



EFFECT OF PHYSICAL EFFORT EXERCISES ACCORDING TO FOUNDATIONS OF DYNAMICS LOAD AND REST IN DEVELOPING THE DISTINCTIVE STRENGTH WITH SPEED OF ARMS AND LEGS OF DISCUS THROWING YOUTH PLAYERS

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Abstract

The effectiveness of discus throwing is one of the activities of throwing the square and field competitions, and it is one of the individual competitions that needs to implement modern scientific methods through the development of sports training science, which aims to improve the level of players' physical and skill capabilities through careful planning of the training program for the purpose of developing its efficiency in performing all requirements for the effectiveness of throwing The disk, and the dynamic of the training of training is a structural physical process that depends on the rules and foundations of training in terms of the components of the training pregnancy, and through the researcher's practice of applying the performance as the researcher is one of the teachers and coaches of the activities of the square and the field in the academic field at Basra University and note that there is a clear decline in the level of performance, especially In performance and achievement among the players of the youth of the Basra Governorate team for the effectiveness, and the researcher assumed that it is due to the weak level of physical performance associated with the skill performance at the archers, and for this it is necessary to legalize exercises on the foundations of the dynamic pregnancy, the size, intensity, and comfort in accurate scientific manner, and the goal of research is to prepare physical effort exercises according to the foundations of pregnancy and comfort In developing the rapid strength of the two men and arms among the players' effectiveness of discus. For young people, the researcher used the experimental approach to the tribal and post testing of the experimental and control groups, and the research community was identified for the players of the Basra Governorate youth team for the training season 2022/2023, which numbered (10) players, as the research sample was chosen in a comprehensive inventory method and divided the sample into two experimental groups and the control group and with (reality 5) A player for each group, and the physical voltage exercises were applied according to the



foundations of pregnancy and rest on the experimental group for an eight -week and by three training units per week and they used the SPSS statistical bag to process data and obtain results, including the researcher to the most important conclusions that physical effort exercises according to dynamic foundations Pregnancy and comfort is a positive impact on developing the rapid strength of the arms and legs of the players of the effectiveness of the discus.

Keywords: physical effort exercises; dynamics of load; Distinctive strength; discus throwing.

1-Introduction Research and Importance:

The development witnessed by the world recently in various fields, including the sports field to reach the higher levels, did not come by chance, but is based on scientific research and objective study aimed and dependent on accurate scientific planning. Which needs to apply modern scientific methods through the development of sports training science, which aims to improve the level of players 'physical capabilities through careful planning of the training program for the purpose of developing its efficiency in the performance of all requirements. In terms of the components of the training pregnancy, and in order for training to be perfectly, it is necessary to choose the appropriate training method for the attribute to be developed by raising the player's capabilities and physical preparations, and then raising the efficiency of the athlete between intensity and comfort to codify the pregnancy and graduate it and stand at an appropriate limit that does not exceed the increase that causes Impact on the physical state of the player, and from here the importance of research in the development and evaluation of means and methods is evident Training towards the right path, which contributes to raising the level of performance for players because of its importance in developing the rapid strength of arms and legs among the players of the effect of discus.

1-2 Research problem:

Through the presence of the researcher in the field, as he is a coach and a teacher of academic in the activities of truck and field, he noticed there is a clear decrease in the level of performance, especially in the performance of the Distinctive strength of arms and legs during the performance due to the weak level of physical performance among players, and for this it is necessary to legalize



exercises on the basis of dynamics of training and severity And the comfort in an accurate scientific way, as responses occur at the level of physical activity and then return to its normal state during the rest time, including what is characterized by relatively continuity, which are the changes that take place as a result of the players continuously. Through this study, there will make there many indicators through which the player's physical condition can be identified Which will help solve the research problem and reach results that we can benefit from in assessing the training level and developing their own physical abilities of the players of truck and field activities in general and the effectiveness of throwing discus in particular.

1-3 Research objectives:

- 1- Preparing physical effort exercises according to the foundations of pregnancy and comfort in developing Distinctive strength with speed of arms and legs of the players 'effectiveness.
- 2- Learn about physical effort exercises according to the foundations of pregnancy and comfort in developing Distinctive strength with speed of arms and legs among the players of the discus.

1-4 Research hypotheses:

- 1- The physical effort exercises according to the foundations of the dynamics of pregnancy and comfort are a positive impact in developing Distinctive strength with speed of arms and the two men among the players 'effectiveness.

1-5 Research fields:

1-5-1 Human field: The youth team of Basra Governorate Clubs in the Effect of Discus throwing the sporting season 2022/2023

1-5-2 spatial field: The field of square and field games in the Faculty of Physical Education and Sports Sciences, Basra University

1-5-3 Time field: from 2/11/2022 to 3/1/2023.

2-Research Approach and Field Procedures:

2-1 Research curriculum & Sample:

The researcher used the experimental curriculum with the pre -test and post -test of the experimental group and the control group to suit the nature of the research. The research community has been identified by the players 'effectiveness of the



disk, and they represent the clubs of Basra Governorate for the sports season 2022/2023, which numbered 10 players, and the sample was divided into two groups the experimental group and the control group and by (5) players for each group.

Table (1) shows the homogeneity of Research

Variables	Unit Measurement	Mean	Standard deviation	Mediator	Kurtosis
Length	Cm	178.3	3.811	177	0.11
Mass	Kg	71.26	6.397	71	0.42
Age	Year	18.93	2.086	18	0.12
Training Age	Cm	4.2	1.78	4	0.02

* The sample is homogeneous if the value of the sprain coefficient between (+1, -1).

Table (2) Shows mathematical circles, standard deviations, and calculated value (T) and the significance of differences in tests between the two experimental groups and the control in the tribal test

Variables & Tests	Groups	Unit Measurement	Mean	Standard deviation	T collected	level error	significance
strength with speed of arms	experimental	Number of times	9.04	2.217	1.432	0.354	Non -moral
	control	Number of times	8.02	1.652			
strength with speed of Legs	experimental	Number of repetitions	10.01	3.462	1.653	0.326	Non -moral
	control	Number of repetitions	9.02	2.831			
achievement	experimental	meter	35.8	1.861	1.541	0.452	Non -moral
	control	meter	35.9	1.432			

* Moral at indication level (0.05) if the error level is smaller than (0.05) and the value of T (1.833)

2-3 Means of collecting information, data and devices used

2-3-1 means of collecting information

- Note - Tests and measurements - A measuring and weight -measuring device - Square and field tract - Disk dumping field - Japanese manufactured time number (1) Dell computer

2-4 Tests used in the research:

2-3-1- Iron Bar Payment Test (20) kg for a period of (10) Sec (Muhammad Subhi Hassanein & Ahmed Kisra maane: 1998)

The goal of the test: measuring the rapid strength of the arms.



IDs and tools: an iron bar (20 kg), flat, and an electronic time.

- Procedures: The test is sits on the seat, holds the iron bar from the middle, then remove the bar to the top (10 Sec).

Registration: Register the number of times up to the top within (10 Sec).

Instructions: The laboratory player is given a single attempt.

The unit of measurement is the number of times within (10) Sec.

2-3-2- Swedish Bar Test (10) Sec.

Test goal: measuring the fast strength of the two men.

Devices and tools: Swedish, electronic time, and a volleyball court.

- Description of the performance: The laboratory stands in the face of the Swedish seat and puts one of the feet on the seat and when the start signal begins with the rise and the rotation alternately and with the fastest possible.

- Registration: The registrar begins to calculate the number of times ascending with a time of (10) Sec

- Instructions:

_ Laboratory player gives two attempts and is calculated for him as a result of the best attempt, taking into account the time of rest from attempt to another.

_ Registrar: stands near the Swedish Bar to record the number of times.

The measurement unit, which is the number of repetitions during the (10) Sec.

2-4 Exploratory Experience:

The researcher conducted an exploratory experience on four players in the effectiveness of disc from the research community in the field of throwing in the Faculty of Physical Education and Sports Sciences, Basra University, to apply tests on them, and train the assistant work team to implement the tests and implement the experimental program for the research sample. And its purpose was:

- Determining the difficulties and obstacles that will appear during the implementation and functioning of the tests.

- Learn the appropriate time to perform the tests and how it takes this procedure.

- The ability of the sample members to implement the tests and their suitability for them

Learn about the devices and tools needed to implement the experiment and tests.

2-5 Tribal tests: The researcher conducted tribal tests in the field of throwing at the Faculty of Physical Education and Sports Sciences, Basra University, 13/11/2022 at three in the afternoon.

2-6 Main experience:

The implementation of the program started on 15/11/2022 until 2/1/2023 appendix (1).

- The duration of the exercises placed in weeks: (8) weeks.
- The number of total training units: (24) training units.
- Number of weekly training units: (3) units.
- Weekly training days: (Saturday - Monday - Wednesday).

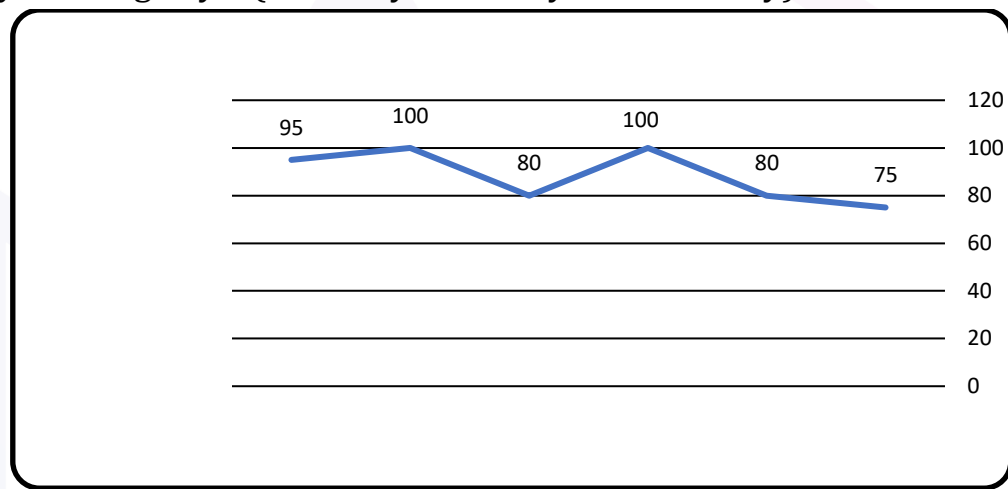


Figure (1) Represents the graphic plan for intensity distribution of the weekly training program

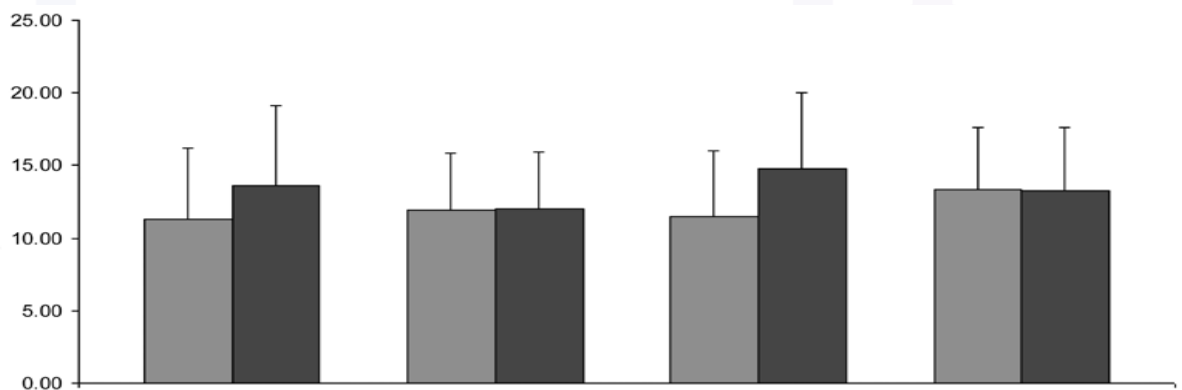


Figure (2) Represents the achievement Throwing level of the experimental and control groups

2-7 post – tests: After completing the implementation of special exercises within the prescribed period and then conducting the exams for the research, on Wednesday 4/1/2023 in the same field and taking into account the provision of similar conditions for tribal tests in terms of (time, place, tools used and the method of implementation the exams).

2-8 Statistical means: The researcher used the statistical bag (SPSS) to find appropriate statistical processors.

3 - View and Discuss the Results:

The results of the experimental and controlled groups were presented in the discussions, analyzing and discussing them, as well as presenting the results of the differences between the tribal and post -tests in the variables and their analysis.

Table (4) shows mathematical mean and standard deviation, and the value of (T) and the significance of the differences between the results of the tribal and post tests for the two groups of research in the variables under research.

Variables & Tests	Groups	Unit Measurement	Tribal test		Post-test		T collected	level error	significance
			M	S	M	S			
strength with speed of arms	Experimental group	Number of times	9.02	1.231	11.01	1.463	1.486	0.001	moral
	Control group	Number of times	8.02	1.673	9.04	1.762	1.376	0.002	moral
strength with speed of Legs	Experimental group	Number of repetitions	10.01	0.437	12.02	0.731	1.631	0.007	moral
	Control group	Number of repetitions	9.02	0.764	10.03	0.672	1.785	0.006	moral
achievement	Experimental group	meter	35.8	3.365	39.6	2.974	1.396	0.001	moral
	Control group	meter	35.9	3.564	37.9	2.386	1.668	0.004	moral

* Moral at the significance level (0.05) and the value of T (1.833)



Table (5) Shows the teams of the circles, the value of (T), the level of error, and the significance of the differences between the results of the post -test of the two group's research in the variables under research.

Variables & Tests	Unit Measurement	Experimental group		Control group		T collected	level error	significance
		M	S	M	S			
strength with speed of arms	Number	9.01	0.654	8.02	2.531	1.432	0.001	moral
strength with speed of Legs	Number	10.1	0.678	9.02	3.641	1.657	0.001	moral
achievement	meter	39.7	0.654	37.9	2.531	1.576	0.001	moral

Results Discuss:

Through the results of table (5) there are moral differences for the search variables between the tribal and post tests for the two research groups and in favor of the post -test, and the researcher attributes this development of the members of the experimental group to the training program to include exercises according to the foundations of pregnancy and comfort, especially to develop the rapid strength of the muscles of the arms and legs and that By performing the repetitions and increasing training groups and codified rest periods through the programmed scientific planning of the training units used in the style of exercises that led to this development where the exercises of the medical balls and jumping exercises were used relatively highly leading to the development of fast power (William F. Ganong: 2001), The development of the components of the training pregnancy intensity and size in the training units "which leads to natural reactions in the body's systems and muscle cells. Physical training by rapid strength leads to an increase in physical activity" (Muhammad Ali Ahmed: 2000), that the training program leads to the development of Achievement, if based on a scientific basis in organizing the training process and its programming, using the appropriate and gradient intensity, observing individual differences, and using repeat The optimum embryos and inter -rest periods (2002 Bernie, D :), through



the above, we note that the development of the experimental group members at the expense of the control group as a result of the organized training for the fast strength exercises for the arms and the two men as it had an effective impact on "increasing the ability of the players gradually from Where the strength and the level of performance and achievement "(Kamal Abdel Hamid & Muhammad Subhi Hassanein: 2001) that the development taking place is due to the training program prepared by the researcher, which made it one of the first basic skills that the training started on in the first training units, and no training unit was without its existence on The duration of the training program, as it may sometimes be among the warm -up exercises for balls, the continuation of training on them continuously and with great repetitions that exceed any other skill, make progress in performing this skill clear (2005: Jense G.R. And Fisher) through the special training of the tablet (Risan Khreibet Majeed & Ali Turki Musleh: 2002), as well as the appropriate repetitions used in the training units that facilitated the process of kinetic ability to perform better through the development of the muscles working to throw the disk, and this in turn requires a high degree From controlling the method of performance and less than the technical stages of the effectiveness of draining the disk (Zaki Mohamed Hassan: 1999), and the programmed planning process in training these important physical qualities for the effectiveness of draining the disk and paying attention to training these characteristics because it has a great role in improving the level of performance, and that increased repetition In performing exercises leads to the optimal performance by continuing training in various training or competition conditions (Abdul Rahman Abdel Hamid Zahir: 2000).

4. Conclusions & Recommendation:

4-1 Conclusions

- 1- The physical voltage exercises used in the training program, according to the foundations of pregnancy and comfort, the emergence of the development of the basic skills of the players 'effectiveness of the discs for the experimental group and for the benefit of the post-measurement.
- 2- The emergence of a moral development in the level of performance and achievement, and for both groups controlling and experimental and for the benefit of the experimental group.



4-2 Recommendations

- 1- Attention to legalizing the training program according to the foundations of pregnancy and comfort, as it has a positive impact on the development of the level of performance on the effectiveness of disc.
- 2- Conducting similar studies on the categories to another and for both sexes in the various square and field activities.

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Appendix (1) Exercises used in the research A model of the training units used in the main experience First training unit, the second week, the time of the unit: 40-45 minutes

Day	PRACTES	Exercise intensity %	Repetition Number	Groups Number	comfort is between	
					Repetition M	Groups M
SAT	Throwing from half of the disk confrontation with a weight of 2 kg	80%	5	4	1	2
	Throwing a medical ball with a weight of 2 kg		5	4	1	2
	Throwing light tablets 1 kg		5	3	1	2
	Throwing the disk from the full technique		5	3	1	2
MUN	Throwing the disk from the confrontation with a weight of 1 kg	80%	5	4	1	2
	Throw a medical ball with a weight of 2 kg from above a table		5	4	1	2
	Throwing light tablets with a weight of 1.5 kg		5	3	1	2
WED	From putting the disk throwing 1.5 kg	80%	5	4	1	2
	Throwing a medical ball with a weight of 2 kg		5	4	1	2
	Throwing light tablets 1 kg		5	3	1	2
	Throwing the disk from the full technique					