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THE EFFECT OF EXECUTING ACHIEVEMENT ABILITY EXERCISES WITH INCLINED SURFACES AND AUXILIARY TOOLS IN ACHIEVEMENT FOR ADVANCED JAVELINS

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Abstract

The purpose of this paper isto preparing achievement ability exercises with inclined surfaces and various auxiliary tools for the stages of throwing and jumping switch, identifying the effect of exercises prepared for achievement ability with inclined surfaces and tools to assist in developing achievement for advanced javelin throwers, identifying the significance of the differences between the experimental and control groups in the post-test.The researchers used the experimental method by designing two equal groups with two tests, pre and post-test, and the research community was determined from the players who got the first six places to throw the javelin in the Iraq Championship for the season 2020 , the category of applicants, which numbered (6) players and they represent the research sample, and they were divided by random into two groups Two equal (3) experimental group shooters and (3) control group shooters, and each player will take (6) attempts in the achievement test. After completing the units' vocabulary, the researchers conducted the post-tests, then they collected the data and the (spss) program statistically processed it.

As for the most important conclusions, they are: Exercising ability had a significant impact on raising the level of muscular strength, which helped to develop the special physical aspects of javelin throwing effectiveness with less time and effort,

inclined surfaces played a major role in increasing (step length)by raising the angle of inclination for the shooters, the use of alternative tools (medical balls weighing 1 kg, rod weights weighing 20 kg) has a clear impact on improving many variables in the study, the most important of which is the achievement ability of the shooters.

Introduction:

As for the most important recommendations, they are The possibility of using inclined surfaces within the applications of trainers and for all ages and levels of javelin throwers, it is possible to use inclined surfaces in educational units to increase the length and frequency of the step for learners during their learning stages of the effectiveness, which increases their motivation to learn, it is possible to use tilted surfaces in Other activities such as jumping, jumping and sprinting.

The sports field is one of the most important areas in people's lives, so there was and still is a continuous interest in the sports movement to achieve the highest levels of sports achievement, whether using theoretical and applied sports sciences or modern scientific and technical means the other. Hence, we see many countries in which the sporting aspect constitutes a bright spot, and this is demonstrated through the achievements made in many events, and the high and advanced level of sporting achievements in our present time is closely linked with the achievements of various sciences and technological progress in them, which contributed to the development of a new qualitative to solve many problems of human activity, including the field of sports training, especially athletics activities.

In addition, the effectiveness of javelin throwing is one of the distinguished activities in athletics, and it requires physical abilities and kinetic abilities, especially for the javelin thrower, in addition to some physical characteristics of the javelin. Whether during the rough run or the final throwing phase.

And the use of such tools helps in the practical benefit in the field of specialization more than the use of traditional methods, through the possibility of providing the best conditions for developing the muscular capacity of the type of specialized sports activity in terms of focusing on the basic muscles and controlling the type of resistance and speed of performance, and the possibility of controlling the development program Muscular ability easily due to the regulation of the training load more easily.

Hence the importance of the research, as the process of throwing and follow-up by jumping is a distinctive performance for some world champions, as it gives a better preparation for the force, by increasing the distance of force processing during the body's rush forward with the spear to the farthest possible distance, through preparing exercises with inclined surfaces and auxiliary tools to develop Achievement for advanced javelins

Research problem:

The effectiveness of javelin throwing is one of the activities that need the greatest muscular strength and through its connection with the correct technical performance, specifically the phases of throwing and switching by jumping so that the player can achieve the farthest possible distance. The correct technique of throwing by jumping and the body rushing forward, and this performance gives more strength to equip the javelin, which led the researcher to focus on some of the weaknesses that the javelin thrower suffers from in Iraq with the weak technical performance of the javelin thrower. In addition, auxiliary tools for the development of achievement for advanced javelins.

- Preparing achievement ability exercises with inclined surfaces and various auxiliary tools for the stages of throwing and jumping switch.
- Identifying the effect of exercises prepared for achievement ability with tilted surfaces and tools to assist in developing achievement for advanced javelin throwers.
- Identifying the significance of the differences between the experimental and control groups in the post-tests.

Research hypotheses:

The exercises prepared for the ability to perform with inclined surfaces and auxiliary tools have a positive effect in developing the achievement of advanced javelins.

Research fields:

- Human field: It was represented by the advanced javelin throwers participating in the Iraq Club Championship in Athletics 2020 - 2021
- Time field: (1/2/2021) to (30/8/2021)
- Spatial field: The researchers chose the athletics stadium in the College of Physical Education and Sports Sciences, University of Kufa

Research methodology and field procedures:

Research Methodology:

The researchers used the experimental method because it fits with the nature of the research problem, and by designing the method of two equal groups (experimental and control) with pre and post-tests.

Community and sample research:

The research community was determined from the players who got the first six places for javelin throwing in the Iraq Championship for the season 2020, the category of applicants, which numbered (6) players and they represent the research sample, and they were randomly divided into two equal groups (3) throwers of an experimental group and (3) shooters Control group and each player will take (6) attempts in the achievement test.

Devices, tools and means used in the research:

Means of data collection:

• Arab and foreign sources and references.
• Personal interviews.
• Tests and measurements.
• Special forms for recording test results for players.

Tools and devices used:

• A legal field for javelin throwing.
• Slanted manufactured wooden surfaces.
• Legal spears weighing 800 grams (10) spears.
• Metal tape measure length (100) meters.
• Medical balls of different weights (1 kg) and (3 kg).
• Iron flanges weighing 20 kg, 3 pcs.

• An area of length 15 meters and width of 5 meters for the front and back throw tests.
• A weight of (5) kg, a number of (2) for the front and back throwing test.

Field research procedures:

Auxiliary means inclined surfaces (manufacture and characterization):

Inclined roofs consist of a surface made of wood, which consists of two layers, the first layer of wood and the second layer of iron supports. The thickness of the wood is (20) mm, and the thickness of the iron supports (10) mm, and it is placed over an iron frame with a length of (6) meters and a width of (2) Meter with an iron frame from the front side to control the angles of the surface to raise or lower it to specific degrees. The thickness of the iron used is (4) mm and dimensions are (2) inches in (8) inches.

Tests and measurements used in the research:

The researchers based on the scientific sources to determine the appropriate tests that serve the research and that achieve the desired purpose. These tests are:

- Javelin throwing test of stability: to measure the achievement distance achieved from the stability position.
- Achievement test: to measure the best achieved achievement.

The exploratory experience of the tests used in the research:

The researchers conducted the exploratory experiment on Friday 11/3/2021 AD on the playground of the Faculty of Physical Education and Sports Sciences at the University of Kufa and on two players from outside the sample. Specific physical tests were conducted and a number of legal attempts were given to identify the obstacles that the researcher will face as well as to determine the duties of the assistant work team and their number, and the time taken to perform the specified tests. The sample was also informed about how to work on the auxiliary means (inclined surfaces) and how to determine the angle for inclined surfaces (raising and lowering) and the intensity was determined from 100% for the exercises proposed by the researcher to identify the possibility of programming them within Curriculum prepared and its own undulating.

Main experiment procedures:

Pre-tests:

The researchers conducted tribal tests on the research community for the two groups (control and experimental) for the study variables on 3/15/2021.

Preparing exercises for the use of inclined surfaces and auxiliary tools:

The researchers prepared exercises to develop the achievement ability of the javelin thrower, which were designed according to scientific bases, using an auxiliary training method that works with inclined surfaces and known angles. The stresses, repetitions and appropriate rest periods were put in place, relying on scientific sources in sports training and in accordance with the approved trainer's curriculum, and the duration of the special exercises reached (8) weeks with two training units per week and in the special preparation stage. The researchers held meetings with the coaches to see their curricula for the players, the training periods and the places in which they train, as well as to inform them of the new work that will be added to the experimental

group curriculum, as well as determining the formula for work on The aid means for the players, and the days that are within the curriculum are (Saturday and Tuesday), as the exercises prepared and used by the experimental group are the same as the curriculum used by the control group, but the difference is that the experimental group uses the assistive device during the training units unlike the control group that uses Ordinary throwing, and the exercises prepared by the researcher are limited to specific goals to solve a problem The purpose of the research and the realization of its hypotheses are as follows:

Post-tests:

The researchers, with the help of the assistant work staff, conducted the post-tests of the research community after the completion of the implementation of the strategy of the metacognitive learning cycle, on (10/5/2021), as the researchers took into account the same conditions in which the tribal tests were conducted in terms of the sequence of tests.

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

Presentation, analysis and discussion of the results:

Presenting the results of the pre and post-tests for the control and experimental groups for the variables under study:

Table (1) shows the arithmetic means and standard deviation in the results of the pre and post-tests of the control group for the variables investigated.

Variables	Measuring unit	Pre-test		Post-test		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
achievement test	Meter	63.66	1.74	65.00	2.00	-2.915	0.001	sig
javelin throw stability test	Meter	41.88	2.34	43.66	1.57	-3.332	0.004	sig

Table (2) shows the arithmetic means and standard deviation in the results of the pre and post-tests of the experimental group for the variables under study.

Variables	Measuring unit	Pre-test		Post-test		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
achievement test	Meter	64.27	2.16	66.38	1.64	-4.299	0.000	sig
javelin throw stability test	Meter	42.22	2.04	44.83	1.75	-4.097	0.000	sig

Table (3)shows the arithmetic means and standard deviation in the results of the post-tests of the control and experimental groups of the variables under study.

Variables	Measuring unit	Control		Experimental		T value	level Sig	type Sig
		Mean	standard deviation	Mean	standard deviation			
achievement test	Meter	65.00	2.00	66.38	1.64	-3.415	0.000	sig
javelin throw stability test	Meter	43.66	1.57	44.83	1.75	-4.301	0.001	sig

Discuss the results:

As for the members of the control group, it was as follows:

First / achievement test: the results showed that there were significant and statistically significant differences for the members of the control group, by achieving an increase in the distance accomplished in the post-test, which amounted to (1.44) meters. From the academics who graduated from their hand's many spear throwers.

The researchers attribute the reason for this improvement to the training methods used and the methods used by the trainers that brought about this improvement in the group, in addition to the commitment of the research sample members (the control group) to perform the duties assigned to them and to continue regularly in the training is what achieved these results and the researcher agrees with (Saad Mohsen) While he says, “The opinions, no matter how different their scientific and practical culture curricula differ, the training or educational program inevitably leads to the development of achievement or performance, if it is built on a scientific basis in the organization and programming of the education and training process, the use of appropriate and gradual intensity, and the observation of individual differences as well as the use of optimal repetitions and effective inter-rest periods And under the supervision of specialists under good educational and training conditions in terms of place, time and tools used[(1)].

It is worth mentioning, according to the researcher’s knowledge of the trainers’ curriculum and the quality of exercises prepared in strength applications in the service of technical performance, as it agrees with (Rasheed, 2004), quoting (James) “the need for harmony between special strength training with the requirements for effectiveness in order to obtain the best technical performance Move." [(2)] ,That is, the use of training in particular with performance requirements to bring about development in the achievement.

Secondly / javelin throw stability test:

The results showed that there were significant and statistically significant differences for the members of the control group, by achieving an increase in the completed distance by about (1.78) meters.

The researchers consider that this increase was logical and a reflection of the improvement in the achievement test, and it is clear to us that strength training and its investment in employing performance have a good contribution to increasing the

ability of the shooter to shoot from a position of stability. It is carried out through training in the art of motor performance, which prepares the athlete to reach the goal, and is based on a viable organization to exploit the mutual influence between the internal and external forces of the athlete in order to put all the forces in a beneficial manner to obtain high sports results in specialized sports" [(3)].This helps us to interpret the results of this test, as the shooters on a daily basis use this test as a necessary exercise that reflects the vision for the coaches to identify the levels of their players.

As for the members of the experimental group, they are as follows:

First / Achievement Test:

The results showed significant differences and statistical significance in favor of the post-test through comparisons of the pre and post throw distances in the javelin throw tests.

In addition, the difference came with an increase in the achieved distance, which amounted to (2.11) meters, which is a reflection of the application of the vocabulary of the exercises of the researchers, and the members of the experimental group, applied their own exercises at the beginning of the special preparation period.

The researchers attribute the reason for the weak throwing distance in the pre-test as a result of the inability of the sample members to recruit their abilities and take advantage of them in achieving a good throwing distance, due to the specificity of the stage where the player is exposed to high loads in the general preparation period in preparation for the special preparation, while in the post-test the throwing distance was better Clearly from pre, because of special strength training and specific exercises according to inclined surfaces, which was reflected on the biomechanical variables and the improvement in those variables was a reflection of the progress in the level of training, and that progress in the level enabled the members of the experimental group to recruit their abilities and capabilities well towards achieving a distance It is better as the exercises are built in a scientific, codified manner according to the set goals.

The two researchers agree with what was stated by Amr Allah Al-Basati"that the level of technical performance in any sports activity is related to the development of the physical and motor requirements for this activity, even if they were indifferent proportions "[(4)], meaning that there is a close relationship between motor skills and physical requirements, especially strength in each activity. Mathematical, and finally, the researcher adds that the clear improvement in all mechanical variables was reflected in the final achievement, and at the forefront of these variables are the determinants of starting and the length of the last step.

Second / stability test of javelin throwing:

The results showed that there were significant and statistically significant differences for the members of the experimental group by achieving an increase in the distance of (2.61) meters

The researchers attribute the reason for this improvement to the fact that the special strength training and its consistency with the effectiveness requirements on inclined surfaces increased the performance improvement, and these qualitative exercises that determined the level of motor performance thus caused a difference between the members of the two groups and in favor of the experimental group members in the post tests, and this is what he indicated (Buherle and Wernner)

affirmed that "strength training should be combined with motor skills" [5] and this was done in the special exercises when stationary throwing was used at angles of inclination on constantly inclined surfaces, and as demonstrated by the significant results in the achievement of stationary throwing.

Conclusions and Recommendations:

Conclusions:

Based on the research results that were reached within the limits of the research community, the following conclusions could be reached:

- The exercises of achievement ability had a great impact in raising the level of muscular strength, which helped to develop the special physical aspects of the effective javelin throwers with less time and effort.
- Inclined surfaces have a major role in increasing (step length) by raising the angle of inclination for shooters.
- The use of alternative tools (medical balls weighing 1 kg,rod weights weighing 20 kg) has a clear impact on improving many variables in the study, the most important of which is the achievement ability of shooters.

Recommendations:

- The possibility of using inclined surfaces within the applications of coaches and for all ages and levels of javelin throwers.
- It is possible to use inclined surfaces in the educational units to increase the step length and frequency for learners during their learning stages of the activity, which increases their motivation to learn.
- Inclined surfaces can be used in other activities such as jumping, jumping and sprinting.

References:

Saad Mohsen Ismail.(1996). The effect of training methods for developing the explosive power of the legs and arms in the accuracy of shooting by jumping high in handball. PhD thesis, Baghdad, p. 98.

Saad Allah Abbas Rashid.(2004). The development of the special power to stop some biokinetic variables and their impact on the performance of some basic skills on my (ground and parallel) systems, PhD thesis, University of Salah al-Din, College of Physical Education, p. 103.

Qasim Hassan Hussein.(1998). Foundations of Sports Training, 1st Edition, Amman, Dar Al-Fikr for Printing, Publishing and Distribution, pg. 676.

Amr Allah Al-Bassiti.(1998). Foundations and Rules of Sports Training and its Applications, Alexandria, Al-Intisar Press, p. 19.

Buherle, M. and Wernner, E.(1984). "He muscle hypertrophy raining of he body builder" raining sport, p. 5-9.