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The impact of physical exercises with weighting in an ascending hierarchical manner in developing some of the physical abilities of judo players under 20-years

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Abstract:

One of the important foundations for the success of the training process is its reliance on the scientific method based on physical numbers as well as the selection of correct training methods and means according to the requirements of the judo game, which has physical capabilities in terms of its own laws and decrees. The research problem crystallized through the experience of the field researcher in the field of the game. Some physical abilities related to the level of physical and technical performance, which were demonstrated through field follow-up for judo players under 20 years of age. Therefore, physical exercises were prepared with weighting in an ascending hierarchical manner, which has a noticeable effect during performance and at the best level using maximum effort, less effort than the maximum, and changing the type of exercise And its intensity and campaign, and every aspect of training with heavy resistance (type of exercise, method of training (intensity)) under the title of specific training, and the aim of the research is to identify and prepare physical exercises with weighting in a hierarchical ascending method in developing some physical abilities of judo players under 20 years old. The research shows that physical exercises with weighting in an ascending hierarchical manner has a positive effect on developing some physical abilities of judo players under 20 years of age.

The researcher adopted the experimental approach with equal groups and defined the research community as judo players under 20 years of age and by (14) players, and they were prepared and adapted around the standardized training program in terms of the level of performance. And physical exercises with weighting were applied in a hierarchical ascending method in developing some physical abilities on the experimental group for a period of eight weeks and by three training units per week. The researcher used the statistical bag (SPSS). Physical abilities of judo players under 20 years old.

Keywords: *ascending hierarchical style, physical abilities, judo game.*

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I. Introduction :

The countries of the world are interested in developing various sports at all levels, and this is clearly evident in what we see in the Olympic and world championships in terms of improving technical performance and the physical level, and if this indicates anything, it is evidence of the high ability to employ scientific facts and theories to serve the development of sports.

Judo is one of the sports that is very much affected by the implementation of training work in terms of methods and training methods. , One of the methods of qualitative training for muscle strength is the method of using the maximum effort, and the effort less than the maximum, by changing the type of exercise, its intensity and campaign, and every aspect of training must be with heavy resistance (type of exercise, and training method (intensity), because the best situation for training effort is around Different heavy resistance methods are not negative, and the use of these resistors to develop the special performance strength according to the weight of each part of the body, as the resistance is designed according to the absolute weight of the arm and the leg to achieve the best level of physical and technical performance, from this the importance of this research stems by studying the effect of physical exercises with weighting in a manner The rising hierarchy in developing some of the physical abilities of judo players under 20 years of age, which reflects the player's physical ability, control and control during actual performance, so this study came To shed light on the importance of these exercises according to the scientific foundations that are related to the components of its actual training and thus keep up with the internationally developed level in it.

Research problem:

Through the experience and follow-up of the researcher training and academically, I noticed a weakness in the physical level of the judo players and the lack of codification of the program that has to do with the level of physical and technical performance, which was shown through field follow-up for judo players under 20 years. The performance and at the best level using the maximum effort, the less than the maximum effort, and the change of the type of exercise, its intensity and campaign, and every aspect of training must be with heavy resistance (type of exercise, and training method (intensity) under the heading of specific training, so the researcher decided to study this problem and find an attempt. Successful solutions even in order to provide correct scientific information through which the players' effort is distributed based on the amount of physical performance during the game and to reach the best level.

research aims:

Preparing physical exercises with weighting in an ascending hierarchical manner in developing some of the physical abilities of judo players under 20 years old

• Identify the effect of physical exercises with weighting in an ascending hierarchical manner in developing some of the physical capabilities of judo players under 20 years old

Force search:

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• There is a positive impact of physical exercises with weight training in a hierarchical ascending manner in developing some of the physical abilities of judo players under 20 years of age.

Research areas:

The human field: Hateen Sports Club players under 20 years old in Babil Governorate for the 2019 season.

The time frame: the period from 2/3/2019 to 12/5/2019.

Spatial domain: Hateen club hall in Babel Governorate.

II. Research methodology and field procedure:

Research Methodology:

The researcher used the experimental research method to design and design the equivalent experimental and control groups.

research community

The researcher identified the research community as the players of Hateen Sports Club, Babil Governorate, under 20 years of age, who formally participated in the tournaments held by the Iraqi Central Judo Federation for the 2019 season, which amounted to (14 players). , And they divided the odd and even number method according to the sequence of their achievements.

Tools:

1- Calculator for laptop type (HP) of American origin, number (1).

2- Japanese-origin Sony camera, number (1) 3. Medical scale, number (3).

4- Japanese-made CASIO electronic stopwatches 5. Adhesive tape.

6- Compact discs (CD type skc, made in Korea. 7. A linen tape measure of 20m length

8- Medicine balls of different weights (4)

9. Rug count (4). 10- Weight bands with different weights (for legs and arms).

Tests:

-Distinctive force speedfor arms

-Distinctive force speed for the legs

- endure strengthfor arms

- endure strengthfor the legs

Pre-tests:

The pre-tests were conducted in the Hateen club hall on Thursday 7/3/2019.

The main experiment: The exercises started from Sunday 11/3/2019 until Wednesday, 5/8/2019

The duration of the objective exercises in weeks (8) weeks.

The total number of training units is (24) training units.

The number of training units per week is (3) units.

Weekly training days (Saturday - Monday - Wednesday).

Training method used: high intensity interval training and repetitive training method.

Training intensity used: (80-100%). From the maximum intensity of the player's performance.

The researcher used in the exercises the method of weighting according to the weight of each part of the body, and the weight was based on (the two legs), where the weight of both (legs) was extracted from the total body weight by multiplying the total body mass multiplied by the percentage of the part shown in figure (1) p.10 Thus, we obtain the weight of the specified part, and in another formula we extract the weight to be added to the part by multiplying the mass of the part by the intensity of the weight required to be shed on the specified parts.

The researcher used the laws of relative force:

Laws of the relative strength of two men: (Adel Al-Basir 2004: pg. 249)

The first step - the relative mass of the legs relative to the body (19.13) X 2 = the ratio of the mass of the legs to the body.

The second step - the ratio of the mass of the legs to the body X the body mass = the ratio of the mass of the legs to the body of each player.

That the total body mass is equal to (62) kg and the percentage of the two men is (38.26), so the mass of the two legs will be, the total body mass x the percentage of the part = the mass of the part

62 x 0.3826 = 23.72 kg representing the mass of the two legs.

Extract the weight to be added:

Weight to add strongly (0.05) will be.

Legs Weight x Required Weight Intensity = Weight to be Dredged.

23.72 x 0.05 = 1.18 By dividing this weight according to the following equation, kg 509 = (1.18) / 2 The weight required to be added according to the strength required for each leg.

Post-tests:

The researcher conducted the post tests in the hall of the Hateen club on Sunday 12/5/2019 (after completing the proposed exercises and with the same steps and conditions under which the tests were conducted.

It shows the arithmetic mean, standard deviations, the calculated (t) value, and the level and type of significance for the results of the physical abilities of the control group in the pre and post measurement

Significance	Indication level	T	Post-test		Pre-test		tests
			STD	A	STD	A	
Sign	**0.002**	**2.91**	**1.85**	**18.5**	**1.40**	**16.1**	Distinctive force speed forarms
Sign	**0.001**	**1.06**	**2.13**	**27.4**	**1.73**	**25.7**	Distinctive force speed for the legs
Sign	**0.001**	**2.63**	**3.53**	**58.2**	**3.94**	**56.7**	endure strength for arms
Sign	**0.000**	**1.83**	**4.86**	**34.6**	**5.21**	**32.4**	endure strength for the legs

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It shows the arithmetic mean, standard deviations, the calculated (t) value, and the level and type of significance for the results of the physical abilities of the second experimental group in the pre and post measurement.

Significance	Indication level	T	Post-test		Pre-test		tests
			STD	A	STD	A	
Sign	0.001	6.51	2.72	18.3	1.85	15.2	Distinctive force speed forarms
Sign	0.005	4.33	2.71	30.1	1.51	26.5	Distinctive force speed for the legs
Sign	0.001	16.42	3.52	69.5	4.22	57.6	endure strength for arms
Sign	0.002	4.64	2.96	36.2	3.51	31.3	endure strength for the legs

The results of the pre and post -tests of the two experimental research groups in the tests of the most important physical abilities show that there are significant differences between the pre and post tests and in favor of the post measurement for the two research groups despite the difference in exercises between the two groups. Hierarchical (ascending) training.

The exercises prepared by the researcher were effective and effective for the experimental group, and this is through the use of scientific planning in preparing these exercises by giving rest periods and at rated times, where rest at different times is very important to return the functional body systems to their normal state after the completion of any muscular effort, and that All components of the training load should increase in proportion to the overall improvement achieved by the athlete, that is, the higher the level of improvement of the player, the greater the need to increase the components of the training load (Muhammad Reda Ibrahim Al-Madamagh: 2008, p.88).

The researcher believes that it is necessary to rely on these exercises in the special preparation stage because they help to develop the physical capacity, especially the force characterized by speed and endurance of strength. Therefore, the researcher relied on diversification in the use of these exercises with the aim of having an effect on physical abilities as each physical ability had its own exercises including Corresponds to the goal of this ability and the extent of its impact in terms of training load As for the control group, for which the exercises prepared for it were special exercises for the components of the load in the upper limits in the periods of rest, where the largest amount of positive rest was given in a standardized manner.

The results showed significant differences between the pre and post tests, the experimental group and the control

Results of differences in the physical abilities of the telemetry between the experimental and control groups							
Significance	Indication level	) T (	Post-test		Pre-test		tests
			STD	A	STD	A	
Sign	0.002	3.73	2.74	21.82	1.84	18.63	Distinctive force speed forarms
Sign	0.001	2.81	2.72	31.51	3.13	27.64	Distinctive force speed for the legs
Sign	0.002	5.03	3.51	63.66	3.52	58.14	endure strength for arms
Sign	0.003	2.41	2.93	39.16	4.85	34.51	endure strength for the legs

group, in the speed characteristic of the muscles of the arms and in favor of the post measurement of the experimental group. Physical exertion that the level of appearance of the distinctive force is related to the nature of the skillful performance of the movement, and the athlete cannot show the highest level of force characteristic of speed except in the case of high skill performance, as the primary role of the kinematic compatibility within the muscle between the fibers and the motor units and the temporal characteristics of contraction is the main factor for the development of the characteristic strength with speed It is the compatibility within the muscle between the muscle fibers and the speed of muscle contraction of the motor units, and the decentralized, plyometric and isokinetic training is the most influential in the development of strength characterized by speed (Abu Al-Ela Ahmad 2003, pp. 159-160)

Discuss the results of enduring strength in arm and leg muscles:

Through what has been presented and analyzed in Table (), it becomes evident that significant differences appeared in tests of physical abilities between the two research groups in (bearing strength in the arms, carrying strength to the two men) and in favor of the experimental group, where the researcher believes that the moral development of the experimental group is the use of weight training in the hierarchical training method ascending with weights The proportions of the parts of the body that were characterized by a greater rest period compared to the control group exercises and with sub-maximal training intensity because it works to develop strength endurance,

as the recovery period between exercises plays a very important role in developing any form of endurance, and the researcher also considers that carrying strength is one of The strengths whose energy needs are greatest because they depend on the duration of the stimulus and not on its intensity, and the duration of the perpetuation means the need for greater energy to continue muscular work The ability of a muscle or muscle group to overcome external resistances regardless of its shape or size, meaning that the strength of the muscle in resisting the load The reality is that if the muscle is able to resist the weight on it, then this means that the muscle is going to develop its level (Kamal Al-Rabadi: 2004, p. 28)

III. Conclusions and recommendations:

Conclusions:

1 - The physical exercises with weighting in an ascending hierarchical manner had a positive effect in the experimental group compared to the control

2- The physical exercises with weighting in an ascending hierarchical manner among the members of the research sample led to their development in the pre and post -tests.

3- There is an evolution in the experimental group in the dimensional physical tests compared to the members of the control group, which indicates the effect of the program prepared with physical exercises by weighting in an ascending hierarchical manner

Recommendations:

1- Emphasis on the necessity of using exercises for the maximum time of performance to develop the physical capabilities of judo players.

2- Preparing similar research and conducting studies of physical abilities in the field of judo and other samples.

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