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The effectiveness of using rebound exercises to develop the explosive power of arms and legs and forms of correction for Junior with a handball

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Abstract:

The training in the sports field results depend on the integration in the physical, skill and planning preparation at the same time. This requires paying attention to all aspects, giving it the same importance and focusing on preparation, especially during the training process and mastering the skills. Through the experience of researchers being players and coaches, and during their observation of club training that some coaches tend to implement various methods and methods in developing strength in general and non-specialized through physical exercises for strength and perhaps some weight training and this is the reason for the insufficiency of the training process for the requirements of modern play, so he felt The researchers pointed to the use of regressive strength exercises in developing the explosive power of the arms and legs, and the forms of correction for Junior with a handball, to be an expressive way that the trainers would benefit in achieving good results. The research aims to:

1- Preparing the rebound force exercises to develop the explosive power of the arms and legs and the forms of correction for Junior with a handball.

2- Knowing the effect of using the rebound force exercises in developing the explosive power of the arms and legs and the forms of correction for Junior with a handball.

The researchers used the experimental approach to suit the nature of the research problem. The research community identified the emerging players in the specialized center in the youth forum of Al-Qasim, who are (22) players.

The most important conclusions were:

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1-There is an evolution of the explosive power of the arms and legs and forms of aiming for emerging players with handball and for the control and experimental groups.

2- That the choice of the regressive strength exercises to develop the explosive power of the arms and legs was compatible with the working muscles of the skills of straightening shapes of the hand, which caused the effective impact in the development of its performance.

Keywords: *rebound exercises, training process, handball*

I. Introduction

That the global sports levels reached by athletes in various global sports are the result of various efforts in which many specialists contributed in this field, and by relying on sports training that is based on theoretical and applied sciences contributed to improving the effectiveness and efficiency of the sports training process, which led to the upgrading and achievement Best results.

Handball is one of the group games, which requires practicing the performance of skills with special specifications and accurate technical performance, and following sophisticated planning methods, especially when the level is close between the two teams in the physical and skill aspects through continuous training on special exercises that are similar to the cases of play, taking into account Scaling them in order to ensure that players have a good assimilation, and ensure that the level of physical and skill preparation is consistent with the capabilities and capabilities of players in mental aspects and their capacities to absorb, as well as knowing the weaknesses and strengths of the opposing team and its ability to quickly act in changing play situations and choose the most appropriate for the required performance .

The strength training exercises are one of the effective and effective training means in developing physical capabilities, as they are methods that are directed directly towards the capabilities to be developed and are specific to performance. Therefore, special physical ability must be developed because it is one of the important requirements that the player needs in order to keep up the game and perform the required duties in the same way throughout the game. The importance of research through the effect of using aqueous regressive strength exercises in developing the muscular capacity of the legs and arms and the forms of correction for Junior with handball.

Research problem:

The training in the sports field results depend on the integration in the physical, skill and planning preparation at the same time. This requires paying attention to all aspects, giving it the same importance and focusing on preparation, especially during the training process and mastering the skills. Through the experience of the researchers being players and coaches, and through their observation of club training that some coaches tend to implement various methods and methods in developing strength in general and non-specialized through physical exercises of strength and perhaps some weight training and this is the reason for the insufficiency of the training process for the requirements of modern play, so he felt The researchers pointed to the use of regressive strength exercises in

developing the explosive power of the arms and legs, and the forms of correction for Junior with a handball, to be an expressive way that the trainers would benefit in achieving good results.

Research aims:

1- Preparing the rebound force exercises to develop the explosive power of the arms and legs and the forms of correction for Junior with a handball.

2- Identifying the differences between the pre and post tests in the two control and experimental research groups in the explosive power tests for the arms and legs and the correction forms for Junior with handball.

3- Identify the differences between the experimental and control groups in the dimensional tests in the explosive power tests for the arms and legs and some forms of aiming with the handball

Research hypotheses:

1- The rebound force exercises have a positive effect in developing the explosive power of the arms and legs and the corrective forms for Junior with a handball.

Research fields:

The human sphere: the emerging players in the specialist center of the Qassem Youth Forum.

Time domain: From 15/8/2019 to 26/12/2019

Spatial domain: the sports hall in the Al-Qasim Youth Forum and the swimming pool in Al-Qasim

II. Research methodology and field procedures:

-Research Methodology: The researchers used the experimental approach to suit the nature of the research problem.

- The research community and its sample: The research community determined the emerging players in the specialized center in the Youth Forum of Al-Qasim, who are (22) players, and his sample was chosen by simple random method, and the number (16) players was divided into two control and experimental groups.

Tools

- Legal handball field .. - Balls for young people, count (8), timing clock, number 2. person number 12. - Colorful planning bars - LG p 4 Calculator (PC). - Swimming pool included. - Medical balls weight (1 kg -2 kg 3 kg) .- Correcting squares (50 x 50 cm). - Plastic terraces with different heights.

The tests used

- Vaulting Sargent (for the two legs)

-Throw a medical ball weighing 2 kg with hands over the head from a sitting position on a chair (for arms)

- Over-the-top aiming on the precision-shooting squares (50 x 50 cm)

- Correct from jumping high on the correction squares

- Correction from frontal fall on the accuracy of correction boxes.

Pre-test:

The researchers conducted the pre-test tests for the sample of (16) players on (30/8/2019), before starting the main experiment, with all variables adjusted.

Sample homogeneity:

To achieve the purpose of homogeneity of the research sample, the researchers carried out several measures to control the variables, even though the sample that was chosen was from a close age group as well as to prevent influences that may affect the results of the experiment in terms of individual differences in the individual of the research sample. Therefore, the researchers used the statistical means represented by the arithmetic mean, the standard deviation, the mode, and the coefficient of torsion of the length, weight, time, and training age variables to know the reality of homogeneity.

Equivalence of the two research groups:

For the purpose of knowing the good progress of the two groups' initiation before the researchers used the statistical methods (mean, standard deviation, and choice (t)) of the independent samples (between the control and experimental groups).

training program:

A training curriculum was prepared using various aqueous rebound strength exercises for beginners in handball, the curriculum was applied on the date of (1/9/2019) and continued until (30/11/2019), applied for two months (8 weeks) and at the rate of (3) Units per week The total number of training units has reached (24) training units. The time (3) o'clock determines the date to start performing the exercises after the warm-up process that takes (10-15) minutes. Where the researchers took into account that the exercises were arranged according to their difficulty with a step by step from walking exercises and then jumping horizontally to jumping through different heights, while the arms included the gradient with weights of medical balls and according to the ability to perform the sample, the duration of exercises prepared in the curriculum was given within the usual training unit used in the club, which takes (120) minutes and then exercises in the main part immediately after warming up and a time (35 minutes). Aids were used to increase the accuracy of the technical performance of the skills.

- Presentation of the technical performance of the skills before and after each training unit to increase the information for the players and learn about the mistakes they made during the training in order to correct the best performance of the skills.

- Filming the technical performance of the players and displaying them to them to identify and handle errors.

Post-test:

After completing the implementation of the training curriculum using auxiliary auxiliary force exercises, dimensional tests were carried out on (2/12/2019), and the tests were carried out in conditions close to the tribal tests and their procedures and under the direct supervision of the researchers.

III. RESULTS

The results of the explosive power tests and handball correction forms are presented in the two-dimensional tests for the control and experimental groups:

Table (1) shows the arithmetic mean, standard deviations, two calculated (t) values and the level of significance between the two post-tests for the control and experimental groups.

Tests	Control group		Experimental group		Value of T	Significance
	A	Std	A	Std		
Vaulting Sargent (for the two legs)	32	1.41	42.62	1.59	14.08	Sign
Throw a medical ball weighing 2 kg with hands over the head from a sitting position on a chair (for arms)	5.75	0.46	6.75	0.46	4.32	Sign
Over-the-top aiming on the precision-shooting squares (50 x 50 cm)	3.62	0.51	4.65	0.52	3.86	Sign
Correct from jumping high on the correction squares	3.90	0.40	4.37	0.91	2.72	Sign

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Correction from frontal fall on the accuracy of correction boxes.	3.51	0.53	4.50	0.53	3.74	Sign

Through the above presentation and analysis of the previous table, it is clear that there is an evolution of the explosive power of the arms and legs and the forms of correction for young players with handball and for the control and experimental groups. The researchers attribute the reason for the development of the control group to the influence of the regular approach developed by the coach in addition to the continued and regularity of the players in the training, which had a clear role in the development. As Saad Mohsen affirms, "Experts' opinions, regardless of the different sources of their scientific and practical culture, that the training program inevitably leads to the development of achievement, if it is built on a scientific basis in organizing the training process and its programming and the use of appropriate and graduated intensity and note the individual differences as well as using the optimum iterations and interfacing periods affecting and supervising Specialized trainers under good training conditions in terms of space, time, and tools used. The results also showed that there are significant and significant differences for the experimental group in the evolution of the study variables as well as the regressive strength training, which contributed to the development of the special ability (of the legs and arms) affecting the motor performance and that have an effective impact. This is reinforced by what Talha Hossam El Din (1997) stated, "Pleomeric exercises (rebound exercises) work positively to improve movement energy and rubber energy, which has a major impact on the development of the explosive capacity by stretching and shortening muscle fibers. These also affect the rapid response Muscles as a reflex response by muscle spinners. " (Bastawisy Ahmad 1999) confirms, "The importance of polymeric exercises is that they work in tandem with good technique to advance the level of achievement of the various sporting events." An agent for performance improvement under various conditions. Likewise, a method of identifying error in performance for skill and correction was used as a method to increase the players 'experiences with each other despite their simple capabilities. The speed of movement is the result of rapid explosive force and is used as a basic function in performing the motor skills that depend on the transitional speed, movement, lightness and change of direction that works to stop the explosion. "The researchers believe that the explosive capacity of the muscles of the two legs is one of the most important major physical capabilities that must be present In activities where performance requires vertical jumping, such as high jumping and handball aiming, the increase in the distance of vertical jumping occurs depending on the development of the explosive power. (Pollock 1990) states that "the explosive power occupies the first place among the physical capabilities in most sports activities that require jumping Al-Amoudi.

IV. Conclusions and recommendations

Conclusions

1-There is an evolution of the explosive power of the arms and legs and forms of aiming for emerging players with handball and for the control and experimental groups.

2- There is a preference for the experimental group in the development of the explosive power of the arms and legs.

3- The choice of the regressive strength exercises to develop the explosive power of the arms and legs was compatible with the working muscles of the skills of straightening shapes of the hand, which caused the effective impact in developing its performance.

Recommendations:

1-The necessity of emphasizing the use of regressive strength exercises to contribute to developing the explosive power of the arms and legs and the forms of aiming with a handball for young men. And in different proportions.

2- Choose the rebound strength exercises that are similar to the skillful performance in terms of the motor path and the projection of strength and muscles working for those skills of handball.

3- Conducting attempts to use the rebound strength exercises on other skills that are appropriate to the level and capabilities of the players and according to their categories.

4- Diversification in the use of regressive force according to different iterations and stresses.

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