

THE EFFECT OF A BURGER STYLE IN DEVELOPING SOME TYPES OF STRENGTH AND TECHNICAL PERFORMANCE OF GRIPS IN JUDO FOR JUNIORS

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Abstract

The purpose of this paper is to identifying the effect of the burger style in developing some types of strength and technical performance of grips in judo for juniors. The research community was determined by the intentional method represented by the Al-Hedod Sports Club (Baghdad), which numbered (15) junior judo players. (12) Players were selected and they are within one classification and they were divided into two samples (control and experimental) and the number of each total became (6) players, and thus constituted (80%) of the research community, Among the most important results he reached, where the burger style achieved remarkable success in developing some types of strength and technical performance of grips in judo for juniors. In addition, that the use of the scientific method and the experiment in previous research will give better results if it was applied in the same method and performance, and this is what was achieved by the Burger method.

Keywords: Health science. Sports training

Introduction

Scientific research plays a major role in the advancement and prosperity of the country. It is also considered an effective element in providing everything new related to human life, including health, science, social, and even sports.

That is why we find civilized countries because of their possession of research institutions that teach to provide useful and new things, as well as address the problems facing the progress of that civilization, in addition to addressing the obstacles that stand in the way of human life, including the athlete as well.

On the sports side, scientific research is very necessary for the progress of the athlete and the achievement of sports achievements because it addresses all the requirements of the game and the players in terms of physical, skill, tactical and psychological aspects, in addition to research in sports sciences to provide training and correct learning for performance, in terms of sports training or the sciences supporting it.

In terms of the science of sports training, scientists work in scientific research in building programs, methods and controlling the components of the training load according to the requirements of the sports game, and for this, we find judo one of the sports in which the physical aspect, especially muscular strength, plays a major role in obtaining achievements and winning fights, and for this scientific research Works to correct the correct training process, especially muscular strength and technical performance of grips.

Scientist Burger is one of the prominent scientists in the science of sports training, who researches methods that serve the sports side, especially muscular strength, and this is what gave importance to this research in

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experimenting with its methods to raise the physical level, especially muscular strength, in addition to the technical performance of some of the various grips of the game.

Research problem

Training juniors requires the use of appropriate strength so that it does not affect the growth of the body, and the goal of developing strength is to serve the game, especially judo, in the correct manner and in a scientific manner.

Through the researcher's modest experience as a judo player and president of the Judo Federation (a mixture of judo and karate), he noticed that training muscular strength and its different types for young players do not go according to the scientific method in terms of age and strength development towards achieving the success of the technical performance of grips, and this affected the Most of the novice players have improved. Therefore, I decided to study this research problem and work on developing muscle strength using the effect of the burger method in developing some types of strength and artistic performance of grips in judo for juniors, as it is a scientific method and tested on young age groups.

Research objective

- Identifying the impact of the burger style in developing some types of strength and technical performance of grips in judo for juniors.
- Identifying the differences between the results of the pre and post-tests for the control and experimental groups in the development of some types of strength and technical performance of grips in judo for juniors.
- Identifying the results of the differences in the post-tests between the control and experimental groups in the development of some types of strength and technical performance of grips in judo for juniors.

Research hypotheses

- There are significant differences between the results of the pre and post-tests in favor of the results of the post-test in the development of some types of strength and technical performance of grips in judo for juniors.

- There are significant differences in the results of the post-tests between the control and experimental groups and in favor of the experimental group in developing some types of strength and technical performance of grips in judo for juniors.

Research fields

- Human field: Junior judo players.
- Time field: (2/6/2020) to (8/8/2021).
- Spatial field: The closed hall of the Al-Hedod sports club.

Research methodology and field procedures

Research Methodology

The researchers used the experimental method with the design of equivalent groups (control and experimental) to suitability in solving the research problem and achieving its objectives.

Community and sample research

The research community was determined by the intentional method represented by the Al-Hedod Sports Club (Baghdad), which numbered (15) junior judo players. (12) players were selected and they were within one classification and they were divided into two samples (control and experimental) and the number of each total became (6) players, thus forming a percentage (80%) of the research community, after which each sample was homogeneous separately and the two groups were equal in the research variables as shows in [table \(1\)](#).

Information collection methods

Data collection methods

- Arab and foreign sources.
- The tests used.
- Scientific observation.

Table 1: Shows the homogeneity of the two samples and their equivalence in the research variables.

Tests and measurements	Control			Experimental			T value	Type sig
	Arithmetic mean	Standard deviation	difference coefficient	Arithmetic mean	Standard deviation	difference coefficient		
length/cm	110.23	2.145	1.945	110.74	2.451	2.213	0.35	Non sig
Weight/ kg	28.657	1.256	4.382	28.964	1.652	5.703	0.33	Non sig
Explosive power of the arms / meter	2.325	0.341	14.66	2.12	0.362	17.075	0.923	Non sig
Power Featured speed for arms/ count	8.565	0.541	6.316	8.756	0.574	6.555	0.542	Non sig
Power Featured speed for legs/meter	9.475	0.455	4.802	9.658	0.487	5.042	0.614	Non sig
endurance power for arms/count	14.582	0.541	3.71	14.698	0.563	3.83	0.332	Non sig
endurance power for legs /count	20.256	0.741	3.658	20.754	0.784	3.777	1.033	Non sig
grip (o- goshi)/ degree	2.725	0.224	8.22	2.784	0.236	8.477	0.406	Non sig
grip (harai goshi)/ degree	2.698	0.236	8.747	2.787	0.334	11.984	0.489	Non sig
grip (Seoi nage)/ degree	3.225	0.475	14.728	3.226	0.411	12.74	0.003	Non sig

Tabular value (T) at the degree of freedom (10) and below the level of significance (0.05) = 2.23

Tools and devices used

- A regular football stadium
- 2-hour stopwatch.
- Medical scale.
- Standard tape 10 meters.

Field research procedures**Identify the search variables**

The researchers reviewed the sources and references related to quality and previous research, noting the physical variables, especially some types of muscular strength, in addition to some of the necessary grips for judo players necessary for study and development.

Tests used**Test the explosive power of the arms (Allawi and al-Din Radwan. 1994)**

- Test name: Medical ball throwing test weighing (3) kg with hands over the head from a sitting position on a chair
- The purpose of the test: To measure the explosive force of the arms and shoulders.
- Tools: a medicine ball of weight (3) kg, a measuring tape and a chair with a strap that fixes the torso and is tight.
- Performance specifications: the laboratory sits on the chair, hands above the head carry the medical ball, and the torso is adjacent to the edge of the chair. The belt is placed around the laboratory torso and held from the back by means of a tight grip for preventing the laboratory from moving forward while throwing the ball with two hands so that the process of throwing the ball is done with hands only without using the trunk. Each laboratory has three attempts, scoring the best of them.
- Recording: The distance between the front edge of the chair and the nearest point the ball places on the ground is calculated.

Test the Power Featured speed for arms (Amir. 1999)

- Test name: Arm flexion and extension test (from the forward-leaning position) (10 seconds)
- The purpose of the test: To measure power featured speed for arms for the muscles of the arms.
- Unit of measure: number of times
- Description of performance: From the front-facing position, noticing that the body has taken the correct position, bending the arms and then fully extending them.
- Tools used: stopwatch.
- Recording: The number of times the arms are bent and extended correctly within (10) seconds.

Test Power Featured speed for legs (Amir. 1999)

- Test name: Forward long jump test for (10) seconds.
- The purpose of the test: - To measure the power featured speed for legs.

Tools: tape measure - stopwatch - pitch - whistle

Method of performance: - The tester stands behind the starting line, and when he hears the beep, he makes a dash forward, then the distance he travels is measured within (10) seconds.

Conditions:

- No part of the body should touch the ground except the feet.
- Make every effort by the laboratory to record the largest possible distance
- Test administration: a timer that gives the start signal and calculates the time taken to perform the test.
- Recording: The laboratory records the largest distance traveled during the test time (10) seconds and is given three attempts, and the rest period between one attempt and the other is (5-7) minutes to restore recovery and record the best attempt.

Test endurance power for arms (Hassanein. 2001)

- The purpose of the test: To measure the endurance of the muscles of the arms and shoulders.
- Performance: From the oblique prone position, the tester bends the elbows until it touches the ground with the chest and then returns again to the oblique prone position, repeating the performance as many times as possible.
- Notes:
 - It is not allowed to stop while performing the test.
 - The straightening of the body is observed during the performance stages.
 - The need for the chest to touch the ground when performing.
- Recording: records the number of valid attempts made by the tester.

Test endurance power for legs (Hassanein. 2001)

- The purpose of the test: To measure the endurance of the muscles of the legs.
- Tools: Two posts connected by a rubber rope (parallel to the ground) 50 cm high. This tool is placed behind the laboratory during the performance.
- Performance specifications: From a standing position, palms intertwined behind the neck and knees bent in half. The tester jumps high to parallel the horizontal rope with the feet, then descends in place and bends the knees in half until the horizontal rope is parallel to the buttock. This work is repeated as many times as possible.
- Notes:
 - The jumping level should be so that the feet are parallel to the horizontal rope.
 - The knees should be bent so that the butt is parallel to the horizontal rope.
 - The body must be completely straightened when jumping high.
 - The jump is in the vertical direction.

- Any performance that violates the previous attempt will be canceled.
- Recording: records the number of valid attempts made by the tester.

The grip shall be evaluated at (10) degrees, and it shall be by an arbitration committee, according to the following table (2):

The scientific basis for the tests

Standardized tests were used, which have honesty, stability and objectivity, in addition to the correct evaluation of the grips by a specialized jury.

Exploratory experience

On 2/6/2020, the researchers conducted an exploratory experiment on the original research sample, by applying a set of exercises used for the purpose of legalizing the training load, identifying the components of pregnancy in terms of intensity, size and comfort, and knowing the burger method and how to apply it.

Field experience

Pre-tests: The pre-tests were conducted on 12/6/2020

Training used

Burger has developed multiple methods for training muscle strength according to experiments on various sports, and for this researcher adopted his method explained in the second chapter, which depends on repetitions and totals as follows:

Training in three sets of (6) repetitions, three times a week, is the best method for developing strength.

The exercises were applied in the main section of the trainer’s training units (Appendix 1) and during the special preparation period, and the number of units was (24) training units at a rate of (3) units per week. Application days (Sunday, Tuesday and Thursday). The intensity ranged (80-90%), with regard to rest, the pulse was relied on as an indicator of comfort, and the training was applied on 13/6/2020 and ended on 7/8/2020.

Post-tests

Post-tests were conducted on 8/8/2020.

Statistical methods: The search data was processed through the Statistical Package for the Social Sciences (SPSS).

Presentation, analysis and discussion of the results

Presentation of the results of the pre and post-tests of the control group for the tests and measurements used.

Presentation of the results of the pre and post-tests of the control group for the tests and measurements used.

Presentation of the results of the post-tests between the control and experimental groups of the tests and measurements used.

Analyze and discuss the results

By noting Tables (3), (4) and (5), we found that the control and experimental

groups obtained the development in the physical aspect (types of muscular strength) and the technical performance of the grips under study for judo players, as the (t) values calculated in the test were The post-test is greater than the values of (t) in the pre-test, and this indicates that there are significant differences between the two tests in favor of the post-test.

The reason for the development of the control group came to the success of the training program by the coach, which aimed to develop muscle strength and technical performance, which helped to come up with an appropriate approach for him in raising the muscle strength of the judo players, which was clearly reflected in their performance in the post-tests better than the pre-tests. (Qat .1999) mentions, “The success of the training curricula is measured by the extent of progress achieved by the athlete in the type of sports activity practised and through the skill, physical and functional level achieved, and this depends on the adaptation that the athlete achieves with the training curriculum that he applied.”

In Table (5), we found that the experimental group is better than the control group, and this indicates the success of the burger method in developing muscular strength and its types for judo players, and this was reflected in the technical performance of the grips under study, as the burger method is one of the methods that control the components of the training load, especially size and totals Because it affects the number of repetitions of the applied exercises and produces better strength, as (Abdullah. 1997.) sees “Giving regular exercises consistent with the correct scientific method enhances the increase in the efficiency of the joint muscle groups in the performance of kinetic skills and physical qualities that the player acquires during training.”

The legalization of pregnancy using the scientific method of the burger world, including the legalization of the best repetition, has a significant influence in the small and medium training circuit to raise the physical capabilities towards excellence, especially the aspect of speed and strength, because it is one of the abilities that require a certain strength with high speed and for several repetitions, and this is confirmed by (Al-Tamimi. 2003) “The success of the training program depends on the good organization and distribution of physical loads within the small training circuit, which is the starting point for the practical application based on the rule of switching the training weight between the minimum and the maximum and the actual comfort”

On the positive side of the Burger method, it is successful in developing muscular strength endurance by using load rationing for the best repetition due to the nature of this important physical ability for judo players to perform and continue to fight throughout the period of the round and at an almost constant level of fatigue tolerance as a result of the movements the technical performance of the grips imposed on the player Exerting more strength and resistance. For this, strength exercises must be codified and distributed correctly and repeatedly in the training performance corresponding to the performance of the competition, and this is what (Sabri and Al-Katib.1980) sees it “it is the ability to continue relatively intense muscular work for a long time, i.e. meaning the ability of muscular resistance of a single muscle or group of muscles against the factor of fatigue by means of several continuous contractions of the muscle.”, and they also add “Force endurance is the ability of a muscle or muscle groups to stand against fatigue during repeated muscular contractions or Standing against external resistance for a long period of time.”.

And (Al-Basati. 1998) believes, “The development of any physical component of

Table 2: Shows the evaluation of the sections of each grip used.

No.	Name grip	Primal part	main part	concluding part	Overall score for evaluation
1	Seoi nage	4	4	2	10
2	Seoi nage	4	4	2	10
3	Seoi nage	4	4	2	10

Table 3: Shows the differences between the pre and post arithmetic means in the tests used for the control group.

Tests and measurements	Pre		Post		standard error	T value (Calculated)	Type sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Explosive power of the arms / meter	2.325	0.341	3.142	0.451	0.257	3.178	Sig
Power Featured speed for arms/ count	8.565	0.541	10.564	0.457	0.422	4.736	Sig
Power Featured speed for legs/meter	9.475	0.455	10.44	0.563	0.274	3.521	Sig
endurance power for arms/count	14.582	0.541	16.475	0.574	0.441	4.292	Sig
endurance power for legs /count	20.256	0.741	22.654	0.657	0.552	4.344	Sig
grip (o- goshi)/ degree	2.725	0.224	3.998	0.457	0.443	2.873	Sig
grip (harai goshi)/ degree	2.698	0.236	4.123	0.565	0.511	2.788	Sig
grip (Seoi nage)/ degree	3.225	0.475	4.998	0.457	0.475	3.732	Sig

Tabular value (T) at a degree of freedom (5) and under a probability of error (0.05) = 2.57

Table 4: Shows the differences between the pre and post arithmetic means in the tests used for the experimental group.

Tests and measurements	Pre		Post		standard error	T value (Calculated)	Type sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Explosive power of the arms / meter	2.12	0.362	4.551	0.567	0.774	3.14	Sig
Power Featured speed for arms/ count	8.756	0.574	12.658	0.614	0.687	5.679	Sig
Power Featured speed for legs/meter	9.658	0.487	11.652	0.745	0.674	2.958	Sig
endurance power for arms/count	14.698	0.563	18.441	0.745	0.779	4.804	Sig
endurance power for legs /count	20.754	0.784	24.658	0.854	0.891	4.381	Sig
grip (o- goshi)/ degree	2.784	0.236	4.977	0.542	0.621	3.531	Sig
grip (harai goshi)/ degree	2.787	0.334	6.123	0.847	0.732	4.557	Sig
grip (Seoi nage)/ degree	3.226	0.411	6.112	0.625	0.571	5.054	Sig

Tabular value (T) at a degree of freedom (5) and under a probability of error (0.05) = 2.57

Table 5: Shows the differences in the post-test arithmetic means in the tests used for the group between the control and experimental groups.

Tests and measurements	Control		Experimental		T value (Calculated)	Type sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
Explosive power of the arms / meter	3.142	0.451	4.551	0.567	4.348	Sig
Power Featured speed for arms/ count	10.564	0.457	12.658	0.614	6.122	Sig
Power Featured speed for legs/meter	10.44	0.563	11.652	0.745	2.906	Sig
endurance power for arms/count	16.475	0.574	18.441	0.745	4.68	Sig
endurance power for legs /count	22.654	0.657	24.658	0.854	4.166	Sig
grip (o- goshi)/ degree	3.998	0.457	4.977	0.542	3.088	Sig
grip (harai goshi)/ degree	4.123	0.565	6.123	0.847	4.395	Sig
grip (Seoi nage)/ degree	4.998	0.457	6.112	0.625	3.276	Sig

Tabular value (T) at the degree of freedom (10) and below the level of significance (0.05) = 2.23

an orphan if there is no harmony and physical and natural adaptation between the player and the components of the training process in terms of quantity and quality on the one hand, and the level of the players and their age stage on the other hand".

As for the grips, its development came from the exercises that worked to develop the muscle groups that belong to the required grips, and this is confirmed by (Allawi. 1994) as he mentions that "physical qualities are the main component that practically adopt the rest of the components necessary to reach the highest levels and that the development of these The qualities are closely related to the process of developing kinetic skills, as the individual cannot master the basic kinetic skills of the type of sports activity in which he specializes, in case he lacks the physical specifications necessary for this activity."

Conclusions

- The burger style has achieved remarkable success in developing some types of strength and technical performance of grips in judo for juniors.
- Using the scientific and proven method in previous research will give better results as it was applied in the same method and performance, and this is what the Burger method achieved.
- Explosive power, speed and endurance of power are among the physical abilities necessary for the game of judo and need a scientific method to legalize it as in the burger style in order to reflect this physical development on the technical performance of the grips.

Recommendations

- Adopting a burger method in developing some types of strength and technical performance of grips in judo for juniors.
- Emphasis in training on the use of the scientific method subject to experimentation, as in the burger method.

- Emphasis on the training of explosive power, speed and endurance, because they are the necessary physical abilities for judo.
- Conducting similar studies in the use of training methods for other scholars to develop the physical characteristics of judo players.

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