars on referees' advanced vocational training during judo competitions. The main indicator of referee's qualification will be successful test-passing. The test was composed on the base of question-answer structures. It includes questions and variants of answers, showing knowledge of competition rules and understanding of judo. First experiment with this test took place at referees' seminar in the course of Russian combined team training to Olympic Games 2000. 38 referees passed the test successfully and highly assessed significance of their qualification advancing.

Gradual character of junior sportsmen's training, consequent realization of all motor and technical skills' formation stages in judo are important aspects of coach's successful activity. Many Russian coaches neglect it nowadays. They force sportsmen's competition training process without excusable reasons in order to receive quick sport result [38].

Concerning qualified referees' training for judo competitions, it should be noted that there is deficit of such researches both in Russia. Also firm tendency of any (even very insignificant) referee's decisions substantial influence on final result of competition duel was found [46]. Unfortunately the problems of referees' training have not been studied sufficiently both in Russia.

### Topic 6

This topic is presented by 3 dissertations, which regard determination of adolescents' suitability for judo on the base of their morphological functional indicators and physical condition.

The problem of effective children's selection in judo sport circles and sport schools is one of insufficiently studied in Russia. All works are only methodic recommendations for selection of children and adolescents to judo circles and schools. The works slightly differ from each other by selection methodic. However the main criterion is boys' physical condition and fitness [47]. Pautkin A. [47] recommend to consider total indicators of adolescents' bodies (body length, body mass, chest circumference) when selecting to judo schools. Significant results can be achieved by boys, who are good in the following

tests: torso raising on horizontal; bar and chin ups. To such conclusions the author came after three years' studies, devoted to determination sport suitability of 117 adolescents, specialized in judo. The researches were conducted in children-junior judo school (age of boys was 12-14 years).

It should be noted that such recommendations are rather criticized by some Russian scientists. Osipov A. [48] found that when selecting children in circles of martial arts in uniform (sambo and judo) it is necessary to consider coordination abilities and ability to quickly master techniques.

## DISCUSSION

Analysis of dissertation works devoted to judo showed that the main direction of Russian scientists' researches was increase of sportsmen's competition and training quality. This direction is represented by the most quantity of works, embracing long period of researches (from 2 to 12 years) and high quantity of tested. In average one research involved about 80 sportsmen. Total quantity of the tested was over 3000 persons. Other directions are represented by researches, which lasted for shorter period of time (from 1 to 5 years) and involved less quantity of sportsmen. In average, every of such works involved 25-35 persons. The chronology of scientific researches permits to note certain reduction of researches on sport judo recent time. If at the beginning and in the middle of 2000-s in average 4-5 scientific works were published, then recent 4 years only 2 dissertations have been published. Weakening of scientists' interest to judo problems can, in the future, render negative influence on scientific methodic base, which is necessary for coaches and sportsmen for achievement high sport results.

The present study showed that dissertations devoted to modern and objective control methodic, as well as to sportsmen's health assessment, have the highest applied importance. Trainings without proper control of loads result in judo athletes over-fatigue. Noticeable worsening of myocardium reaction to physical load in judokas, who are trained without load control, was registered [34]. Trutnev P. [23] offer to use electric cardiogram indicators in training process as objective and current express assessment of athletes' functional state. Even in childhood in judo

trainees there were found individual characteristics of vegetative regulation of heart rhythm [33]. In this connection methodic of heart work control shall be used in training process since initial stages.

Attention should be paid to the works, devoted to sportsmen's training to throws' correct technique. Analysis of techniques' fulfilment shows that in throws with complex coordination structure there are excessive differently directed movements [39]. Unfitness for such actions is compensated by many judo athletes at the cost of significant muscular efforts that are quite incorrect [38]. In the authors opinion incorrect fulfilment of many actions with complex coordination is embedded in sportsmen already at initial stages of training. Many coaches select beginners to judo schools orienting on adolescents' physical condition [47]. In such selection coordination abilities and ability to quickly master judo techniques are not a determining factor in selection. Thus, when mastering techniques with complex coordination, adolescents shall compensate deficit of coordination by significant physical efforts. Some specialists severely criticize coaches' bent to orientate on children's physical condition in their selection to judo schools [38, 48].

Unfortunately some works have already lost their timeliness and importance for modern judo. The works, devoted to hold strength and restriction of opponents' holds freedom were based on application of sambo techniques in judo [37]. Recent years International Judo Federation (IJF) has systematically been changing of competition rules. Among them there are: prohibition grabbing for pants and belt. Fulfilment of such actions will inevitably result in disqualify during judo competition. Therefore, training of such specific preparatory techniques for throw or defence nowadays is purposeless.

In Russian Federation there have been prepared and defended dissertations on judo, connected with study of the following: laws of sport training; aspects of judo athletes psychological training; pedagogic means and methods of training process perfection; principles of combat sport physiology. Substantial base of dissertations, defended in 2000-s permits to create powerful theoretical-methodological substantiation of this kind of sports. It makes possible to work out technologies of successful organization of elite judo athletes training on the base of sport motivation for this kind of combat sports activation.

The experience, accumulated in Russian sport science for many years, witnesses about timeliness of scientific methodic development, devoted to activation of different age judo athletes at different stages of sport perfection. Study, preservation and application of this experience by sport and scientific organizations of other countries require timely generalization of valuable experimental data, received by Russian scientists. In the whole it will facilitate successful international progressing of judo.

Scientific works of Russian judo researchers can help to raise the quality of training and competition functioning of judo athletes from different countries, with their philosophy and traditions. Analysis of already defended dissertations proves that Russian scientists' works can render additional international influence on efficiency, and show character of judo competitions. Future promising researches in this field, fulfilled by scientists from different countries, based on scientific results of Russian scientists, will be a reliable proof of this fact.

This publication is another example of the transfer of scientific knowledge published in Russian language [12, 15, 16] available by the journal *Archives of Budo*, which is dedicated to the issues of the specialties for the new scientific specialty: science of martial arts. It is filling the mission of breaking barriers up, when the world was divided by Iron Curtain [49].

## CONCLUSIONS

Studying of analysed dissertations by international community will help to agree single definitions in judo sphere. Social-scientific order for preparation and fulfilment of such research is especially relevant at the present time. It is proved by global changes in international sports development and demand in strengthening of scientific international contacts in this specialization as combat sport wide family of martial arts.

Comparative analysis of Russian dissertations devoted to different aspects of sport judo will significantly enrich modern sport science and can become a starting point for further scientific researches in the field of science of martial arts.



## REFERENCES

1. Peset F, Ferrer-Sapena A, Villamón M et al. Scientific literature analysis of Judo in Web of Science®. *Arch Budo* 2013; 2: 81-91
2. Cicovic B, Pržulj D, Stojiljković D et al. The influence of basic preparations on the development of the motor and functional abilities of judoists. *APES* 2011; 1(2): 117-122
3. Pedrosa GF, Soares YM, Gonçalves R et al. Content validation of a catalog of exercises for judo. *Percept Mot Skills* 2016; 122(3): 933-955
4. Challis D. Talent Identification in judo. Anglia Ruskin University Judo Research Group on behalf of the International Judo Federation [accessed 2016 Nov 10]. Available from: URL:<https://judo-bob.files.wordpress.com/2011/08/talent-identification-in-judo.pdf>
5. Ziv G, Lidor R. Psychological preparation of competitive judokas – A review. *J Sport Sci Med* 2013; 12(3): 371-380
6. Gaurav Dureja, Gagandeep Singh. Superstitious behavior among judo, taekwondo and boxing players. *Phys educ students* 2016; 20(2): 50-59
7. Green C, Petrou M, Forqarty-Hover M et al. Injuries among judokas during competition. *Scan J Med Sci Spor* 2007; 17(3): 205-210
8. Pocecco E, Ruedl J, Stankovic N et al. Injuries in judo: a systematic literature review including suggestions for prevention. *Brit J Sport Med* 2013; 47(18): 1139-1143
9. Franchini E, Del Vecchio F, Matsushique K et al. Physiological profiles of elite judo athletes. *Sports Med* 2011; 41(2): 147-166
10. Albuquerque M, Tavares V, Lage G et al. Relative age effect in Olympic judo athletes: A weight category analysis. *Sci Sport* 2013; 28(3): 59-61
11. Gaskov AV, Kuzmin AV, Kudryavtsev DM et al. Successfulness of general and special physical qualities' development on different stage of students-boxers' training. *Phys Educ Students* 2016; 1: 4-11
12. Iermakov SS, Podrigalo LV, Jagiełło W. Hand-grip strength as an indicator for predicting the success in martial arts athletes. *Arch Budo* 2016; 12: 179-186
13. Podrigalo LV, Iermakov SS, Alekseev AF et al. Studying of interconnections of morphological functional indicators of students, who practice martial arts. *Phys educ students* 2016; 1: 64-70
14. Kozina ZL, Jagiełło W, Jagiełło M. Determination of sportsmen's individual characteristics with the help of mathematical simulation and methods of multi-dimensional analysis. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2015; 12: 41-50
15. Iermakov SS, Arziutov GN, Jagiełło W. Quick training of students to judo techniques. *Arch Budo* 2016; 12: 15-24
16. Bliznevsky A, Kudryavtsev M, Iermakov S et al. Formation of active-effective attitude of 12-13 year judo athletes to sports functioning in competition period. *Arch Budo* 2016; 12: 101-115
17. Bahman Mirzaei, Farhad Rahmani-Nia, Navid Lotfi et al. Trainability of body composition, aerobic power and muscular endurance of cadet wrestlers. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2016; 5: 53-57
18. Balushka LM. Perfection of physical fitness of lyceum with advanced military physical training pupils by means of sports wrestling. *Pedagogics, psychology, medical-biological problems of physical training and sports* 2016; 5: 4-10
19. Levitskiy AG. Managing the training of judokas based on the level of individual's readiness to competitive activity. PhD [dissertation]. Sankt Petersburg; 2002 [in Russian]
20. Maksimov DV. Individualization of physical training of highly qualified martial artists in the preparatory period. PhD [dissertation]. Moscow; 2009 [in Russian]
21. Mitskevich EA. Preparation of highly skilled sportsmen-judoists on the basis of management of their functional state. PhD [dissertation]. Moscow; 2009 [in Russian]
22. Chibchik Yu. Individualization of training process of young judoists at the initial stages of preparation. PhD [dissertation]. Chelyabinsk; 2010 [in Russian]
23. Trutnev PV. Experimental substantiation of increase of efficiency of highly qualified judoists before the competition. PhD [dissertation]. Krasnoyarsk; 2006
24. Frolov VV. Pedagogical means and methods to improve the reliability of highly skilled judoists. PhD [dissertation]. Moscow; 2002
25. Ananchenko K, Khatsayuk A. New methodical approach to the assessment of video record which is used when training of judoists. *Slobzhanskiy Herald of Science and Sport* 2016; 4(54): 9-14
26. Osipov AY. Analysis of the Krasnoyarsk territory's judo athletes' preparedness for competitive wrestling according to new rules of competitions. *Bulletin of Krasnoyarsk State Pedagogical University named after V.P. Astafiev* 2014; 1(27): 88-91
27. Tel'uk SI. Comparative analysis of competitive activity of Russian men judo team on 2012 Olympic games and 2013 World championships. *Vestnik sportivnoy nauki* 2014; 3: 13-17
28. Eliphanov SB. Physical, moral and volitional pre-conscription training of young men for service in the armed forces in the process of judo. PhD [dissertation]. Maykop; 2007 [in Russian]
29. Masenko L. Discussion of the Research Results of Judo Games at the Initial Stage of Long-Term Training. *Cent Eur J Sport Sci Med* 2015; 10(2): 109-115
30. Chermil Z. Formation of social-psychological security of personality of young athletes: the case of judo. PhD [dissertation]. Krasnodar; 2005 [in Russian]
31. Rotenberg AR. Pedagogical control system of personal growth of combat sports athletes. PhD [dissertation]. Sankt Petersburg; 2007 [in Russian]
32. Babushkin G, Shumilin A, Chikurov A. Diagnostics and correction of pre-competition psychological readiness of judoists of different qualifications. *Journal of Siberian Federal University. Humanities & Social Sciences* 2011; 9(4): 1240-1250
33. Andronova LB. Features of the functional status of young athletes involved in martial arts]. PhD [dissertation]. Moscow; 2010 [in Russian]
34. Osipov AY. Estimation of athletes' condition on basis of ECG-control. *Teoriya i praktika fizicheskoy kultury* 2007; 7: 46-49
35. Aliev EG. Methods of formation and improvement of technical and tactical skills of 17-19 year old judoists. PhD [dissertation]. Moscow; 2002 [in Russian]
36. Mekertych'yan AN. Improving the efficiency of throws in judo by reducing the degrees of freedom grippers. PhD [dissertation]. Krasnodar; 2004 [in Russian]
37. Sovmiz AA. Adaptation of throwing techniques in judo to the kinematic conditions of a sport competition. PhD [dissertation]. Krasnodar; 2009 [in Russian]
38. Parkhomovich GP. Fundamentals of classical judo. Perm; 1993 [in Russian]
39. Podoruev YuV. Correction of motional guidance techniques judo throws and features of its formation in the conditions of early specialization. PhD [dissertation]. Krasnodar; 2009 [in Russian]
40. Baev IA. Initial training judo in the rack using basic circular movements. PhD [dissertation]. Sankt Petersburg; 2004 [in Russian]
41. Osipov, AY. Selection criteria beginners in wrestling. *Bulletin of Krasnoyarsk State Pedagogical University* 2013; 4(26): 155-157
42. Ponarina OS. Technology of formation of health of students of higher educational institutions are not athletic profile based on judo. PhD [dissertation]. Moscow; 2010 [in Russian]
43. Yakovlev AS. Training of sports reserve in judo on the basis of sports-oriented physical education of junior schoolchildren. PhD [dissertation]. Volgograd; 2012 [in Russian]
44. Purakhin NF. Pedagogical diagnostics of professional qualities of the coach in sport martial arts]. PhD [dissertation]. Moscow; 2013 [in Russian]
45. Trofimov AI. Criteria and methods of training of judges in judo. PhD [dissertation]. Moscow; 2002 [in Russian]
46. Osipov AY. The analysis of Siberian federal district judo athletes training in modern competitive wrestling. *Bulletin of Krasnoyarsk State Pedagogical University* 2016; 1(35): 105-108
47. Pautkin AV. Definition of sports fitness adolescents at the stage of initial sports specialization in martial arts. PhD [dissertation]. Tambov; 2009 [in Russian]

48. Osipov AYu. Increasing level of technical skills of young wrestlers of sambo and judo. Bulletin of Krasnoyarsk State Pedagogical University 2013; 2(24): 93-95
49. Barczyński BJ, Graczyński M, Kalina RM. Barriers Restricting the Free Dissemination of Scientific Achievements: Own Experiences in Crossing Walls and Bridges. J Hum Kinet 2009; 22(22): 7-14
50. Santos L, Fernandez-Rio J, Ruiz ML et al. Three-dimensional assessment of the judo throwing techniques frequently used in competition. Arch Budo 2014; 10: 107-115
51. Budō. The Martial Ways of Japan. Tokyo: Nippon Budokan Foundation; 2009
52. [https://en.wikipedia.org/wiki/Sambo\\_\(martial\\_art\)](https://en.wikipedia.org/wiki/Sambo_(martial_art)) (accessed 2016 Nov 10)

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