Effect of some proposed exercises in development of balance of the Roman Wrestling players

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Abstract:

Each wrestling grip has its own requirements of kinetic characteristics, and coaches must take that in account. The wrestler, who have high kinetic characteristics, can improve his skills and tactical level and helps him to learn special complex grips too. Wrestler depends primarily on the balance, which is an important kinetic ability, especially in the implementation of the kinetic duty. The importance of the research emerged in the developing of proposed exercises to improve the balance of Roman Wrestling players, these exercises have positive returns among workers in the field of wrestling (clubs, training schools, Olympic champion, and unions.. etc.

Researchers noticed, through studying most of local, Arab and international wrestling combats, that the wrestler balance during movement on the mat have a big role to perform offensive, contrary or composite grips. for that, researchers felt to put some exercises for the wrestler to improve their kinetic characteristic, that will help coaches to arise wrestler ability to the highest level possible. The objectives of this research are to put proposed exercises in order to improve the balance of the Roman wrestling players, and study the effect of these exercises on the development of them. Researchers assumed that there are significant differences between pre and post- tests, in favor of the post-test, and these exercises have a positive impact in improving the balance of the Roman wrestling players.

The researchers, in theoretical framework, highlighted some terms used in this study. In the research methodology and field procedures, they conducted the homogeneity procedure on one group and equivalence procedure between the two groups (experimental group and control group) , as well as the equipments and tools used, and procedure of conducting the exploratory experiment, pre and post- tests, and researchers procedures, data collection and the statistical processing

After collecting data from forms and processing it statistically by the statistical program (spss), researchers displayed the results in tables, then analyzed and discussed in order to develop the conclusions. Researchers then Recommended some recommendations in order to benefit from this study and its practical experience through put the proposed exercises in the hands of specialists of wrestling training in the field for its great importance to improve the kinetic characteristic (balance) of players and performing grips in the best way in order to scoring points correctly without any mistakes.

1. Defining the research:

1. Preface and research importance:

Wrestling game is one of the World Games public popular among practitioners as practiced by amateur and that's what make them take that character and its importance has been included among the institutes and colleges of physical education curricula all over the world for the purpose of the graduation of generations of specialists leaders in training, arbitration and Education in the game.

Countries of the world are competing in the creation of modern scientific foundations to conduct studies and research in which they can develop the technical, physical and motor

gladiators level of performance, which requires physical and motor have the qualities development and following physical performance kinesthetic good because it is one of the basic ingredients in the preparation of gladiator outstanding as especially kinetic chain, as per grab the handles wrestling has its own requirements of the kinetic characteristics was incumbent on the trainers take this into account, and the wrestler who enjoy physical and kinetic characteristics of high unable to improve his skills and tactical as well as help him learn the complex grabs, and when the integration of training physical attributes wrestler needs a motor capacity of all kinds as the wrestlers rely on to break the connection between the gladiator rival and mat and prejudice to it its balance for grabs through which make high scores and win the duty, the wrestler depends primarily on the balance, which is an important dynamic ability to him, especially in the implementation of the motor duty, it has demonstrated the importance of research in the development of exercises proposed to develop a balance among players Romania wrestling as well as the importance of the study that have positive returns among workers in the field of wrestling (clubs, training school, and Olympic champion, and unions ... etc).

1.2 research problem:

Researchers noticed, through tracking most of local, Arab and international wrestling combats, that the balance of wrestler during movement on the carpet have a big role to perform offensive, contrary or composite grips. For that, researchers felt to put some exercises for the wrestler to improve this kinetic characteristic, which will help coaches to arise the level of wrestler to the highest possible level.

1.3 research objectives:

1. Establish proposed exercises in order to improve the balance of the Roman Wrestling players.
2. Know the effect of the proposed exercises in development of balance of the Roman Wrestling players.

1.4 Research Hypothesises:

1. The proposed exercises have a positive effect in development of balance of the Roman wrestling players.

1-5 research limits:

1-5-1 human limits: Players of Roman Wrestling in Al-Rafidein Sport Club, youth category for year 2014.

1-5-2 time limits: 17/08/2014 – 25/09/2014.

1-5- Spatial limits: Wrestling Hall at Al-Rafidein Sport Club in Al-Qadisiyah governorate, and the laboratory of physiology at the College of Physical Education.

2- Theoretical framework:
2.1 Balance: is the ability to consistently keep the body at different skills and conditions kinetic and fixed performance or in the case of the rotation or move, the balance is divided into:
(A) stable balance.
(B) balance concern.
(C) continuous balance.

2-2 Physical exercises: (Abbas Ahmed, 2000, P30)

Physical exercises defined as selected positions and physical movements according to educational, scientific principles, these exercises aim to form the body and improve various kinetic abilities to achieve the objective that set for, the types of physical exercise are:

1. Systematic exercises.
2. Reformer or formative exercises.
3. Harmonic exercises.

2.3 Benefits and purposes of physical exercise:

1. Improve physical ability by strengthening the various organic body parts to earn the ability of keeping adaptive effort and resisting fatigue.
2. Kinetic purpose: that makes the body movements useful at least amount of energy possible to describe the Individual movements as balance, agility and good smoothness.
3. Help individuals to build a good basic foundation in order to improve their physical ability, through practicing with physical exercises, their physical capabilities built in accordance with the requirements of the type of activity they practice.

2.4 Roman wrestling for amateurs:

"Style of wrestling applied on grips for all parts of the body except the two legs, rough- grips or reversed joints not allowed." (Musaad Ali, 19978, P3)

3- Research methodology and Field procedures:

3.1 research methodology:

Researchers used the experimental method using equal groups style for its suitability because the nature of the research problem.

3.2 Society and the research sample:

Research community included the Roman wrestlers of Al-Rafidein Sport Club for year (2014) To the category of young people and their number was (20) wrestler representing all the weights of (8) was selected three convergent weights so that it can be treated statistically, and the number of wrestlers to these weights (10) Gladiators representing weights 50 kg (4) Gladiators and (55) kg (4) gladiators and (60) kg (2) wrestler, divided the sample into two groups (experimental and control) (5) gladiators for each group, was homogeneity in the same group, and parity between them in the (weight, age, and age training, and balance).

Table (1)

Means, standard deviations, variation and Skewness coefficient of two groups (experimental and control) of the variables (weight, age, training age, and balance) for uniformity.

group	variables	units	Means	S.D.	Variance coff.	Skewness coff.
experimental	weight	Kg	55.200	5.263	9.534٪	0.070

	age	year	19.000	1.000	5.263٪	0.000
	training age	month	33.200	8.336	25.108٪	-0.495
	balance	degree	194.40	9.208	4.736٪	-0.850
control	weight	Kg	55.600	5.029	9.044٪	-0.990
	age	year	19.200	0.836	4.354٪	-0.512
	training age	month	32.800	8.671	26.435٪	069،0
	balance	degree	193.60	7.893	٪4.076	-0.917

From Table (1), Skewness coefficient equation was used to distribute the sample on gauss curve within limits (± 1), and checking whether they are within the normal distribution. All results appeared under (±1); this shows that the sample has a moderate normal distribution within these limits. Variant coefficient equation was used to know the homogeneity within the same group, variant coefficients values was confined under (30%) , that shows that the sample in the same group was homogeneous, " If variant coefficient is closer to (1%), the sample is more homogeneous , if its higher than (30%), the sample is non-homogeneous." (Wadee' & Hassan, 1999, P161)

Table (2)
Means, standard deviations, and calculated (t) value of two groups (experimental and control) of the variables (weight, age, age training, balance) for equivalence.

variables	units	experimental		Control		calculated (t) value•	Significance of differences
weight	Kg	55.20	5.263	55.60	5.029	0.123	Non-significant
age	Year	19.00	1.000	19.20	0.836	0.343	Non-significant
Training age	Month	33.20	15.336	32.80	8.671	0،051	Non-significant
balance	Degree	194.4	9.208	193.60	7.893	0.147	Non-significant

•Tabulated (t) value at level of significance (0.50), df (8) =1.860

3-3 Equipments, tools and means used in the research:

- Observation and experimentation
- Unloading and data collection form.
- The balance beam (height (40 cm) length (115 cm), width (5) cm) / 2.
- Special tools for balance (convex tool from the bottom with a wooden board above the display (40 cm) / 2, a special tool for balance next to a rubber convex bottom of a plastic frame above the display (35 cm) / 2.
-German-made balance test Device (Body Teamwork Challenge Disc Balance).

3-4 Exploratory experiment:

On Sunday of 17/08/2014, researchers conducted their exploratory experiment in Al-Rafidein Sport Club and the physiology laboratory at the College of Physical Education on some research samples using research tools, and balance-measuring tool with the help of support staff for the purpose of:

1. Know the obstacles and difficulties that may occur during conducting the research, they found that it is possible to control all obstacles that could occur.
2. Identify time required to conduct the experiment and balance measurement, they selected 10 o'clock in the morning to start.
3. Readiness of assistant team[·] in terms of tools, measuring instruments, and how to determine the exercises used. Assistant team has been identified and all team members found out them work and duty in field exploratory.
4. Validity of the special experiment tools, as found to be valid for measuring.

3.5 Test used in the research:

3.5.1 Balance test (Body Teamwork Challenge Disc Balance):

- The purpose of the experiment: measuring the balance of the wrestler.

-**tools used in the experiment:** balance measuring tool, laptop computer with all connections required, software disc.

- **Performance specifications:** the wrestler under test stands on the measuring device for 6 times, measuring results appear on the computer screen using a special computer program.

- **records:** researchers take only the scores which appear on the balanced program, where (6) tests scores are collected from easy to difficult without the intervention of researchers or the man responsible of the tool, grades begin from 1 and above
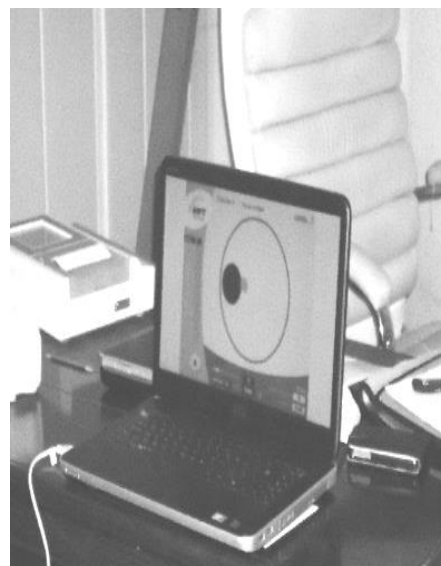
[·] **Assistant team names:**
  - Raafat Abdel Hadi Kazem, college of Physical Education – Al-Qadisiyah University.
  - Ammar Muthana Jmeel Fatlawi, college of Physical Education – Al-Qadisiyah University.
  - Mohammed Hatem Abdul-Zahra, College of Physical Education – Al-Qadisiyah University.

Fig (1) Balance test.

3.6 Pre-test

On Monday, day on 08.18.2014, the researchers conducted a pre-test on the sample in the laboratory physiologist at the College of Physical Education - University of Qadisiyah under the supervision of a specialist in the physiology lab, which was conducted (6) tests for each wrestler through your balanced program.

Fig (2) Software of balance test.

3.7 Field research Procedures:

Through noticing Roman grips and their performance nature, and their requirements of physical and kinetic characteristics through training courses that toke place in Al-Rafidein Sport Club, there was a significant role of balance in the completion of grips, any weaknesses of those kinetic characteristics of a negative impact on the grips performing correctly and earning scores . The researchers proposed exercises in order to improve the level of balance.

- being conducting exercise for the experimental group by giving them a stimulating exercises.
- Conducting exercises in a sample of your preparation period was used Recurring training method.

- The course was of (4) Weeks, three units a week.
- Training using tools that have been manufactured for improving this characteristic (balance).
- Training days for the experimental group are Sunday, Tuesday, Thursday (within the training course where the training exercises perform after warming up).
- Control Sample group train as coach Instructions for this kinetic characteristic, they can't practice on training tools without agreement of the coach and the sample members.
- Time for balance exercises in the training unit: about 30 to 32 minutes intervened with comfort times.
- taking into account the diversity of the training units in terms of exercise, as follows:

1- Exercise one:

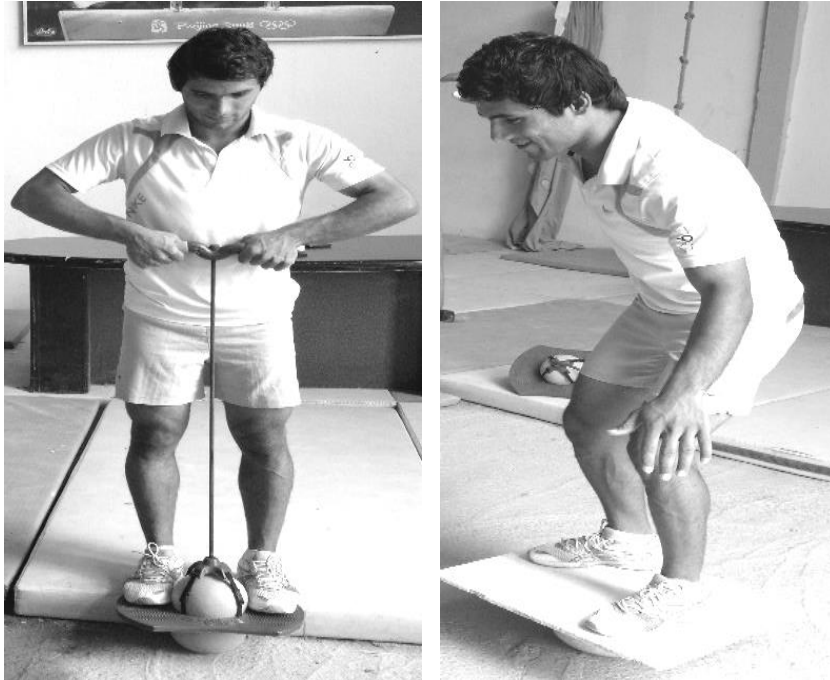Stand stable on convexity balance tool as long as possible more than one time.

Fig (3) Exercise of convexity balance tool.

2- Exercise two:

 Stand on the second tool and make grips with balance as long as possible.

Fig (4) Exercise of second balance tool.

3-- Exercise three:

Stand with partner, one foot on one tool and the other on the other tool, staying balance while making grips as long as possible.

Fig (5) Exercise of third balance tool.

4- Exercise four:

Stand on the convexity tool with partner, and staying balance while making grips as long as possible.

3.8 Post- test:

on Sunday of 2014/9/21 , researchers were conducted the post test on the sample in the physiology lab of the College of Physical Education– Al-Qadisiyah University after the completion of the exercises period of the experiment in Al-Rafidein Sport Club. the researchers, with coordination with the competent of physiology lab, they conducted the balance test at 10 O'clock in the morning of the date above on the research sample, they acquired the data and performed the statistical calculations using (spss) program for this study.

3.9 Statistical methods used:

Researchers used Variance coff. equation and (spss) program for most accurate results through:

-Mean.

- Standard deviation

- Skewness coff.

- (t) Test of the correlated and independent samples.

4- The results and discussion:

After training on the proposed exercises within time and obtaining the necessary data through tests, data presented in tables, and then analyzed and discussed.

4.1 Results and discussion pre and post-tests results for both groups (experimental and control) for balance variable:

Table (3)
Means, standard deviations, calculated (t) value and its significance in the experimental group

	variables	Pre-test		Post-test		Calculated (t) value[•]	Significance
-1	balance	Mean	S.D.	Mean	S.D.	3.947	significant
		194.40	9.208	23.000	20.506		

•Tabulated (t) value at level of significance (0.50), df (4) = 2.132

From table (3), results of pre-test for balance variable shows that mean value was (194.40) and S.D. was (9.208), while results for post-test shows than mean value was (23.00), S.D. was (20.506). and when comparing the calculated (t) value which was (3.947) with the tabulated (t) value (2.132) at the significance level of (0.05) and degree of freedom (4), we find that the value of calculated (t) larger than the tabulated value, which indicates the presence of significant differences in favor of the post-test. that means that the proposed exercises have an impact on the improvement of balance, because the nature of these exercises which elevate the status of kinetic characteristics of the wrestlers. which is reflected on the performance of most grips to the highest degree of Kinetic consistency and earning scores that lead to win, this achieves the objective and the purpose of this study.

Table (4)
Means, standard deviations, calculated (t) value and its significance in the control group for the Search variable (balance)

	variables	Pre-test		Post-test		Calculated (t) value[•]	Significance
-1	balance	Mean	S.D.	Mean	S.D.	4.892	significant
		193.60	7.893	211.80	6.870		

•Tabulated (t) value at level of significance (0.50), degree of freedom (4) = 2.132

From table (4), results of pre-test for balance variable shows that mean value was (193.60) and S.D. was (7.893), while results for post-test shows than mean value was (211.80), S.D. was (6.870). and when comparing the calculated (t) value which was (4.892) with the tabulated (t) value (132.2) at the significance level of (0.05) and degree of freedom (4), we notice that the value of calculated (t) larger than the tabulated value. which indicates a significant differences In favor of the post-test, that means the exercises used by the coach have an effect on improving the balance of the experimental group because all grips and movements depend on this characteristic as well as other kinetic characteristics like (agility, flexibility.. etc.)

4.2 Results and discussion post -tests results for both groups (experimental and control) for balance variable:

Table (5)

Means, standard deviations, calculated (t) value and its significance for the experimental and control groups in the post-tests for research variable (balance)

	variables	Pre-test		Post-test		Calculated (t) value[•]	Significance
-1	balance	Mean	S.D.	Mean	S.D.	1.882	significant
		230.00	20.506	211.80	6.870		

•Tabulated (t) value at level of significance (0.50), degree of freedom (8) = 1.860

From table (5), results of pre-test for balance variable show that mean value was (230.00) and S.D. was (20.506), while results for post-test show than mean value was (211.80), S.D. was (6.870). When comparing the calculated (t) value which was (1.882) with tabulated (t) value (1.860), the value of calculated (t) larger than the tabulated one, that indicates a significant differences between the two groups (experimental and control) in the post-test, In favor of the experimental group. This indicates that the proposed exercises have a certain and clear impact on balance development, and this is due to the strong training units course, which enhances their level and elevate their balance level.

4.3 Discuss the results of pre and post- tests for two groups (experimental and control) to the balance variable:

From (Table 3), results of balance variable of pre and post-tests for the experimental group showed that there was a significant difference for this group in favor of the post-test. The reason of this balance variable evolution, due to the researchers, was that using proposed exercises, which have a major role in the significant improvement statistically in the post-test. and proposed exercises was used in accordance with the nature of the performance to suit the action of the balance variable and the nature of the wrestlers movement.

High-level achievement required focusing on special physical characteristics and identifying their training ways and means. (Amru'llah,1998, P66)

To achieve high level of compatibility we must raise the level of these characteristics, including the balance quality, which it is one of the basic components of the compatibility, it could be stable balance or kinetic balance, and this is what achieved by the proposed exercises in related to nature of performance according to systematic curves . "Balance plays an important role in many sports activities (such as wrestling, gymnastics ... etc.), the balance appears in different body positions, both in the fixed conditions or kinetic. (**Freeq**, 2003, P41)

pivot base area and the amount of the impact of payments competitor to the back of losing the balance has the ability wrestler to take the corners influential to reduce the loss of balance or configuration to process a counter-attack or deception and maneuver and dribbling to get the proper position to perform grab to make the highest score to win, and that change body positions to reduce the height center gravity for pivot base leads to balance the process and keep it as long as possible, and this was confirmed by (Samir Msult 0.1999, p. 210) "that the body be in equilibrium when the line is down from its center of gravity within the base invoked"

From table (4), the results of the control group showed differences between pre and post-tests in favor of post- tests, because this group used some exercises in the training units similar to grips performance , but not included in the balance exercises, as there is no special tools for that as in the experimental group. this appears in table (5) in terms of the differences that have emerged between two groups (experimental and control) in the post tests and in favor of the experimental group, because of using the proposed exercises in which include balance in the course of stability (balance and stability) in some exercise or balance during movement (kinetic balance) in some exercises. Note that the balance appears through individual physiological ability to maintain a certain status of the body during stability and movement, and because the wrestler needs more kinetic equilibrium to perform technical grips, especially chucking grips (kidnapping). therefore, the evolution of kinetic balance has a significant impact on keeping balance. especially when lifting competitor and when try snatched back from above the chest by lowering the center of gravity of the body while raising the competitor by bowing the body to the level of the knees. as it is "the closer of the center of gravity of the body to the supporting area, the chance of equilibrium increase " (**Freeq**, 2003, P12)

5. Conclusions and recommendations:

5.1 Conclusions:

Researchers reached to the following conclusions according to the research objectives and hypotheses within the research sample used and the nature of the methods used in the analysis of the results:

1. The proposed exercises have a significant impact in improving the balance of the Roman wrestling players.
2. According to the nature of the performing of this quality, similar to kinetic work on the floor, training had a major role in the development of Roman wrestling players.

5.2 Recommendations:

According to findings of researchers from conclusions, they recommend the following:

1. Use the proposed training exercises in Roman wrestling training, because of their role in the improving of balance quality.
2. Conduct periodic tests on wrestlers to know their balance level, especially other age categories.
3. Conduct similar researchs in other activities need this quality too much.

-Arabic sources:

- Amir Ahmed Al-Bisatti: Principles and Rules of Sports Training and Applications, Alexandria, Almaarif facility, 1998.
- Samir Msult: Bio-Mechanic of Sports, 2nd ed., Mosul University, Dar Al-Kutob for printing and publishing, 1999.
- Ahmed Abbas Saleh: BasicTeaching Methods of Physical Education, 2nd ed., Baghdad University, 2000.
- Abdullah Hussein al-Lami: basics of Kinetic learning, ed. 1, Al-Teif Press, 2006.
   -Ali Mahmoud Massad: the basic principles of amateur wrestling, Mansoura University, 1997**.**

- Freeq Fa'iq Qasim: the Impact of a training proposal curriculum to develop some special physical Charachterstics and their relationship with the level of the performance of some chucking grips (kidnapping)in Roman wrestling juveniles category aged (16-17 years), unpublished Doctoral thesis, University of Baghdad, 2003.
- Wadee' al-Tikriti, and Muhammad Yassin Hassan al-Obeidi: Statistical SAplications and the Use of Computers in Physical Education Research ,Mosul, Dar Al-Kutob for printing and publishing, 1999.

Supplement (1)

Form of the proposed exercises during experimental training unit group

Sections	Exercise name	Exercise time	Volume (Frequency)	Groups	Rest time between groups
preparatory Section, includes whole training unit	Public and private warm-up	15 min.	All training unit starts warm-up in order to adapt all muscles to work and for all sample respondents, and give a special warm-up for flexibility and working muscle before starting the basic exercises.		
main section, for kinetic equilibrium only	Exercise 1	Up to balance	3 times	3	30 sec.
	Exercise 2	Staying 45 sec.	3 times	3	30 sec.
	Exercise 3	Staying 45 sec.	3 times	3	30 sec.
	Exercise 4	Staying 45 sec.	3 times	3	30 sec.
final section, for all training unit	relaxation	5 min.	Ending training unit by all respondents perform the calm and relaxation exercises		

• Time varies from wrestler to another, according to their ability to balance as soon as possible.