

*** Firstly: The Introduction :**

The most important thing that distinguishes our modern age in the third millennium is the continuous among individuals and countries with the aim of achieving development and progress in various fields of life. Physical education and sport is considered one of the fields in which many scholars and researchers made many researches and studies with the aims of making many resolutions for the problems of humanity. With its modern philosophy.

Physical education became associated with the development of sciences and arts. Countries, especially required no physical effort because of its constructive aims.

Wrestling is considered one of the sportive activities which attracted more interest throughout the ages.

Developed countries exert great efforts to prepare its national teams on scientific bases because international sport became an indicator that reflects the cultural and scientific progress.

Wrestling is based on sciences related to human dynamic activities such as anatomy, physiology, biomechanics, psychology, and physical training.

Abdelhamed Ahmad (1987) says that the world now has acknowledge with the various methods of developing the preparation elements (physical, skillful, planning) till the world champions became convergent in these elements.

Mohammad Hassan Allawy (1992) pointed out that physical training became a science that have its principles and bases because, the essential aim from training is to prepare the player to reach the highest level in his sportive activity.

Mofty Ibrahim (1990) says that planning for training is of importance in order to get progress and raise the standard of young players.

Mohammad Nabawy Al Ashram (1986) believes that the movement of throwing with facing is one of the important movements in the group of back throwing movements, especially when it is made in a correct way because of its effect in ending the competition.

Singer (1980) believes that the dynamic sense helps the player to acquire many dynamic skills and underlying that the success of dynamic performance depends on the physical characteristics, dynamic abilities, dynamic sense.

Ahmad Hussein (1986) says that the sensor dynamic perception could be increased through dynamic learning. So this growth may not be enough if compared with its counterpart that is increased through special exercises.

*** Secandly: The research problem and Its importance:**

Wrestling has a distinct position among other sports because it is the sport of defence and attack between two players everyone of them wants to get more points, and prevent the other player from getting any points. The movements of back curvelness are of the most important movements. Both **Mosad Ali ahmoud (1986) and Muhammad Al-Nabawy Al-Ashram (1985)** agreed that the correctly performed back throwign movements enable the wrestler to achieve the following advantages:

- It is difficult to defend it especially if the player is raised from the carpet.
- It is considered an effective mean to collect agreat number of technical points.
- Sometimes it exposes the other player to the shoulder touch by which the player wins the games.

Both **Muhammad Sobhy Hassanin and Hamdy Abdelmonem (1988)** say that the performance level playes an important role in the training process and this is existed in the players whose levels are high and is a result for all elements in the physical activity.

Hamid Ahmad and others (1986) believe that guiding the movement is one of the most important functions of the nervous system which helps the precision of the movement in space, the tension degree, and the speed of dynamic performance.

Ahmad Zaki Mussain (1986) believes that the dynamic sense perception anables the player to perform any dynamic skill precisely.

Hamid Ahmad and other (1986) add that the effectivieness of training resulted in improving the functions of the dynamic sense system and this is attributed to the **growth** of the dynamic sense system.

Barrow & Macgee (1973) believe that the more training helps the unskilled to control the correct places and movemtns. Also the continuous training helps to develop the **dynamic sense**.

The back throwing **movement** is one of the high difficult degree movements especially for **young** wrestlers.

The documental analysis results for the championships of Ibrahim Mostafa and world champions. Showed the scarcity of the back throwings in the performance of the **Egyption** teams if compared with other teams. There is no local study in **the** researcher's knoledge that handled this part by means of using accrobatic movements.

The researcher believes that improving the technical performance the back thrwing movements **may** highly contribute in achieving more points for the wrestler or ending **the** match by fixing the other player's shoulders. Henc it contributies in rising **the** level of the wrestler's performance.

*** Thirdly: Research aims:**

The research aims carrying out a suggestive training program using the acrobatic movements in order to recognize:

- 1- the effect of the training program by using acrobatic movements on the performance of back throwing movements.
- 2- The effect of the training program by using acrobatic movements on some physiological variables in the research sample.

*** Fourthly: Research assumptions:**

- 1- the training program by using the acrobatic movements has a positive effect on the performance of back throwing movement as well as some physiological variables in the research sample.
- 2- There are indicative statically differences between the experimental and control groups in the post measurement for the performance of the back throwing movements and some physiological variables for the experimental group.

*** Research procedures:**

-The used method:

The researcher used the experimental method following the experimental design to the post and pre-measurement for two groups, one is experimental and the other is the control group to fit for the nature of the study.

-Research sample:

The research sample was chosen by using the intentional method from the young wrestlers in al-Sharkia sport club for the year 2004-2005. they are 31 players, 7 players of them. Were taken to conduct the field study on them. So the main sample became 24 players to be divided into two groups, one is the experimental and the other is the controller. Every group included 12 players.

***Means of data collection:**

To define the ways of data collection, the researcher reads several scientific references and previous studies to define the most suitable way to measure the skillful performance in addition to the measurement of the functional efficiency for the vestibular system and this resulted in:

-Firstly: Measurement of the skillful performance:

The skillful performance was measured by referees including 3 international referees from Ismalia zone for wrestling through evaluation form for the skill performance for the movements of the research. The form was designed relying on the international law for wrestling having the conditions of the technical movement for this position by giving one degree from 4 where the referee gives a degree (point) and the average degrees is taken.

-Secondly: The test of measuring functional effectiveness for the vestibular system:

It is a criterion test that is used in specialized physical education schools in training in gymnastics in Soviet Union.

-Thirdly:

The researcher used the vertical jump test to find for the nature of the study and sample under study.

***the training program:**

***The basic sides for the program:**

- the program was applied from 1/1/2005 to 1/4/2005.
- The program lasted for 12 weeks.
- The number of training unit in every week is 3.
- The average time for the training unit is from 30 to 45 minutes.
- The preliminary time is 10 minutes.
- The main part takes not less than 15 minutes.
- The final part takes 6 minutes.

***Components of the program:**

-Warming up exercises:

it makes the player reach the full preparation to make the physical exercises and the acrobatic exercise which is important to improve performance of the skills under study. In this exercise, the researcher concerned with preparing joints and ligaments and preparing the respiratory and nervous systems.

Acrobatic and skillful exercises:

They are exercises related to the skills under study, acrobatic movements, as well as the physiological variables under study.

-Relaxation and smooth exercises:

They are exercises to be made after the above exercises in order to reduce the number of heart beats to help players to recover and adapt with the training effort as well as nervous relaxation.

***Main study :**

The researcher made the pre-measurement on two groups (the experimental and control group) from 26/12/2004 to 28/12/2004. He also applied the experiment on the experimental group from 1/1/2005 to 1/4/2005 or 12 weeks with 3 training units in every week. As for the control group, the researcher used the same program except the acrobatic exercise. After finishing the researcher applied the post-measurement on the

two groups (the experimental and control group) from 2/4/2005 to 3/4/2005 with the same tests, conditions, and circumstances. The results of measurements were put in lists to begin treating them statically.

***The statistical method**

- The Mathematical average. -The normative deviation.
- The twist moduls. -The interrelation moduls.
- “T” test. -The progress percentage aquation.

*** Conclusions:**

- The acrobatic exercises have a positive effect on developing functional efficiency of the vestibular system which resulted in improving the skillfull performance for the back throwing movements.
- There are statically indicative differences between the post and pre-measuments for the control group in the variables under study.
- There are statically indicative differences between the two experimental and control groups in the post measurement in the variables under study in favor of the experimental group.
- The experimental group was more than the control group in the percentage of progress for all the variables under study.

*** Recommendations:**

- the usage of the training program in training processes in order to improve the skillfull performance for the back throwing movements.
- The usage of acrobatic exercise in wrestling training especially in the period of preparing younger players because of its importance in rising the performance.
- Working towards developing the dynamic balance as one of the most important physical components related to the requirements of performing back throwing movements.
- Making similar studies on different samples, fields and ages.



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The Efficiency of the Acrobatic Movements in Improving Performance of Back throwing Movements and Some Physiological Variables For Wrestlers

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