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The impact of educational exercises for learning the grip of balance on developing motor balance and agility among free wrestlers aged (14-16) years old

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Abstract:

This study aimed developing educational exercises for learning the grip of balance on developing motor balance and fitness among free wrestlers, which are compatible with the capabilities of the study sample individuals as well as identifying the impact of educational experiences for learning the grip of balance on developing motor balance and agility among them. The study used the experimental approach. The study sample was chosen from the youth group in Al-Athamiya Sports Clubs that consisted of (8) wrestlers. (SPSS) was used to analyze the results. The results revealed that using the educational exercises has a positive effect on improving motor balance among free wrestlers. The researcher recommended the necessity of using the training and educational programs to develop balance and agility while taking into consideration the technical sides of the motion or grip.

Keywords: physical education and sports curriculum; national identity values; educational exercises; the grip of balance; motor balance; agility among; free wrestlers

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I -Introduction and importance of the research:

Undoubtedly, sports domain is one of the domains that reflect the progress and advancement of countries all over the world. Many sciences contributed to this domain and various studies and researches have been conducted in order to achieve the highest achievement levels. Wrestling is considered as one of the individual games that attracts the attention of too many athletes due to its characteristics related to excitement, suspense, speed, power and accuracy in performance. The game of wrestling has developed considerably over the last year, where many amendments were made to the law of this game. Wrestling is a type of sports that includes many grips and movements that require a high level of accuracy and mastery to achieve the targeted goal. Wrestlers are characterized by certain capabilities and constant readiness, where they have a good reserve of physical and kinetic capabilities to maintain performance efficiency during the time of wrestling.

Educational exercises: they are a set of sports movements that are repeated in a certain regular way in a certain context to provide the individual with the right kinetic performance.

Since the study sample individuals belong to the junior youth group, the study focused on the grip of balance as one of the most important grips among free wrestlers, which has a considerable effect on the proceedings of fight. Based on the above-mentioned, coaches should give more attention to the aspects that affect this type of grip, including the motor capabilities represented by balance and agility which have a direct effect on achieving a good performance level among young wrestlers. Various training and educational curricula were developed in relation to preparing wrestlers in all the domains, which ensure winning the fight. The actual need for the process of preparing this system that consisted of several educational and training approaches, in a scientific way, emerged for the purpose of accomplishing achievement. Indeed, this process will assign each educational or training stage a certain approach that is different from the basic approach by changing the training load according to the educational and training level of the junior wrestlers.

The study problem:

The grip of balance is one of the most difficult grips due to the nature of the performed movements that are characterized by flexibility, muscular-nervous compatibility and agility, in addition to performing movements from different positions based on the body posture of the competitor. Based on the researcher's work in the domain of wrestling, and given his previous experience as a wrestler, coach and a teacher of wrestling course, he noticed a weakness in the performance of young wrestlers as well as a weakness in performing the grip and learning it in

a relatively later stages, since the suitable time for learning the grip is at the age of (10). This case results in a difficulty in learning and a fluctuation in development, as coaches pay little attention to the kinetic aspect of this grip, represented by kinetic balance and agility. Therefore, the researcher addressed this problem by developing an educational program to develop the aspect of balance and agility among wrestlers.

The study objectives:

1- Developing educational exercises to learn the grip of balance and develop motor balance and agility among free wrestlers in accordance with the capabilities of the study sample.
2- Identifying the effect of educational exercises for learning the grip of balance on developing motor balance and agility among free wrestlers.

The study hypotheses:

The educational exercises for learning the grip of balance have a positive impact on developing motor balance and agility among free wrestlers.

The study domains:

The human domain: the free wrestlers in Al-Athamiya Sports Club within the age category (14-16) years old.

Temporal domain: (4/1/2022- 24/2/2022).

Spatial domain: the wrestling hall in Al-Athamiya Sports Club.

II - Method and Materials

The study methodology:

The researcher used the experimental approach due to its compatibility to the study nature by using the pre and post test design for each group.

The study population:

The study population consisted of the junior free wrestlers in Al-Athamiya Sports Club with a total of (10) wrestlers within the age category (14-16) years old, who ate registered in the Iraqi federation of wrestling for the year (2020-2021). Two wrestlers were excluded for the purposes of conducting the pilot study; therefore, the total number of the sample was (8) wrestlers, with a percentage of (75%) of the total population.

The researcher used the following tests:

- Bass modified test for dynamic balance.
- The test of running in different directions around (5) signs to measure agility.

The researcher conducted a pilot study on a sample of (2) wrestlers on 28/12/2020 in order to:

- Verify the validity of used instruments and materials.
- Verify the accuracy of implementing tests as well as the other related procedures according to the cited conditions.
- Order the proceedings and performance of tests and assign rest periods between them.
- Determine the suitability of tests to the selected age category.
- Determine the severity of performance, frequency times and rest periods between training sessions.
- Verify the scientific weight of tests, in terms of validity, reliability and objectivity.

The pre-test procedures were conducted on Tuesday2/1/2020. The tests started by Bass modified test for dynamic balance, followed by running test in different directions around (5) signs to measure agility. There were suitable rest periods between tests. After that, the educational approach was applied during (6/1/2020 – 3/3/2020); it included three educational units in each week, and three days a week over a period of (8) weeks under the supervision of the team coach. During the implementation of exercises, the coach depended on the following:

- Since balance and agility lie within the motor abilities, the researcher merged exercises of the educational units by using frequent regular and constant training.
- Developing the physical and motor abilities related to the grip of balance, represented by (power, speed, flexibility, agility adjustment and balance).
- Interval training, with its two types; low and high, was used, in addition to circular training.

The training program included the following items:

1- The principle of individual differences was taken into consideration, considering them as a basic element in training with regard to setting the components of training load.
2- The training methods used in training varied into two parts :
    a- The method of low-intensity interval training to develop the technical aspects.

b- The method of high-intensity interval training to develop the physical and motor aspects.

3- The training methods used in training approach varied, where they included medical balls and rubber ropes, in addition to the methods used in weight training, such as (dumbbells, steel bars, pulling rollers, and different other weights).

4- Due to the nature of the sample and the objective of the study, the intensity level was determined and graded from (low to average, above average, and less than high), with an intensity of (70% - 95%).

5- The time of proposed training was (30) minutes from the time of the main part during the training session.

The post tests were conducted in similar conditions to the pre tests. Post tests were conducted on (4/3/2020), where the statistical package was used to calculate skewness coefficient, Pearson coefficient, means, standard deviations and Wilcoxon test.

III-Displaying and analyzing the results:

After completing the procedures of the study, results were processed statistically using the statistical package. The results are shown in table (1) as follows:

Table (1)
The significance of differences between the pre and post test for the experimental group

	Test	Wilcoxon test	z-value	Error level	Sig. level
1	Bass modified test for dynamic balance	10.18	2.49-	0.01	**significant**
2	Running test in different directions around (5) signs to measure agility	76.87	2.524-	0.01	**significant**

*Statistically significant at (0.05)

Table (1) showed that there are statistically significant differences between the results of pre and post tests regarding the abilities of muscles, where the value of error probability was less than (0.05).

VI-Discussing:

By displaying and analyzing the test results, we found that there are significant differences between pre and post tests in favor of the post tests; this

means that changes occurred in the variables of motor balance and agility. This finding agrees with the study hypothesis. The researcher attributed this finding to the fact that the used trainings depended on frequencies and intensities that were set to be compatible with the levels of the sample individuals, giving sufficient rest periods between training sessions, and the trainings encompass a mixture of physical, technical and motor abilities accompanying the performance of the grip of balance. During the training sessions, there was a constant correction of the committed errors, leading to more progress in the wrestler's level by implementing the exercises in the correct way, and thus the wrestler would perform the skill automatically by the constant repetition.

The researcher suggested that the used trainings has a great impact on improving the systems that are responsible for the balance of the wrestler's body while performing the grip of balance, particularly the inner ear which improves the performance of the grip; i.e. the liquid existing inside the inner ear moves and keeps moving after the fixation of the wrestler's head and gives the wrestler a feeling that motion is still continuous. This finding was confirmed by (Khoja), which revealed that the continuous training leads to diminishing this feeling and suggested that sight is another factor through which the process of controlling body parts is facilitated. The results also suggested that coaches should give as much frequencies as possible when doing any exercises to develop the required skill.

Performing motor skills related to the grip of balance in a rapid manner by wrestlers, with more focus on stomach trainings, enabled wrestlers to control their bodies while performing the grip of balance, where they can make advantage of the speed of flexing arms, trunk or knees while doing the grip of balance. This finding was confirmed by (Abdulkarem, 2002) as he suggested that there is a relationship between motor balance, speed and agility, and revealed that the rapid movement for high-jumping athletes changes when the situation changes at the time of performance, and is based on the athlete's balance, either during movement in air or on the ground.

Using these exercises with this age category promotes balance among them. (Domrat, 2002) confirmed that balance is improved by age between (11-16) years old. Accordingly, we accept the alternative hypothesis set by the researcher in all the investigated variables, since there are statistically significant differences between the pre and post tests in favor of the post tests.

V- Conclusions:

After displaying and discussing the results, the study concluded that:

- Using the educational exercises has positively improved the motor balance among free wrestlers.

- Using the educational exercises has positively improved agility among free wrestlers.
- There are statistically significant differences between the pre and post tests in favor of the post tests regarding the two variables (balance and agility).

In the light of the results, the study recommended:
- Using the developed educational exercises in developing motor abilities in a correct way among free wrestlers.
- The necessity of using the educational and training programs in developing balance and agility while taking into consideration the technical aspects of motion and grip.
- Using the modern training and educational methods while learning the difficult grips in wrestling with analyzing the grip parts for training purposes.

VI- Resources and references:

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