

THE EFFECT OF THE USING THE REACTIVE POWER TRAINING IN THE DEVELOPMENT OF SOME MOTOR CAPABILITIES OF THE EPEE FOR AGES (14-16 YEARS)

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Abstract

This study aimed to identify the impact of the use of reactive power training in developing some capacity motor for duel players weapon of Sabre, the researcher used experimental method, and included a sample search (12) Player (ages 14-16 years) divided into two groups (experimental and Officer) of each group (6) players, was carried out by the researcher on a sample search for 6 weeks and (4) training units per week for the number of units (24) training module. After conducting tests, the researcher found that remote experimental group has achieved remarkable development in all of the tests in question and thus achieve a first search, either in remote tests between experimental and control group have achieved superior pilot in a test of balance and stability in the three test your agility and speed the transition to pitch, there is no moral difference between the two groups and thereby part of the second, and the imposition of the above we find that the exercises had affected the experimental group and upgrading Their performance.

KEYWORDS: Reactive power training. Duel game.

1. INTRODUCTION

The reactive power training is one of the ways that help to improve the muscular strength through performance of jumps that characterized by high and short frequencies and these jumps help the production of the power for the working muscles and their jumps differs from the biometric exercises in terms of the height of jumping place and frequencies of jumps and the length of the muscular latency, these exercises considered one of the modern methods that used to develop the speed and the strength that characterized by the speed that needed by the swordsman to perform his movements such as progression and regression and stabbing during the attack as well as in the defense motions by the distance. Also called strength training reaction (reactive power) and the interactive training is known as the performance of powerful movements that involve decentralized contraction (reducing the power) followed immediately by central contraction characterized by explosion (strength production). And the movement begins from the tissue of energy storage to appear as potential energy and take advantage of this energy as motor energy or as energy for the motor performance to generate power efficiently as the training of reactive power or the interactive training organizes the neuromuscular contractions in order to recruit the working muscles quickly which enhances the generation of the power that needed in the muscle (1). Therefore, (Reaktivkraft) in German and (reactive power) in English will depend beside the maximum power and the ability for the quick muscular contractions on the tensile ability and the sudden rebound lessening, and this also depends on the neuromuscular compatibility level and on the reflexive action of the elongation stage and stretch in the fibers and tendons and ligaments and on what is called muscular rigidity that caused by the decentralized contraction. Therefore, the reactive power will depend on the number of working and assistance muscles and on their internal stimulation and on the strength of the rubber parallel components and the chain of tendons and ligaments (Gollhofer: 1987).

From the foregoing, we find that the reactive power will depend on the force that characterized by speed and its superiority degree, being a dynamic and high-level capability (Hohmann, *et. al.*: 2007).

Saber weapon is distinguished from the rest of the weapons as its legal target is larger than the rest of the weapons as the target includes all the body and this differs from the epee weapon as the target is in the chest and back area while the Arab sword weapon shall be the upper part of the body of a hip joint and this requires from the player of saber weapon production of high strength and speed to perform movements of attack and defense since any delays in the performance of these movements possible to turn a negative impact on the swordsman and thus lose the bout. Hence comes the importance of research that lies in the impact of using the interactive training to develop some of the motor capabilities of the saber weapon players and apply some modern styles and that will help in the development of the level of players and achieve development in the special movements.

The research aims to prepare exercises by using interactive training to develop some special motor abilities kinetic of the saber weapon as well as identifying the impact of the use of interactive training for the development of some of the motor capabilities of the saber weapon.

2. MATERIAL AND METHODS

Research Methodology: The researcher used the experimental method due to its suitability with the nature of the research problem.

The research sample: included the players of the specialized school for the Iraqi Central Union Of Fencing (14-16 years) and totaling (12 player) were divided on two groups ; the experimental group and the control group and randomly by lottery, (6) players per each group. The player with less or more than the age of the sample have been excluded noting that the sample is homogeneous in anthropometric measurements and chronological age as well as the equality of the skills under research .

Tests used in the search:

First: the balance test (standing on a stick by the metatarsal) incidental way (Ayed Sabah, 2009: 92-93).

Second: the test of speed transition in the court (Munir Noah 1989: 50)

Third: progress and regression test in less possible time (Abd Al- Hadi Hameed: 2004).

Fourth: the three test and the stability to the front of the standby mode (Bayan Ali: 1997: 194):

Steps to implement the program:

The researcher implemented the exercises that used in the research by the following steps:

- interactive training exercises have been prepared in a private manner which are mainly dependent on short jumps with high frequencies and has served for movements of fencing game .

- The exercises that used in the research have been implemented from 08/05/2014 until 17/09/2014 for a period of 6 weeks and by four training modules in the week so the total number of training modules during the implemented period (24) training unit.

- The number of exercises that used and prepared by the researcher (45) exercise and period of implementation of these exercises (10-50 seconds).

- The exercises implemented in the first part of the main section of the module due to the need of these exercises of compatibility and speed in performance, as for the implementation of the exercises amounted to (20-30) minutes.

- The adoption of the training mode pulsation in the implementation of the exercises and the percentage of work to rest (2: 1) in all the exercises used.

- The periodic training used in the implementation of the exercises, the number of repetitions of the exercises reached to (2-3) while the number of units (2-3).

- As for the control group continued on their usual exercises.

3. RESULTS

Table 1: shows the results of the tribal and posteriori tests for the experimental group in the tests of special kinetic capabilities

The statistical treatments	Unit of measurement	M	SD	Value of calculated (t)	Degree (sig)	Significance
Test of balance	sec	1.109	0.38	7.117	0.001	Significant
Test of transitions speed	sec	1.35	1.11	2.965	0.031	significant
Agility test	sec	1.29	1.02	3.085	0.027	significant
Test of three and stability	meter	0.74	0.49	3.679	0.014	significant

(at the degree of freedom n - 1 and level of significance 0.05)

Through observation of the table (1) we find that the results of all the experimental group tests were significant and in favor of a posteriori tests as the calculated (t) value (7.117, 2.965, 3.085, 3.679) respectively and when comparing the degree of (sig) for the tests under research are (0.001, 0.031, 0.027, 0.014) with the significance level (0.05) we find that it is less than (0.05) so that all the results are positive.

Table 2: Shows the results of tribal and posteriori tests for the control group in the special motor capabilities tests

The statistical treatments	Unit of measurement	M	SD	Value of calculated (t)	Degree (sig)	Significance of differences
Balance test	sec	0.21	0.47	1.094	0.324	Not significant
Test of transition speed	sec	0.73	1.55	1.147	0.303	Not significant
Agility test	sec	0.91	2.53	0.879	0.420	Not significant

Test of three and stability	meter	0.15	0.29	1.309	0.247	Not significant
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(at the degree of freedom n - 1 and 0.05 level)

Through our observation of the table (2), we find that the results of all tests of the control group is not significant, as the value of calculated (t) (1.094, 1.147, 0.879, 1.309) respectively and when compare the degree of (sig) for the tests under research (0.324, 0.303, 0.420, 0.247) with the significance level (0.05), we find that it is greater than (0.05) and so all the results were not significant.

Table 3: Shows the results of the posteriori tests of the experimental and control groups for the special kinetic abilities

The statistical treatments	Unit of measurement	Experimental group		Control group		Value of calculated (t)	Degree of (sig)	Significance of differences
		M	SD	M	SD			
Balance test	sec	3.51	0.85	2.66	0.46	2.13	0.05	significant
Test of transitions speed	sec	10.33	0.98	10.31	1.07	0.034	0.97	Non-significant
Agility test	sec	21.55	1.38	20.67	1.57	1.026	0.32	Non-significant
Test of three and stability	sec	3.57	0.31	3.11	0.36	2.343	0.04	significant

(at the degree of freedom n - 2 and 0.05 level)

From Table 3, we find that the results are variable between the experimental group and control group as the value of calculated (t) (2.13, 2.343) and when comparing the level of significance with a degree (sig) for the two tests (0.05, 0.04), we find that the extracted value is less than (0.05). while for the transitions speed test and agility test there were no significant differences between the two groups as the value calculated (t) (0.034, 1.026) respectively, when compared the level of significance with a degree (sig) for the two tests (0.97, 0.32) found greater than (0.05) and so did not achieve any significant difference.

4. DISCUSSION

From Table 1, we find superiority of the experimental group in all tests between tribal and posteriori tests and in favor of post-test, and the researcher attributes the cause of development to exercise that prepared by him as these exercises depends mainly on the speed of frequency of the jumps during the performance and that means switching the rapid muscular work from the decentralized contraction to the central contraction and explosiveness muscular strength will not be realized just due to the central muscular contraction but due to the decentralized muscular contraction of the muscle group itself and as due to all the elastic forces stored in the muscles, tendons and ligaments, to start assembling the high reflectivity of the stimuli in all those tissues (Komi & Häkkinen1989: 157-167), where said : those muscular physiological abilities that stored in the working muscles as a result of the decentralized muscle contraction and then lead to the strengthening of the muscular work in central muscular contraction and it is called regressive force.

While the control group did not achieve as shown in Table (2) any development in the results of the tribal and posteriori tests and the researcher attribute that the control group depends on the fencing exercises, as well as non-use of the exercises effectively and in programmed manner within the module as happened with the control group.

The table (3) refers to the superiority of the experimental group in the two tests of balance and the three and stability , the researcher attributes that on that jumping exercises with high frequencies have helped to increase their kinetic stability and that these jumps have contributed to the storage of mechanical energy in the muscles and the tendons, elongation of muscles and contrary produce storage of motor energy in the form of latent effort or know as pushing energy which begins at the contraction of contrary muscles and the shorter the time between the occurrence of prolongation and contraction that results in a significant increase in the performance and this will be large when performing rapid effective during performance of the rapid reciprocating movements (Yasser Daboor : 1997:257). This actually appears in the performance of the three stabilities and increase the speed of progress and regression, and as shown in Table 1.

But in a tests of transitions speed and agility did not show any significant differences between the two tests and the researcher attributes that the progression and regression movements are common movements to use in the own fencing training modules, as well as the individual differences between the two groups as the experimental group had been chosen at random and by lottery. This variation in levels between the two groups made the results appear randomly.

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