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# COMPARATIVE STUDY OF NEAR SHOOTING FROM JUMPING BY THE LEG (THE WEAK- THE STRONG-THE DOUBLE) AND ITS RELATIONSHIP WITH THE SHOOTING STRENGTH IN HANDBALL

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## Abstract

Handball is considered one of the very fast games both in the ball passing or shooting it and as the number of goals is the borderline to end the game, shooting to the goal is purpose of the handball game, so the shooting skill is considered one of the most important basic skills and all the skills become useless unless unfinished by shooting the goal. The research aims to identify the differences between near shooting from jumping by the leg (weak, strong, double). As well as to identify the relationship between the near shooting from jumping by the leg (the weak- the strong -the double) and the strength of shooting of the players of the University of Baghdad and Al- Mustansiriya of handball and the participants in the championship of the Iraqi universities for the season 2013-2012. The research hypotheses included that there are a statistically significant differences between the shooting from jumping by the leg (the weak- the strong- the double) and in favor of a strong man. And there was a significant correlation between the shooting from jumping by the leg (the weak- the strong- the double) and in the favor of the strong leg, and the is a significant relationship between the shooting from jumping by the leg (the strong – the double) and the shooting strength and non-significant correlation relationship between the shooting from jumping by the weak leg and the shooting strength by the handball. The most important conclusions of the research is to achieve research hypotheses, and the adoption of the players on the strong leg in the shooting without the adoption of alternative options, such as using the weak leg in the shooting to get rid of the defensive positions which makes the loss of scoring opportunities during performing the skill of shooting is very unlikely.

**KEYWORDS: Handball. Shooting. Weak. Strong. Double.**

## 1. INTRODUCTION

The skill of shooting is considered one of the important motor skills in the sport of handball, as all movements of attack aimed at finishing shooting on an opponent's goal regardless of the form and the type of skilled performance. The shooting is the most important duties in the practice of handball and the result of whole game depend on the success of this skill. The development of handball sport in our dear country and reach out to a higher level requires study and research in solving the problems that hinder its development. Through the follow-up of researchers and research sources and their observations of many football matches Iraqi handball as they are specialized in the game, they noticed unavailability of sufficient information about the reality of the near shooting using the leg from jumping (the weak- the strong- the double) and its relationship with the shooting strength . As well as the focus only on the strong leg in performing the skill compared to developed regional and global levels, making it easier and reduces the defense of the player during shooting and then the attack fails. As well as the lack of studies and researches show the level of variation in the use of the leg (the weak- the strong-the double) in the shooting from jumping and its relationship with shooting strength.

From here comes the importance of research in doing a comparative study of the shooting from jumping by the leg (the weak-the strong-the double) and its relationship with the shooting strength. Thinking of researchers that weak balance of goals of our clubs and national our teams results from the lack of interest in the options of performance the shooting skill from jumping and optimal use of it due to the lack of training and rely only on a single type of jumping which make its defense easier and thus failing the attack and the loss of efforts to deliver the ball to this point and the study aimed to identify the differences between the near shooting from jumping by the leg (the weak-the strong-the double ) of handball reel, as well as to identify the relationship between the near shooting from jumping by the leg (the weak-the strong-the double) and the strength of the shooting by handball , the researchers have assumed that there are statistically significant differences between the near shooting from jumping by the leg (the weak-the strong-the double) by handball as well as there are connectivity relationships between the near shooting from jumping by the leg (the weak-the strong- the double) and the strength of the shooting.

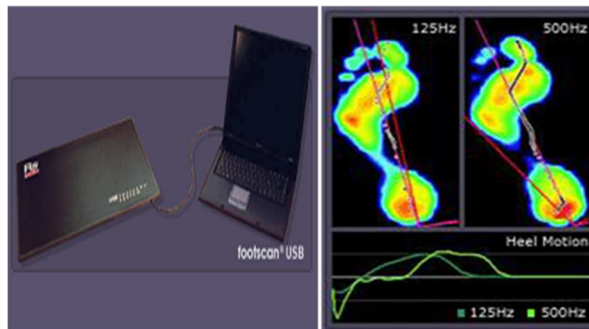
## 2. MATERIAL AND METHODS

The correct identification of the quality of the research to be going into determines the correct path for the success of the researcher and his research and this depends mainly on the basis of the nature of the problem and the objectives of the research, so the researchers chose a descriptive approach due to its suitability with the research problem and the extent of its application to the objectives and hypotheses.

**The research sample:** The correct choice for the research sample is from pedestals and important factors in the success of the work of the researcher by the application of steps or vocabularies of his research scientifically as " researcher chooses sample that represent the original community (according to the point of view of the researcher), which is studying honest representation." (15: 222) Therefore, the researchers chose the sample by the intentional way who are players of Baghdad University and the University of Mustansiriya of handball who are participating in Iraq's universities Championship in 2013-2012. The total number of research sample (22 players) after excluding goalkeepers and players who have not yet completed the skill of shooting to represent the proportion of (22.2%) of the total nine championship teams that participate in the championship.

**The used tests:**

**1. Vertical jump test of stability: (16:62)**



**Image (1) scanner device (FOOT SCAN)**

**2. Test of ball throwing at full power on the goal: (16:62)**



**Image (2) radar (Radar)**

**2. RESULTS AND DISCUSSION**

**Table 1 shows the value of calculated (T) and tabular comparison between the shooting of jumping weak and strong legs**  
**Strong man weak man**

The strong leg		The weak leg		Arithmetic mean	Standard deviation	Value of calculated (t)	Value of tabulated (t)	Significance of differences
M	SD	M	SD					
1638	359.48	1054	112.37	584	255.61	2.28	2.16	Significant

**Table 2 Shows the value of calculated and tabulated (T) for comparison between the shooting from the jump by the strong and double leg**

The strong leg		The double leg		Arithmetic mean	Standard deviation	Value of calculated (t)	Value of tabulated (t)	Significance of differences
M	SD	M	SD					
1638	359.48	1588	357.74	50	65.52	0.763	2.16	significant



**Table 3 Shows the value of calculated and tabulated (T) for comparison between the shooting from jumping by the weak and double leg.**

The weak leg		The double leg		Arithmetic mean	Standard deviation	Value of calculated (t)	Value of tabulated (t)	Significance of differences
M	SD	M	SD					
1054	112.37	1588	357.74	534	236	2.26	2.16	significant

Through tables (1) (2) shows that the value of calculated (T) is greater than the tabulated value which indicates that a significant difference in favor of the strong leg jumping. The researchers attribute this to outweigh the shooting from jumping by the strong leg is normal because of the natural mechanism for using the opposite leg of the throwing arm which give a preparatory greater extent and helps to increase the power generated by the motor jumping and motor transport from the leg and the trunk and then shooting from the arm. This is confirmed by (Sareeh Abd Al- Karim) in that the aim of preparing for the shooting from jumping by the opposite leg man of the thrower arm as in handball is to increase the range of motion which helps to increase the speed and momentum of the body. (5: 162) and the adoption of the players on the strong leg in shooting , as well as the concentration of the trainers in their training units to perform the skill of shooting of the strong leg , which helps to develop it and then its superiority. Physiology scientists have confirmed that however, that part of the events have become involuntary and the motor system in the brain may be affected by these events as a result of the ongoing exercise and repetition motor sports so acquires a high degree of workmanship. (17: 149)

Through the table (3) shows that the value of calculated (T) is greater than the tabulated value which shows that a significant difference in favor of the double jump leg. Researchers attribute the superiority that the shooting from the double-jump easier on the player's performance compared with using a weak leg. In addition to feeling the player with the help of a strong leg to the weak one during the raising for shooting and gained two points, the first is the sense of failure of the weak leg's ability to provide adequate force to the lack of repeated use and focus on the exercises on the shooting from the jump, and the second point during performance and strength resulting from the pushing by the feet together that make it the preferred way in performance. As said (Yasser Dabour) in that "as the basic principles of training is their possession multiple types and from different modes of shooting." (18: 143) and this is the first assumption of the research hypothesis.

**Table 4 shows the correlation between the shooting by the strong leg and the strength of shooting.**

variables	Value of calculated correlation coefficient	Value of tabulated correlation coefficient	Significance
The strong leg Shooting strength	0.627	0.532	Significant

**Table 5 shows the correlation between the shooting from the double-jump and the strength of shooting.**

variables	Value of calculated correlation coefficient	Value of tabulated correlation coefficient	Significance
The weak leg Shooting strength	0.039	0.532	Not significant

Can be seen from the table (4) that there was a significant correlation between the shooting from jumping by the strong leg and strength of shooting, the researchers attribute it to the high-skill of members of the sample as a result of training and focusing on the strong leg during performance of the skill. (Mohammed Mahmoud) said that every grouped and individual game has basic skills and by which access to the performance of the game in the good form and required as the higher the technical performance of basic skills , increased the general level of the game, and achieving success will be associated with the good technical performance for any game was. Whenever the player was able to perform his complex and simple work that is required to be performed accurately and easily, a player become with a high-performance art. (16:63) (21: 3) and one of the skilled technical performance characteristics of the shooting from jumping with handball is full workmanship and the interaction and coordination between the movements groups covered by the skill such as speeding and strength in performance at same time and the proper time depending on the speed and movements of the defenders.

It is clear from the table (5) that there was a significant correlation between the shooting from jumping by the double leg and the strength of shooting, the researchers attribute that to the strength in the legs during performing the skill of shooting from the double jump. This is confirmed by (Dia Al-Khayiat and Nofal Al-Hayali) as mentioned about what the handball player should have as the physical abilities, including strength in being able to get the jump on the high balls, and scrolling or shooting on the goal from jumping, strength in throwing which enable him to shoot on goal, in addition to the physical strength of the player earn him self-confidence and the ability to face rival and resistance him. (7: 383) in addition to the possibility of concentrating the sample in using another type of jump from the usual to perform the skill of shooting and used to exploit the gaps and opportunities in the opponent's defenses. (Ahmed Orabi) said that in order to achieve effective shooting and achieve its objectives which is the goal should be characterized by the highest level of concentration for investment opportunities and speed to surprise the opponent and exploiting

defensive gaps and accuracy to ensure the success of the shooting in addition to the multiplicity of species and under different circumstances. (2: 42) and this is confirmed by (Ammar Darwesh) that he "shooting must be characterized by speed and surprise, strength and timing being on than readiness of the rival player by resampling the preparatory period, diversification, and the changing in the selection of shooting corners that fails the demarche of defenders in repelling the ball or goalkeeper." (9:36)

**Table 6 shows the correlation between the shooting by the weak leg and shooting strength**

variables	Value of calculated correlation coefficient	Value of tabulated correlation coefficient	Significance
The double leg Shooting strength	0.597	0.532	Significant

It is clear from the table (6) that there is non- significant correlation relationship between the shooting from jumping by the weak leg and the strength of the shooting , the researchers attribute it to the lack of using the weak leg in the performance of the shooting skill from jumping for many reasons, including the lack of urging the coaches to their athletes on training by using other types of shooting from jumping and dependence on the opposite leg in performing the skill making it easier to the defender to perform his defensive duty by reading the opponent thinking and anticipate his movement and then the right move and respond to an attack and failing the shooting process. It is noteworthy that (Ahmed Khamis, quoting from Mohammed Al- Walily) in that one of the elements of a successful defense is a good expectation and understanding the duties of the defender and proper timing in the opponent defense. (1:41) as organized and programmed training in a scientific way of the skill adds to the player other options in the implementation of his offensive duty. It is confirmed by (Laith Ibrahim, quoting from Saad Mohsin) in expert opinions regardless different sources of their scientific and practical culture that the training program will inevitably lead to the development of achievement, as it is built on a scientific basis in the organization of the training process and programmed under the supervision of trained professionals under good training conditions as place and time and the used tools. (4:98) In addition, the researchers believe the reason for not using them by the players due to the difficulty of skill and learning performance and habituation on them because they need a player has a different and distinct specifications, the strength of the jump and its height makes it easier for the player to perform skillfully High and mastery, as well as speed and strength in performance, making it difficult for the opponent's defenses in response to the shooting process. It can be seen clear differences in the level of performance between the player and another in the manner of execution and timing and vary depending on the nature of the performance of the shooting according to the specifications of each player and the center of the play centers. (19: 5)

#### 4 CONCLUSION

1. Using the strong leg in the shooting from jumping more than the shooting from jumping by the weak leg.
2. Using the strong leg in shooting from jumping more than the double shooting
3. Using the shooting from the double jumping more than the shooting by the weak leg.
4. There is a significant correlation relationship between the shooting from jumping by the strong leg and the shooting strength
5. There is a correlation relationship between the double shooting and the shooting strength.
6. There is no correlation relationship between the shooting from jumping by the weak leg and the shooting strength.

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# COMPARISON OF SOME KINEMATIC VARIABLES OF LAYUP BASKETBALL OF OLDER AND YOUNG PLAYERS

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## Abstract

Basketball is a game that requires being fast in both attack and defense with a precision in tactical and technical preparation. The layup technique can effect on the score dramatically and provide teams winning of the game. However, strength, speed and accuracy are the basic requirements interact with technical for an effective layup, and the kinematic analysis is a type of biomechanics analysis that care of descript the movement. Therefore, the objective of this study was to investigation biomechanical parameters of layup which can effect on the score and to find out the difference between the layup techniques of players experienced and younger group player of the same university team. A descriptive research design used in the current study .The population of this study was undergraduate male basketball players of the University of Mosul -Iraq, for the academic year 2012-2013, each sample included (6) male basketball players; young players=(176.7 cm tall), (18,3 years age) older player =(179.6 cm tall), (23,3 years age). The procedure of this research started with warm up for 15 minutes followed by passing, shooting, and the players performed the layup technique by repeated 3 times and the best performance of layup was selected to analyze. Data were analyzed using SPSS version 19.0, Mean variables compared by T-test at 0.05. Programs of Maxtra and Dartfish used for analysis. This study conclude that -The length and speed of first and second step for older players higher for the older player than the youth, The older players were better in all tested variables (horizontal and vertical distance, Hips Displacement for jumping, Height of palm, distance of take-off from basketball).

## 1. INTRODUCTION

Basketball is a game that requires being fast in both attack and defense with a precision in tactical and technical preparation.

Recently in many countries in the world basketball is the second most popular game with its vision attracting techniques.

One of the most important skill in basketball is layup, it is one of the five shoting in basketball have two steps and hop (Al teckretee, 1988, p382). The layup technique can effect on the score dramatically and provide teams winning of the game. The kinematic is a science that interest in study the outside discretion for the time and place of movements without the powers (Luay. Ghanim, 1987, p47). However, strength, speed and accuracy are the basic requirements interact with technical for an effective layup, and the kinematic analysis is a type of biomechanics analysis that care of descript the movement and it's have three kinds of analysis :quantitative, specific, and educational(Resan,K. and Nejah.M ,2002,p133). Therefore, the objective of this study was to investigation biomechanical parameters of layup which can effect on the score and to find out the difference between the layup techniques of players experienced and younger group player of the same university team.

The Research problem was determination of the effect of layup techniques on the score of the basketball games of university players in Mosul, this require proper training methods in which players can practice the best techniques based on the outcomes of analyses.

## 2. MATERIAL AND METHODS

A descriptive research design used in the current study were. The population of this study was undergraduate male basketball players of the University of Mosul -Iraq, for the academic year 2012-2013, each sample included (6) male basketball players; young players=(176.7 cm tall), (18,3 years age) older player =(179.6 cm tall), (23,3 years age).the material were:( questionnaire form, Camera, 7 basketball, bench top scale, length scale).The procedure of this research held in physical education college of Mosul university, started with warm up for 15 minutes followed by passing, shooting, the players performed the layup technique by repeated 3 times, A camera was recording vertically on the path the players and the best performance of layup was selected to analyze. The kinematic variables of the research were: First step length, second step length, Speed of second step, Knee angle, Height of palm, Distance of take-off from basket, Horizontal distance, Vertical

Al distance, the distance of hip flight, First step time, and Second step time. Programs of Maxtra and Dartfish used for analysis. Figure -1- show:-The lay-up scoring of the older (23) years old (Fig-1-A)and young (19)years old (Fig-1-B)describing the path of the ball, the palm and the horizontal and vertical distance of center of gravity and the differences between these variables. Data were analyzed using SPSS version 19.0, Mean variables compared by T-test at 0.05.



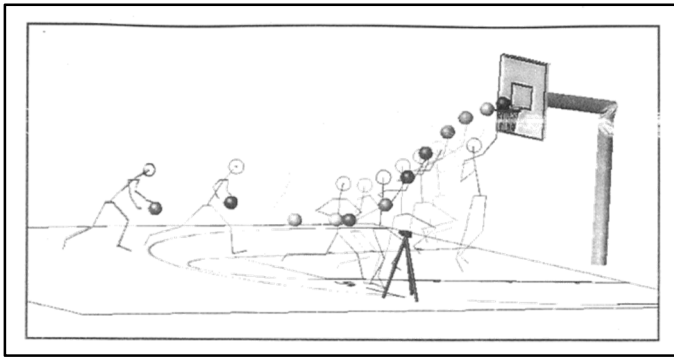


Figure -1- lay- up scoring and camera position of senior player

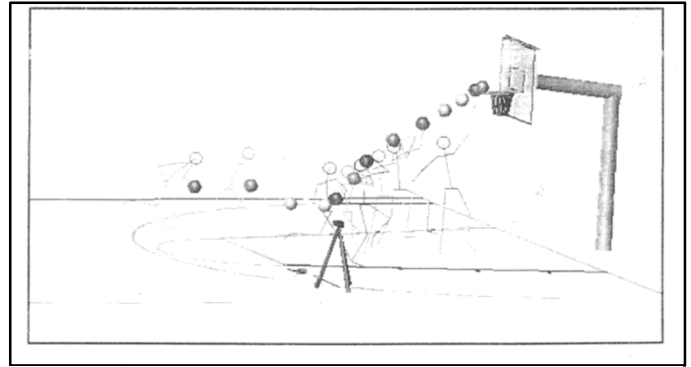


Figure -1- lay- up scoring and camera position of junior player

### 3. RESULTS

Table 1: statistically parameters for both class describing the differences of the first and second step pf lay-up scoring

	SENIOR		JUNIOR		T
	M	SD	M	SD	
First step length	130.1	1.4	96.39	2.57	23.08
Second step length	112	1.15	86.89	4.33	10.17
Speed of firs step	3.43	0.01	3.13	0.09	2.78
Speed of second step	7.69	0.25	5.96	0.21	10.57

The length of first and second step of senior group were 130.1, 112 cm respectively, compared to 96.4 cm in the first step and 86.9 cm in the second step of junior group .

The speed in the first and second steps of the senior group were 3.4m/s and 7.7m/s whereas the junior group have slower score of 3.1 and 6 m/s.

Table 2 statistical for both class describing the differences of the knee angle and the height and the distance of take –off from basket

	SENIOR		JUNIOR		T
	M	SD	M	SD	
Knee angle	122	1.46	124	0.7	2.57
Height of palm	183.6	1.3	182.4	1.07	1.59
Distance of take-off from basket ball	118.2	1.34	109.30	1.1	11.55

The knee angle of senior group and junior group were 122, 124 degree respectively, the height of palm of senior and junior group were 183.6, 182.4cm respectively, Distance of take-off from basketball of senior and younger group were 118.2, 109.30cm respectively.

The horizontal and vertical distance of senior group were 58.48, 25cm respectively, compared to 49.02 for horizontal and 14.4 cm for the vertical of junior group?

The hips displacement for jumping of senior and senior group were 58.77,50.88cm, while time of first and step of senior group were 0.52,0.20sec. Respectively, compared to 0.40, 0.20 sec. of junior group respectively.

### 4. DISCUSSION

The differences in speed and length depends on the coordination of strength, power and explosiveness for the older group as Mehdi said "when the player extend the joints of the body when he break out get more distance and more movement area(Mehdi,N. and others,1988,p24).

The average of knee angle value of older group was less than youth group while the height of palm and the distance between take-off and basket were more than for youth group.

Older group had more speed and length of the steps than the youth group especially of the lower body so that they made more jump and more high, but because the less experience for young players, their knee angle was less.

Horizontal and vertical distance for older group had higher than young .Hips Displacement for jumping for older was higher than young. Time of first step for older was higher than young.

Time for second step was same for Bothe of them because the strength of older group was higher so that they can jump better .Thus, there were significant differences in the examined variables studied between the older and the youth groups, these differences may attributed to experience gained from the exercises as well as using their center of mass by break out throw

opposite, in this aspect Al Rasheed(1987) reported that "the objective of the player is jump vertically not horizontally in the final steps so that he must to change his horizontal power to vertical power"(AlRasheed thaher, 1987, p146).

## 5. CONCLUSION

The length and speed of first and second step for older players higher for the older player than the youth.

The older players were better in all tested variables (horizontal and vertical distance, Hips Displacement for jumping, Height of palm, distance of take-off from basketball)

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# SOME MENTAL VARIABLES AND THEIR RELATIONSHIP TO THE COMPETITIVE BEHAVIOR AND MOTIVATION OF ATHLETIC ACHIEVEMENT FOR SENIOR PLAYERS OF SABER

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## Abstract

The practice of fencing, whether during training or competition exposes the player to a lot of those circumstances and situations of different psychological attitudes, which are often accompanied by excitement and emotion, especially in the course of the competition, as sporting competitions linked with the changed emotional situations that characterized by its intensity to change attitudes of victory and defeat from moment to the other within the athletic competition and thus athletic competition requires that the player should have some mental features to be enable to control his behavior and his actions as the athlete achievement requires the need for a swordsman to use his maximum physical , skilled , tactical, mental abilities to reach to the best possible level. The research problem lies in that most coaches overlook the psychological aspect and focus on the physical and skilled aspects of the game to reach to the best levels on despite scientific studies that benefit and constructed psychological aspects

The study aimed to identify some of the mental variables of the senior saber players. And to identify the relationship between some mental variables and the competitive behavior of the senior players of saber.

The most important results are the presence of significant correlation between some mental variables and the competitive behavior of the senior players of saber. And the presence of a significant correlation between some mental variables and motivation of athletic achievement for senior players of saber

**KEYWORDS: The behavior. Competition. Motivation. Mental. Fencing.**

## 1. INTRODUCTION

The studies and researched that specialist in the field of sports are still searching and interested in preparation of the player for competition from all the physical and technical skills and tactical aspects as well as the psychological aspect which enters in the integrated preparation for all players particularly those in the upper levels, and since the athletic activity exposes the player in general to the positions of many psychological pressures vary in their severity and their impact on the player from one activity to another, especially when the practice turn out to competition, and the two do not differ in that the practice of fencing whether during training or competition exposes the player to a lot of those circumstances and situations of different psychological attitudes often that are accompanied by excitement and emotion, especially in the course of the competition as athletic competitions linked with the changed emotional situations that characterized by their intensity to change the situations of win and the defeat from moment to another within a single athletic competition and thus the athletic competition requires that the player should have some mental features to be enable to control his behavior and his actions, as athlete achievement requires the need of a swordsman to use his maximum physical , skilled and tactical and mental abilities to reach to the best possible level .and for the importance of mental variables in all sports, including fencing and in line with the progress of this sport in the Arab and international championships was the importance of this study to identify some of the mental variables and their relationship with the competitive achievement and the athletic motivation for the senior players of saber .The research problem lies in that most of the coaches in the field of fencing does not give importance in the training modules by using mental capabilities of fencing in the implementation of performance and this is what is reflected in the level of the player in the competitions and not getting advanced positions and his ideas are limited, and the goal of search: -

1. To identify some of the mental variables of the senior players of saber
2. To identify the relationship between some mental variables and competitive behavior of the senior players of saber.
3. Identify the relationship between some mental variables and motivation of achievement for the senior players of saber.

While the research hypotheses were: -

1. There is correlation with statistically significant differences between some mental variables and the competitive behavior of the senior players of saber.
2. There is correlation with statistically significant differences between some mental variables and achievement of the senior players of saber.

## 2. MATERIAL AND METHODS

One of the things that should be followed during selection of the sample that should represent the original community by real and honest representation so the sample of the research represented in the form of players of Iraqi clubs of fencing of the seniors by using saber weapon and participants in Iraq championships in Maysan province for the year 2014-2015, the research sample has reached (43) players representing the percentage (79.62%) of the total community and totaling (54) player, the selection of the research sample was done by the international way style, the researcher excluded for the national team players that totaling (6) players, and rule out also (5) players for the exploratory experience and the sample homogenous as they are of the same class of seniors .

**Mental tests used in the search:** Borden test - (focused attention) :( Ahmed Mohamed Khater and others .1996: 532)

- **The purpose of the test:** is a measure of the concentration of attention.

- **Tools:** Dispersion optical and audio device -scale paper of attention - stopwatch- pen.

- **Test specifications:** When you give the start signal, the device will operate and gives a flash of light every 5 seconds with exciting voice at a rate of one stroke per second (60) beats in a minute that the device is placed on one meter away from the tester and in the level of his view.

- **Conditions:** during hearing the word (stop), a sign placed beside the written off numbers at the time the device is turned off automatically.

- **Registration and calculating the results:** The following significances was extracted:

U1 means the net productivity of the work when measuring severity of attention in the quiet situation.

U2 means the net productivity when measuring the severity of attention in the case of dramatic situations.

Significance of concentration = the difference between the two cases.

Attention concentration  $B = U1-U2$

**Test of (Raven) of the sequential matrices to measure intelligence) translation by Fakhri Al-Dabbagh, 1983: 34)**

the idea of this test is based on perception that the relations between the range of formats, and this test includes (60) matrix distributed on five sections (a, b, c, d, e) and each part consists of the (12) matrix for each of them a separate part by asking the tested one to choose a form between (6 or 8) forms that be appropriate to put him in the allotted place in the matrix or the original group may consists of (9) forms and there are actually (8) forms available while the ninth one is non-existent, and the tested one is requested to study the eight existing forms chains in any way he pleases both lengthwise or width and then draw the relationship existing between them and then move to the second set of forms that contain (6) forms and choose the appropriate form including the one that is consistent with the original group. And that these groups ranging in difficulty so that the group in section (e) require a high degree of intelligence to choose the correct and appropriate format that is consistent with the original group, The custom test time is one hour.

**Registration and calculating the results:** The test results of the sequential matrices were arranged in a simplified manner, so that the final score can be putted with the help of the answer key on the format answer of the test , as calculated for each correct answer only one degree which is the highest score of the test (60) degrees.

**Reaction speed test (1)** (Mohamed Sobhi Hassanein, 1995: 188)

**The purpose of the test:** measuring the reaction time.

**Tools:** an electronic device for measuring the reaction speed, chair.

**Device components:** the device consists of two boxes , the first one consists of the operating and the control key on the top of the box as there is a counter (electronically) to measure the time it takes for tester to respond to stimuli and this box restricted from the tester which do the test while the second box which consists of three lights (red, green, yellow) and the two boxes linked together with wire ends with the study which is used to stop the stopwatch after the emergence of stimuli by clicking on them.

**Specifications of Performance:** the player sitting on the chair and puts his hand on the study of the device and ask him to press on the study, during emergence of the desired signal begins the work of the electronic watch and the tester click on the study, when the signal disappears, the stopwatch stops (counter) and so recorded the reaction time that is taken.

**Conditions:**

- Each tester has three attempts.
- Giving adequate opportunity to the tester to do the test of the device before conducting direct measurement.

**Registration:** Registration for the tester the best of the three attempts (the attempt with the least time).

That the extent of the stability of this test is (0.871) and objective (0.984).

**Psychological scales used in the research:** Scale of competitive behavior :( Mohammad Hassan Allawi 1998: p. 43)

The two courses of Harris (Harris 1984) built competitive behavior questionnaire to identify the competitive behavior of the athletic player who needs to care, guidance and training on mental skills, and includes in its initial image (50) sentences that should be answered by the player on a three-scale gradient (always - sometimes - never) , "Mohammad Hassan Allawi," quoted the scale and converted it to Arabic and abbreviated it to (20) phrases and a statistical transections were founded finding the use of Cronbach's alpha stability which amounted to(0.78).

In order to extract the total score of the scale, the degrees that obtained by each player in his answers for all the paragraphs of the scale were collected, as a higher degree of the scale (60) and a lower (20) with an degree of neutrality the sum of the degrees of scale of appreciation (1-2-3) and divided on (3) and multiply them in the number of paragraphs and thus the degree of neutrality will be (40) degree.

Scale of motivation achievement: (Muhannad Abd Al- Hassan 2004: 36).

the scale includes (40), 12 statements for the field of the motive of ability , 15 statements for the field of motive of success achievement , 13 statements for the field of motivation of avoiding failure and the scales ensure five alternatives (very large degree - a large degree - a medium degree - a small degrees - very small degrees) and Wils found the truth of the scale by using logical honesty and for finding stability , alpha coefficient was used on a sample of athletes have reached (764) male athlete and (253) female athlete and was reached to the following transactions : 76% for field of ability , 0.78% for the field of motivation of success achievement , 0.76% for the field of motivation of avoiding failure .

"Mohammad Hassan Allawi" has Arabized the scale and applying it to the Egyptian environment and was limited on two dimensions : motivation of success achievement and motivation of avoiding failure , and the scale paragraphs amounted to (20) paragraph and the scale included paragraphs of success achievement namely (2-4-6-8-10 -12-14-16-18-20) are all positive except sentences (04.08.14) are negative .The highest degree reached to (100) and a lower (20) with the degree of neutrality of the sum of the degrees of scale appreciation (1-2-3-4-5) and divided on (5) and multiply them in the number of paragraphs so the degree of neutrality is (60) degree.

**The scientific basis of the tests that used in the research:** The researcher aimed to adopt the scientific bases in the tests for the purpose of determining the validity of these tests selected over any validity and reliability and objectivity.

**Test sincerity:** Test sincerity means that the test measure what is putted to test, by other means this test measures the function that claims to be measured and does not measure something else instead of it or in addition to it." (Abdullah Abd Al- Rahman 1999: 154) .The researcher found the coefficient of tests sincerity through the use of self-honesty coefficient which is "sincerity of experimental grades of the tool for the real grades after correcting them from the effects of guessing and thus become true grades of tool is the balance or the self-test, which is attributed to him sincerity performance (Layla Al- Sayed Farahat 2001: 143), according to what is shown in Table (1).

**Table 1: shows the stability coefficient and the coefficient of self-sincerity and the degree of freedom of the tests used in the research**

Rank	Tests	Coefficient of stability	Coefficient of self-sincerity
1	Intelligence test	0.82	0.90
2	Test (Borden Anfimof) to measure the concentration of attention	0.91	0.95
3	Test of reaction speed	0.94	0.96
4	Test to measure the competitive behavior	0.97	0.98
5	Test to measure motivation of the athletic achievement	0.85	0.92

\* Tabular value (0.81) at the level of significance (0.50) and the degree of freedom (4).

Fastness of test: means "if a test was conducted on a same then this test is re-tested on the same sample and under the same conditions, the results that appeared in the first time are the same that appeared in the second time : Mustafa Hussein Bahi 1999: 5). The researcher has been used to find the coefficient of stability method of test and re-test as it is one of the most suitable methods for testing the stability, the first test was conducted at 20.09.2014 and the same test repeated again after 5 days in 09/24/2014 on the same sample that consisting of 6 players. then the researcher used the simple correlation coefficient (Ieperson) to see the stability of the tests and after discovering in the table about the significance of correlation coefficients found that the calculated value for each test is greater than the tabular value that amounted to (0.81) and the degree of freedom of 4, and this confirms that the test has a high degree of stability. Table 7 shows the stability coefficient and the coefficient of self-sincerity and the degree of freedom of the tests used in the search.

3,5,2 objectivity of the test: the objectivity means "clarity of instruction in terms of testing management and giving a degree which gives the same results no matter with the correctors "(Thuqan Obaidat 1988: 159) because the tests that were used in the research is far from self-determination and bias as they are clear and easy to understand by the members of the sample and based on clear



measurement tools, because the results of the tests are recorded in units of (time / sec, degree / specific time, degree), which made the researcher prepared the tests that used in the search of a high objectivity .

### 3. RESULTS

**Table 2: shows the arithmetic means and standard deviations of the research variables**

Rank	The variables	The statistical values		Unit of measurement
		M	SD	
1	Intelligence	38.90	2.68	Degree
2	Concentration of attention	81.54	14.08	Degree
3	Reaction speed	0.375	0.094	Degree
4	The competitive behavior	41.80	2.46	Degree
5	Motivation of the athletic achievement	65.46	5.21	Degree

**Table 3: Shows the calculated and tabular correlation coefficient values and the level of significance between mental variables and scale of competitive behavior**

Rank	Variables	The competitive behavior	Value of the tabulated correlation	Level of significance
1	Intelligence	0.703*	0.304	Significant
2	Concentration of attention	0.398*	0.304	Significant
3	Reaction speed	0.370*	0.304	Significant

\*with degree of freedom (41) and level of significance (0.05)

**Table 4: Shows the calculated and tabular correlation coefficient values and the level of significance between mental variables and scale of the athletic motivation achievement**

Rank	variables	Athletic motivation achievement	The value of the tabulated correlation	Level of significance
1	Intelligence	0.441*	0.304	Significant
2	Concentration of attention	0.822*	0.304	Significant
3	Reaction speed	0.330*	0.304	Significant

\* With the degree of freedom (41) and the level of significance (0.05)

### 4. DISCUSSION

Through what has been presented in the tables (2,3,4) note that there is significant correlation between some mental variables (intelligence- concentration of attention – reaction speed) and the competitive behavior of the senior players of saber, and researcher attributed the cause of the moral relationship to the level of mental abilities owned by senior fencing players by the epee weapon through experience and what is reflected by the fencing exercises to develop the mental side of the players being from the sports that develop the mental capacity, and this was confirmed by (Ashraf Mohammed Ali and others .2002: 115), the higher the player's experience and expanded his knowledge and information and his ability to act more accurate and larger in using it in the future and his performance become quick and easy, and his intelligence develops (1) and also the researcher sees whenever the trainer was able to coach attention with the mental aspect of the use of exercise and their performance and replication in the training modules well lead to the development of the ability of the players to use their physical abilities and motor , tactical and psychological skills and their psychological and mental readiness to suit with the requirements of the appropriate competitive behavior .

And also the existence of a significant correlation between some mental variables (intelligence – concentration of attention – reaction speed ) and measurement of athletic motivation achievement of the senior players of saber , and the researcher attributes the cause of this correlation to the level of mental abilities of the players , which reversed on the level of measurement of athletic motivation achievement clearly where the performance in the sport of fencing requires high intelligence to take the most appropriate and fastest decisions, and the speed of decision making depends on the swordsman information and previous experience gained during the training, and this was confirmed by (Mahmoud Abd Al-Fattah, 1995: 27) : the successful implementation of the tactical and skilled duties of the player depends on the level that reached by his mental abilities through competition and continuous training and undoubtedly that the greater the knowledge and mental abilities of swordsman which are well-prepared it was easy for making the right decision and proper disposition for each variable during the bout, and this is referred to by (Essam Abd Al-Khalek, 1990: 229 ) that the successful factors in the implementation of plans of playing depends on increasing the factors the information and mental capabilities of swordsman and appropriate disposition of the various tactical situations that facing him during the bout .

### 5. CONCLUSION

1. The sample of the research (senior players of saber) characterized by a good level for some mental variables

2. The presence of a significant correlation between some mental variables and competitive behavior of the senior players of saber
3. Existence of a significant correlation between some mental variables and the athletic motivation achievement for senior players of saber

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# THE EFFECT OF AEROBIC EXERCISE AND THE WIPING MASSAGE IN REDUCING BLOOD PRESSURE FOR SOME PEOPLE WITH THE AGE OF (30-40 YEARS)

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## Abstract

So the researcher believes that the diseased people exposes during the performance of aerobic exercise and massage into a state of satisfaction and according to that the processes of physiological preparation must be sought through the therapeutic programs to the development of oxygenated system and improve it through the use of these exercises together and from here we have found that there is a positive relationship between the practice of physical activity and the low incidence of high blood pressure disease. Through the previous, the importance of research lies in many aspects through the use of physical means in lowering the level of blood pressure as the aerobic exercise with low intensity considers one of the suitable and normal methods for the treatment of this disease as well as the use of wiping massage which is one of the therapeutic methods that have sedative effect on the nervous system which helps in regulating blood pressure. The research discusses the problem of the era through the practice of physical activity of the medium intensity as the evidences show that the practice of these activities regularly are working to reduce blood pressure in individuals who have high systolic and diastolic pressure The integration of the aerobic exercises that have light intensity with wiping massage achieved the best results in lowering blood pressure and the level of the variables under consideration, reaching the required level for these patients.

**KEYWORDS:** Physical. Aerobic. Exercise. Massage. Blood.

## 1. INTRODUCTION

The main objective that doctors are seeking about it recently is the advancement of individuals and communities to get them to the finest advanced health levels and this is done through good health and healthy body and as a result of technological development which led to the adoption of the individuals on the machine which led to the denial of the most important physiological requirements in their bodies which is movement. So many diseases that are resulting from lack of movement in humans appeared in the modern era and from these diseases is high blood pressure which is caused by high blood pressure in the arteries to a level higher than the normal level of blood pressure. In spite of scientific progress in the field of treatment so more researches and studies should be done to reach too many of the scientific facts in order to detect the best methods and techniques to treat people with lethal diseases by using exercises optimally in the treatment and rehabilitation of some of the people with high blood pressure. As according to these exercises and their intensity depends the level of treatment in the diseased people and the specialized process lead in the aerobic exercises to raise the level of physiological and functional aspects (through the development of the work of the two systems ; circulatory and respiratory) in addition to the use of wiping massage in easier manner to reduce the blood burden on the arteries that are filled with blood and through studies and researches in this field specially these related with the impact of these exercises on the different organs and systems of the body to know what that aerobic exercises and massage cause like functional and chemical changes on the different organs of the body which positively reflect on reducing the pressure in people in general and achieve the best results.

So the researcher believes that the diseased people exposes during the performance of aerobic exercise and massage into a state of satisfaction and according to that the processes of physiological preparation must be sought through the therapeutic programs to the development of oxygenated system and improve it through the use of these exercises together and from here we have found that there is a positive relationship between the practice of physical activity and the low incidence of high blood pressure disease. Through the previous, the importance of research lies in many aspects through the use of physical means in lowering the level of blood pressure as the aerobic exercise with low intensity considers one of the suitable and normal methods for the treatment of this disease as well as the use of wiping massage which is one of the therapeutic methods that have sedative effect on the nervous system which helps in regulating blood pressure. The research discusses the problem of the era through the practice of physical activity of the medium intensity as the evidences show that the practice of these activities regularly are working to reduce blood pressure in individuals who have high systolic and diastolic pressure From this point the researcher felt to study the effect of aerobic exercises with different intensities that commensurate with the status of the diseased individual and the use of wiping massage to reduce the blood pressure of the patients without any side effects that may increase the severity of the disease in the future

**Research problem:** High blood pressure is a disease of the era and belong to diseased which are called diseases of lack of movement that resulting from the use of human matters and technological methods to reduce the movement of human. Which led to an increasing number of people with these diseases in the modern era because of the circumstances that are exposed during the life of the individual and psychological conditions and tensions of life which adversely effect on the healthy and psychological condition of the patient, prompting individuals to search for ways to prevent and treat it which decreases this serious disease

Due to the paucity of studies that solve this issue, depending on the appropriate natural means, like oxygenated exercises with light intensity, and the adoption of most of the patients on the drugs that reduce the pressure to be easily taken despite their adverse effects on the various organs of the body which leads to other health problems that can be avoided.

From this point the researcher felt to study the effect of aerobic exercises with different intensities that commensurate with the status of the diseased individual and the use of wiping massage to reduce the blood pressure of the patients without any side effects that may increase the severity of the disease in the future.

**Research aim:** knowing the effect of aerobic exercises with light intensity and wiping massage in reducing blood pressure for men with high normal pressure for the ages 30-40 years.

**Research hypotheses:** The light-intensity aerobic exercises and wiping massage have significant effect between the results of the tribal and posteriori tests in lowering the level of blood pressure for men with high normal blood pressure.

## 2. MATERIAL AND METHODS

The researcher used the experimental method to solve the problem of the research because the experimental approach fits with the nature of the problem to be discussed and how to solve as it has been selected one of the designs of the experimental method which is represented by designing the experimental group between two experimental variables at same time.

**The research sample:** The sample was selected depending on the discretionary participation after clarify the goals of the research and its reasons and how important it is and if it is accepted for patients with high blood pressure who are classified as those with mild hypertension and totaling 10 patients with light hypertension (with ages 30-40 years) who showed their willingness to participate in the research experiment.

(4) individuals from the research sample have been eliminated due to they are affected with diabetes and heart disease and so the researcher excluded them from the sample and thus the final number reached to (6) patients.

**Research procedures:** After selection the functional measurements of the research by some experts, the researcher took the necessary measurements, which included the following:

Functional Measurements: - include the following:

- Blood Pressure measurement : (1-64: 1997-67) Measurement
- Heart rate measurement (1-64: 1997-67)
- Respiratory rate measurement : (61: 1997: 1)
- Determination the intensity of physical effort :

The intensity was determined by heart rate intensity as the intensity during the prepared training program ranging between (50-70%) of the reserve pulse rate knowing that (50%) of the reserve pulse equivalent to walking for the patient herself.

How to calculate the intensity of exercise during a single session (360: 1997: 2)

1. The maximum pulse rate calculation  $-220 = \text{age of the athlete}$

2 - The number of heartbeats in the required intensity =  $(\text{the maximum average of the heart beats} * \text{the required intensity}) / 100$

**Tribal test:** The researcher conducted a tribal experimental measurements 18-19 / 2/2014 in the fitness hall / Anbar Sporting Club / Al-Anbar on the research sample and before starting to exercise any physical effort in order to know the extent of the changes that taking place on them during the performance of designed programs for them.

**The physical massage program :** The researcher prepared physical program includes a set of aerobic exercises and with low to medium intensity as it relied on the American College of Sporting Medicine by using the intensity of (45-70%) of medium intensity for patients with high blood pressure (1993: 3) as the researcher used the prepared physical fitness program by the researcher with the introduction of wiping massage and for the patients of high blood pressure. the researcher focused on the introduction of wiping massage after the effort directly for the duration of the test for a period of 8 weeks. The intensity of this program has reached to (45-70%) which means light intensity. This program aims to reduce the level of blood pressure in patients as well as raising the level of fitness of the patients themselves.

The training module has been divided into 3 sub-parts:

- **Introductory part:** Includes warming the body for a period of (5-10) minutes, which is a warm-up for all parts of the body.
- **The main part:** Includes implementation of the program vocabulary that prepared by the researcher by using the selected set of exercises and then the use of wiping massage and exercises which are:
  1. Standing: normal walking and putting arms aside with rotation the palm up and down once again).
  2. Standing: walking by opening step. Standing: normal scrambling by opening the step with putting the arms to the front for the first time and aside for the second time.
  3. Standing: light scrambling with the lifting of the arms high first and then down)
  4. Standing: (walk on the heel)
  5. Standing: scrambling with raising the knees to the front first and then hitting the ankles with the hip.
- \* **The final part:** Includes the performance of calm and relaxation exercises and their purpose is to return the pulse and pressure to a normal situation as much as possible.

After performing the prepared exercises and then the wiping massage on the patient and after a direct effort and as follows:

The patient takes a prone position on the abdomen and arms bent from the elbows with putting palms of her hands under the forehead with total relaxation of all muscles of the body, massages start by using wiping massage as being a massage from the bottom of the head toward the axilla passing through the muscles ( clavicle muscle , mastoid, deltoid, the muscles of the upper back behind the shoulder ) and the massage should be in wiping manner without using the force and prefers to use cream during massage to facilitate the movement of the hands on the patient's body as used a low intensity in order to increase the muscular relaxation. Massage sessions lasted from (5) minutes in the first week and to 10 minutes until the seventh week and as illustrated as follows: (5 minutes .7 minutes .8 minutes .9 minutes, 10 minutes, 10 minutes, 10 minutes, 10 minutes.

**Posteriori test :**The researcher conducted the posteriori measurements on the research sample per week (8) in total rest at 23-24 / 4/2014 and the used methods was the same methods used in the tests

### 3. RESULTS

**Table 1: arithmetic means and standard deviations for the two tests (tribal and posteriori) for the research group in variables under research and the ratio of development**

Rank	Variables	Unit of measurement	Sample number	Tribal test		Posteriori test		Ratio of development
				M	SD	M	SD	
1	The systolic pressure	mmHg	6	146.7	1.114	132.8	3.484	7.45%
2	The diastolic pressure	mmHg	6	91.03	0.361	86.22	0.484	4.43%
3	pulse	Beat/minute	6	77.6	0.386	73.68	0.386	2.25%
4	Respiratory rate	Once/minute	6	16.55	0.234	13.71	0.416	16.08%

From Table 1, we find that the values of arithmetic means and standard deviations in the test (tribal - posteriori) of the systolic pressure were different among the experimental group which confirms the occurrence of change which means changed from what it was in the tribal test as the arithmetic mean reached to (144.8) and standard deviation (5.765) in the tribal test while the arithmetic mean reached to (134) and standard deviation (2.054) in the posteriori test as it is an indication of the effect in lowering systolic blood pressure level as the percentage of development reached to (7.45%) while the diastolic pressure test , the results were different among the experimental group which confirms the occurrence of change which means changed from what it was in the tribal test as the arithmetic mean was (90.2) and with standard deviation (4.359) in the tribal test while the arithmetic mean reached to (86.20) and standard deviation (2.578) in the posteriori test , as it is index of the effect in reducing diastolic pressure level as the percentage of development reached to (4.43%).

To the systolic pressure test were different among the experimental group which confirms the occurrence of change that means changed from what it was in the tribal test, as the arithmetic mean was (78.6) and standard deviation (2.768) in the tribal test while the arithmetic mean reached to (76.60) and standard deviation (2.067) in the posteriori test as it is an indication of influence in reducing the level of the pulse as the percentage of development reached to (2.52%)

To test of systolic pressure were different among the experimental group which confirms the occurrence of change that means changed from what it was in the tribal test as the arithmetic mean was (16.8) and standard deviation (1.197) in the tribal test while the arithmetic mean reached to (14.1) and standard deviation (0.985) in the posteriori test as it is an indication of the influence in reducing the level of the respiratory rate as the percentage of development reached to (16.08%)



**Table 2: shows difference of arithmetic means and standard error, value of (T) and significance of the differences in the experimental group in research variables between tribal and posteriori tests**

Rank	Variables	Unit of measurement	Number of the sample	M D	Sta. error D	(T) value		Significance
						calculated	Error ratio	
1	Systolic pressure	mmHg	6	13.95	3.679	9.287	0.002	significant
2	Diastolic pressure	mmHg	6	4.766	0.249	19.075	0.007	significant
3	pulse	Beat/minute	6	3.98	0.849	11.486	0.008	significant
4	Respiratory rates	Time/minute	6	2.83	0.454	15.266	0.002	significant

Degrees of freedom n-1 = 5 with level of significance (0.05)

To find out the differences between the arithmetic means for the two tests ( tribal and posteriori ) for this group in the systolic pressure test , the researcher adopted the (t) test of the samples that are independent for verification of differences significance and the value of calculated (t) have amounted to (9.287) and the error rate amounted to(0.002) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means for the two tests ( tribal and posteriori ) for this group in the diastolic pressure , test researcher adopted the (t) test of the independent samples for verification of significance differences and the value of calculated (t) have amounted to (19.075) and the error rate (0.007) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means of the two tests ( tribal and posteriori ) for this group in the pulse test , the researcher adopted the calculated (t) test of the Independent samples for verification of significance differences and the value of calculated (t) reached to (11.486) and the error rate of (0.008) which is smaller than the value of the level of significance (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

To find out the differences between the arithmetic means for the two tests ( tribal and posteriori ) of this group in the test of respiratory rates , the researcher adopted the (t) test of independent samples to verify the significance of differences and the value of calculated (t) reached to (15.266) and the error rate (0.002) which is smaller than the value of the level of (0.05) which indicates the presence of a significant difference and in favor of the posteriori test and this is what we observe in the table above.

#### 4. DISCUSSION

Through the results in the table (2) shows that there are significant differences and in favor of a posteriori tests and the researcher attributes the reason for this development to aerobic exercises used as well as the wiping style which is considered one of the most effective ways to reduce high normal blood pressure and this has been demonstrated in studies in the field of treatment of high blood pressure that the aerobic exercise with moderate intensity and regularity cause a decrease in pressure without any change in the body weight. The state of relaxation that accompany the physical activity causes decrease in heart beats during rest for individuals with hypertension after attendance in sporting programs and this is similar to what is happened during eating (abuse) of medical drugs for hypertension which is working to reduce the excitement sympathetic nervous system of them (785 1990: 5)

Also, the practice of the medium intensity aerobic exercise with graduation in their time not less than one (15-30) minute and for (3) times a week helps in reducing systolic and diastolic blood pressure and within a few weeks of practicing these exercises and for categories (high normal blood pressure and light hypertension) 843 : 2000: 10)

Moreover, the diastolic pressure reflects the amount of resistance that encountered in the blood stream or the amount of contraction state of the artery so the decline means a positive case in patients with this disease. It also has a great importance from the medical point of view because it represents a real pressure inside the heart as it is more stable than the systolic pressure (390: 1990: 5).

While for the pulse variable , we note from the same table that all the results were significant and researcher attributes the causes of those differences to the effect of wiping massages as the nervous signals increase their efficiency and urge through massage and lead to increase the contraction intensity of the heart muscle which in turn leads to increase the heart's ability to pump larger blood volumes which is a clear signal that the decline in heart rates of the sample shows the good adjustment to extract more oxygen allowing to decrease the rate of blood flow to the muscles that are exposed to this massage and cause relaxation and thus the heartbeat drops (130: 1998: 7)

As for the respiratory rate variable, we note that all the results also were significant, the researcher attributes the reason to the used curriculum (massages with light exercises) which contributed to the adaptation of the circulatory and respiratory system and the development of the efficiency of this system which reflects the functional status of the individuals of the sample. Moreover, the improvement of heart work as a result of these approaches also helps in reducing the heart rate which in turn has worked to reduce the

respiratory rates. (467: 1989: 6) as well as the adequacy of the need for oxygen by the sample members has demonstrated the extent of adaptation of the work of the lungs as a result of this adaptation.

Also, the improvement of the two systems ( circulatory and respiratory ) means increasing the ability of the working muscles to take advantage of most of the amount of oxygen that carried by the blood which causes increase in the efficiency of the work of the muscles and improve the condition of the patient himself (65: 1993: 11)

In this section the results confirm the effectiveness of the impact of the training oxygenated curriculum that followed in variables (under discussion), especially if there are also massage as the results confirm that the effectiveness of this method in a positive effect on systolic and diastolic pressure and other variables that have a close relationship with the level of blood pressure like pulse and the respiratory rates and thus the research hypotheses have been achieved with regard to the effect of oxygenic training programs in reducing the level of blood pressure and changes in research and in the favor of the posteriori test for the research sample .

## 5. CONCLUSION

The integration of the aerobic exercises that have light intensity with wiping massage achieved the best results in lowering blood pressure and the level of the variables under consideration, reaching the required level for these patients.

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# THE EFFECT OF EATING DIFFERENT CONCENTRATIONS OF SODIUM AND CALCIUM ON THE LEVEL OF ACHIEVEMENT OF CERTAIN EVENTS OF TRACK AND FIELD ACCORDING TO THE DIFFERENT ENERGY SYSTEMS

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## Abstract

The low level of mineral salts in the blood will lead to a certain mechanism done by the body where the body starts to pump water from the blood toward the cells in order to maintain the level of sodium in the blood which must be at level of (135-146) mmol / liter in the blood and this will therefore lead to another negative factor which is water poisoning of the cell and therefore the death of the cell as well as effect of the athletes level and these are the reasons that called the researcher towards the study of using of different concentrations of mineral salts to know the impact of these concentrations to keep the level of salts in the blood and improve the achievement which may be affected by this decrease in the concentrations , the study aimed to identify the effect of taking water that contains different concentrations of sodium and calcium on the level of achievement in the activities of ran (100 m .800 m .3000 m) , the researcher used the experimental curriculum as well as the comparison style in solving the problem of the research , the research sample was selected by the intentional way , as it consisted of nine players representing the team of Diyala University of track and field event (100 m .800 m .3000 m) in accordance with the effectiveness that are commensurate with the energy system and by (3) players for each event and to verify the validity of the assumptions and to achieve the objectives of the research, the researcher adopted a set of biochemical tests in solving the problem of the and the researcher concluded that the mineral salts have significant impact on the sporting achievement in the events of a long time as well as the mineral salts have a positive role in maintaining the speed of sporting hospitalization through calcium role with phosphate component in re-resources of energy to what it was.

**KEYWORDS: Sodium .Calcium. Energy. Blood. Water poisoning**

## 1. INTRODUCTION

Many factors affect the level of physical and athletic achievement and from these factors are mineral salts dissolved in water that taken by the athlete before, during and after delivery, and these salts are essential and important part , some of them do vital processing that have a great importance to the body, so it is necessary to be in accordance with the athletic food , sodium is a mineral which have a significant role in reducing the manifestations of water poisoning as the lack of concentration of sodium in the blood as a result of taking a large amount of fresh water (free of salts) when do vigorous exercise in hot weather and high humidity leads to the entry of a large amount of water into the cells to keep the sodium concentration within the normal level and then destroyed and this so-called water poisoning , scientists have sought to achieve a high level and achieve the standard numbers and this is what encouraged them in the research for all things related to the process of training and through this continuous research , scientists concluded that the athletic food must commensurate with the training process and not in isolation and has been shown that the decrease in the level of mineral salts in the blood is also will lead the body to follow a certain mechanism as the body will pump water from the blood toward the cells in order to maintain the level of sodium in the blood which must be at level (135-146 ) mmol / liter of blood and this consequently will lead to another negative factor which is water poisoning of the cell and therefore the death of the cell as well as the effect of the athletic level (Musa Al-Khatib, 2003) and these are among the reasons that make the researcher to use different concentrations of mineral salts to know the impact of these concentrations to keep the level of salt in the blood within normal limits and thus reduce the manifestations of water poisoning disease as well as to maintain the level of achievement that may be affected due to this fall in concentrations.

### Research Objectives

1. To identify sodium and calcium concentrations in the blood of the players of the track and field in the events of ran 100 m .800 m .3000 m.

- To identify the effect of taking water containing at different concentrations of sodium and calcium on the level of achievement in the run activities (100 m .800 m .3000 m).
- To identify the impact of taking water that contains different concentrations of mineral salts sodium and calcium on the level of blood of the players of running (100 and 800.3000) meters.
- To identify the differences in the concentration of sodium and calcium level in the blood between the players of events of ran (100 and 800.3000) meters.

### Research hypotheses

- There are statistically significant differences in using different concentrations of sodium and calcium and in favor of group that used (10 mg / L) and in favor of the effectiveness of 100 m
- There are significant differences between the use of different concentrations of sodium and calcium on the level of achievement in the effectiveness of 800 m.
- There are statistically significant differences in using different concentrations of sodium and calcium and in favor of the group that used (10 mg / L) and in favor of the effectiveness of 3,000 m.

## 2. MATERIAL AND METHODS

The researcher used the experimental method as well as the comparison method in solving the problem of the research.

**The research sample:** The research sample was selected by the intentional way as it consisted of nine players representing the team of Diyala University in the track and field event (100 m .800 m .3000 m) in accordance with the effectiveness that are commensurate with the energy system and by (3) players per effectiveness, The researcher calculates some variables that will affect the results of experimentation to make sure that the homogeneity of the sample as shown in table 1.

**Table 1: shows the arithmetic means and standard deviations and the coefficient of torsion of the sample shows.**

Rank	Variables	Arithmetic mean	Standard deviation	Mediator	Coefficient of torsion
1	Biological age	23.33	0.3	22	1.3
2	Training age	5.6	0.6	4.6	1.09
3	Weight	63	0.4	64	1.1
4	Height	173.33	0.3	172	1.7

### Field Procedures

To check the validity of the assumptions and achieve the objectives of research, the researcher adopted a set of biochemical tests in solving the problem of the research and started by measuring the sample achievement in each event from the events of the energy system that approved in this study, the researcher did two training units and focused on the first unit to intake normal water that contain salts rations that described on the box by the sample and then conducting the biochemical tests and achievement after the end of the training module, which the researcher considered it a tribal test , then the researcher conducted a posteriori test (second training module) with an emphasis on drinking water that containing added salts by the researcher, the researcher focused on the field follow up of the players after the first effort (tribal test ) and ensure that no adverse physiological manifestations such as high blood pressure.

### Biochemical tests (www.6abib.com)

Measuring the amount of sodium and calcium in the plasma (the researcher measured the ratio of sodium and calcium by following the procedures of each of them)

**Tribal tests :** The researcher conducted a tribal tests after the completion of the training module at 15:10 am at the track and field court in the College of Physical Education -Diyala University, knowing that the training module was a part of the preparation of all events, the researcher role of the researcher in the training module has been confined to the follow-up and giving water to the players (the researcher used Iraqis water , (Sama) type which has a concentration of calcium 70 mg / liter and sodium 13 mg / liter) for each player where each player of the nine players drunk amount of water of 1200 ml and with concentration of (sodium and calcium) (13 mg / 1 / 70 mg /L) respectively, and the researcher focused on urging the players to drink water during a training exercise and in intermittent periods during the training module .

**Posteriori tests :** The researcher conducted a posteriori tests three days after the tribal test to ensure that the players get back to their normal status and full hospitalization, the researcher conducting the tests under the same environmental conditions, the researcher took the results of tribal tests into consideration through readings which shows sodium and calcium concentration level in the blood plasma and based on these readings, the researcher adopted the same water quality (Sama) but by adding the salts to the water at different concentration for each event as the water of the 100 event depended on concentration (18 mg / L) and the water of 800 meters event on concentration (23 mg / L) and the water of 3000 meters on concentration (33 mg / L).

As well as the researcher calculated the achievement of each player from the nine players after the end of the training unit.

### 3. RESULTS

**Table 2: shows the arithmetic means and standard deviations for the two tests (tribal and posteriori) and for the first energy system (the phosagenic system) (100 m)**

Rank	Variables Statistical processors	Unit of measurement	Tribal tests		Posteriori test	
			M	SD	M	SD
1	Na	mmol	92.666	2.516	122.600	3.724
2	Ca	mmol	2.700	0.200	3.140	0.314
3	Achievement	Second	12.36	0.155	11.376	0.142

**Table 3: shows the arithmetic means and standard deviations for the two tests (tribal and posteriori) for the second energy system (lactic acid) system (800 m)**

Rank	Variables Statistical Processors	Unit of measurement	Tribal test		Posteriori test	
			M	SD	M	SD
1	Na	mmol	34.00	2.645	92.8000	2.165
2	Ca	mmol	2.356	0.385	2.616	0.104
3	Achievement	second	164.10	7.794	145.52	4.266

**Table 4: shows the arithmetic means and standard deviations for the two tests (tribal and posteriori) for the third energy system (the oxygenated system) (3000 m)**

Rank	Variables Statistical Processors	Unit of measurement	Tribal test		Posteriori test	
			M	SD	M	SD
1	Na	mmol	17.780	1.700	83.766	2.773
2	Ca	mmol	2.000	0.100	2.760	0.225
3	Achievement	second	567.43	9.419	532.890	21.293

**Table 5: shows arithmetic means differences and standard deviation difference and the value of calculated (T) of the first energy system (100 meter)**

Rank	Variables Statistical Processors	Unit of measurement	f	SD-D	Value of calculated (t)	Significance
1	Na	mmol	29.933	4.278	12.119	significance
2	Ca	mmol	0.440	0.393	1.937	significance
3	Achievement	Second	0.983	0.025	67.678	significance

Value of tabulated (t) (n-1) = 0.816 with level of significance 0.05

**Table 6: shows the arithmetic mean differences and standard deviation difference and value of calculated (T) for the second energy system (800 m).**

Rank	Variables Statistical Processors	Unit of measurement	f	SD-D	Value of calculated (t)	Significance
1	Na	mmol	58.800	4.784	21.287	Significant
2	Ca	mmol	0.26	0.360	1.248	Significant
3	Achievement	second	18.508	8.361	3.849	significant

Tabulated value of t (n -1) = 0.816 level of significance 0.05 level

**Table 7: shows the arithmetic means differences and standard deviations deference and the value of calculated (T) for the third energy system (3000 m).**

Rank	Variables Statistical Processors	Unit of measurement	f	SD-D	Value of calculated (t)	significance
1	Na	mmol	65.986	2.065	55.345	Significant
2	Ca	mmol	0.760	0.250	5.253	significant
3	Achievement	second	34.540	27.156	2.203	significant

Tabular value of t (n -1) = 0.816 with level of significance 0.05

**Table 8: shows the value of calculated (F) and the significance of the differences of sodium component.**

	Summation of squares	Degree of freedom	average of the squares	F	Significance
Between the groups	9312.879	2	4646.440	861.000	Significant
Inside the groups	32.448	6	5.408	861.000	Significant



**Table 9: shows the value of calculated (F) and the significance of the differences for calcium element.**

	Summation of squares	Degree of freedom	Average of squares	F	Significance
Between the groups	0.802	2	0.401	6224	Significant
Inside the groups	0.387	6	0.064	6224	significant

**Table 10: shows the calculated value of (F) and the significance of the differences of the achievement element.**

	Summation of squares	Degree of freedom	Average of squares	F	Significance
Between squares	493908.58	2	246954.289	5136.759	Significant
Inside squares	288.455	6	48.076	5136.759	Significant

#### 4. DISCUSSION

By observing the results of the research and the statistical transactions of the tribal and posteriori tests , we note that all differences were significant differences where the amount of sodium has increased in the posteriori test as a result of increased sodium concentrations in the water which increased and according to the type of efficiency, the researcher attributes the significant differences of the event of (100 m) as a normal condition in order to increase the sodium element concentration , while for the event of (800 m) , the differences were significant between tribal and posteriori tests and that was as a result of increasing the concentration of sodium in the water intake by the researcher , which is reflected on the achievement where the achievement is also affected by this increase despite the lack of access to normal levels of sodium component in the blood, the researcher also measured the high and low blood pressure and the low for the health of the athlete as may act to increase the salts in the plasma during the increase in the rate of the consumed energy to increase the rate of pressure and this is agreed with what is said by (Abu Al-Ella Abd Al- Fattah) to that the increase of energy wastes in the plasma as a result of increased concentrations of total dissolved substances (salts) .... and thus the cell membrane do not allow these materials to enter and so the salt concentration rises and to maintain osmotic pressure in the body withdraws amount of water from inside the cells to the plasma to maintain the concentration of salts which would raise the amount of pressure (the high) significantly (Abo Al-Ella Abd Al- Fattah, 349: 2003), (Iraq virtual science library, Timothy and Nicolas.)

As well as the researcher attributes the significant differences in the event of 3000 m as a result of increased sodium concentrations that added to the water intake and so its effect on the achievement and also the researcher sees that increasing the concentration of salts in the water is very important and would reflect on the achievement of the player if not calculated accurately and this is agreed with what is said by ( Abo Al-Ella Abd Al-Fattah) "that water and minerals deficiency during training and competition leads to lower the athletic performance level and his ability to endure, it was found that the loss of 5% of the athletic weight as a result of water and salt deficiency leads to decrease the performance level of 30% (Abo Al-Ella Abd Al- Fattah .160: 1999) and this is confirmed by the researcher that it must adjust the amount of the added salt, taking into account the type of the used effort as well as the temperature of the environment where the greater temperature of the environment means greater loss of the salts and so the procedures and the results of this research were in the high intensity training modules and with temperatures 33-35 degrees Celsius.

while for the calcium element, we note that all differences were significant differences between each event and between the achievement, the researchers explain these differences that the decrease in the amount of calcium is also due to the phosphate itself where the two linked to the same work as during the training the body consumes energy and after the effort there is re-building of the energy and this requires the presence of phosphate component but cannot take advantage from phosphate unless exists with it alongside the calcium element .

Here the researcher agrees with what is said by (Safa Al- Moreib) for the organs to be able to absorb phosphate well, the phosphate should be in compounds of phosphate and calcium, therefore there must be a ratio between the amount of phosphate and calcium intake, if the need arose for phosphate also increased the need for calcium (Safa Al-Morieb: 186).

Therefore difference in the calcium have been appeared due to the consumption of phosphate component by the body or the compensatory process may be incomplete and in its early stages and so may require doing calcium test after the completion of the effort by longer period.

#### 5. CONCLUSION

1. Mineral salts have significant impact on improving achievement in sporting events of long time.
2. Mineral salts have a positive role in maintaining the speed of sporting hospitalization through the work of calcium with phosphate component to return the energy sources to what it was.
3. The mineral salts (sodium) have a positive role in maintaining the health of the athlete and avoid the risks of water intoxication.

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# 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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# THE IMPACT OF TRAINING IN ACCORDANCE WITH THE DIVISION OF PLAY AREAS ON SOME MOTOR SKILLS AND ACCURACY PERFORMANCE OF SOME OF THE BASIC SKILLS IN SQUASH

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## Abstract

### Research objectives:

- Preparation of training according to the division of play areas on some motor skills and accuracy of the performance of some basic skills in squash.
- Knowledge of the effect of exercise in accordance with the division of play areas on some of the motor skills of squash players.
- Knowledge of the effect of exercise in accordance with the division of play areas on the accuracy of the performance of some of the basic skills of squash players.

### Research hypotheses:

- There are significant differences between pre and post tests on some of the motor skills of squash players.
- There are significant differences between pre and post tests on the accuracy of the performance of some of the basic skills of squash players.

Research Methodology: The researcher used the experimental method to design one set of suitability research topic.

The research sample: included national team players squash for men (applicants), number (8) players.

### Conclusions:

- 1 - The use of play areas by dividing the exercise a positive influence in the development of some motor skills to the research sample.
- 2 - Exercises that divide the regions play a positive influence in the development of some basic skills in the game of squash.
- 3 - The proposed exercises led to the achievement of objectives in the development of performance skills include the fact that the exercises were a special skill exercises inside the stadium.
- 4 - Exercises that divide the play areas have led to the development of agility and compatibility among a sample search.

**KEYWORDS:** Interactive training. Duel game.

## 1. INTRODUCTION

The world has witnessed a significant and rapid development in all spheres of life and physical education is a vital and important one in this field.

Since the game of squash from the modern Games which characterized by speed, strength and intelligence and correct prediction and gained an attention and development in the recent years in terms of modernization and development in the ways and methods of training where athletic training generally contribute in various sporting activities and particularly in a game of squash a significant contribution to achieve the advanced levels through good planning for its programs as recently happened in the growing interest in motor abilities in every kind of sports and its components as it is one of the most important requirements of the skilled performance and the basis upon which depends the performance of different offensive skills especially in a game of squash so the modern training programs rely greatly on increasing the concentration of specialized movements where the squash is considered one of the competitive individual games which is distinct from the rest of the tennis games with excitement and suspense and speed in playing because the player deals with the racket and ball and competitor player inside the court and perhaps the most important characteristic of this game is the distinctive pleasure felt by the practitioners players and this is what calls for adults and children of both sexes to play this game where the advantage of this game is to force practitioners on continuous movement through the exchange of playing ball and it is characterized by the direct challenge and requires awakening and ensure the correct prediction, balance and harmony and agility by

the player to keep up with an opponent during the exchange of playing the ball (Jamal Al-Shafei 2001: 5). Motor abilities occupy great importance and the proportion of importance differs from one game to the other game especially the game of squash that requires the rapid movement and in different directions inside the court and that the presence of the player with the opponent inside the court which is bounded by walls makes the competition between them large and the winner in this competition is the player who focuses on the weak points of an opponent player during the movement and guide the ball to regions away from the presence of the opponent and thus earning points

So the importance of the research is to find out the effect of compound exercises on some motor abilities and accuracy of performance of the offensive skills in squash which consists of several basic skills that must be mastered especially the flied frontal and the background strike as well as low-lying frontal and background strike.

**Research problem:**Through the field experience of the researcher in the training of the national team in a game of squash noted lack of accuracy in the performance of the offensive skills specially the flied frontal and background strikes and the low lying frontal and background strikes during the movement of players inside the court and the researcher attributes that to the fact that there is a weakness in their kinetic abilities , as the player of squash during playing in a state of continuous movement and needs to change his body conditions through the movement to the corners of the court and the compatibility between the eye and the feet to perform the various skills especially the offensive skills and because the two skills of the flied and low lying strikes are offensive skills that made attention to aspects of weakness in the side of the motor abilities which in turn lead to a positive development in the accuracy of performance of these skills in the squash . And a game of squash is one of the games that a precision plays an important aspect in winning the game through diversification in the performance of the offensive skills as that " the accuracy in the performance of a strike is one of the most important characteristic of a game of squash and the success is measured in the ability to deliver the ball in the right place" (Ratib Ahmed and Khalid Al- Kordi 1996: 100).

Hence the problem of the research in using compound training on some motor abilities and the accuracy of performance some offensive in squash.

#### **Research Objectives:**

- Preparation of compound exercises to develop some of the motor capabilities of the squash.
- Preparation of some compound exercises to develop some offensive skills in squash.
- Understanding the impact of the compound training on some motor abilities and accuracy of performance of the offensive skills in squash

## 2. MATERIAL AND METHODS

**Research hypotheses:** There are significant differences between tribal and posteriori tests in the development of some motor abilities of the game of squash and in favor of a posteriori tests differences.

- There are significant differences between tribal and posteriori tests in the development of some of the offensive skills of the game of squash in favor of a posteriori tests differences.

**Research Methodology:** The experimental method is used which is based on a scientific basis for the appropriateness of the research topic.

**The research sample:** Sample "is the part that represents the parent community or the model that the researcher do all his work on it " (Wajeih Mahjoub 310: 1993) as the research sample was chosen in a manner of experimental group with the tribal and posteriori tests and by the intentional way which included players of the Iraqi national team (Youth ) in the game of squash and their number are (8) players who represent the parent community as true and sincere representation and who conducted on them the main experiment of the research .

#### **Devices and tools of the research and methods of collecting information**

- Rackets and balls of Squash (number 10) - stopwatch number (2) and type (Tico Japanese).
- Metric metal tape measure. - Adhesive tape to determine the tests. - Thrower balls device.
- A laptop computer type (ASUS). - Arab and foreign sources. - Observation and experimentation.
- Personal interviews. - Tests and measurements.

#### **Research tests:**

- Test of the straight low-lying frontal strike from the back part of the court (Khalid Mohammed Fadi 84: 2008)
- Test of the low-lying background straight strike from the back of the court (Khalid Mohammed Fadi 85: 2008)
- Test of the flied frontal straight strike toward the back corner of the squash court (Ali Hassan Shukur 46: 2012)
- Test of the flied straight background strike towards the background corner of the squash court (Ali Hassan Shukur 47: 2012)
- Test of zigzag running by Barrow way (Ali Saloom Jawad 123: 2004)
- Test of the numbered circles (Ali Saloom Jawad 150: 2004)

**Tribal tests:** Was performed on Thursday 28 \ 11 \ 2013 on the research sample (players of Iraq team that amounting to (8) players before starting the implementation of the training program where the skilled tests of the research and with the help of assistant team and on the courts of Faculty of Physical Education in Jadiriya at fourth p.m.

**The main experiment :** After the completion of the tribal tests and knowing the level of players through the skilled tests of the research and in order to reach for a solution of the research problem and achieve the objectives of the research, the researcher prepared a proposed training exercises and adopted in the design of these exercises on the analysis of the scientific sources content that interested in the process of training and preparation the training curricula and in order to release its impact in the development of some motor abilities and that the accuracy of performance of some offensive skills in .

The researcher observed the gradient and spikes in the training loads in all training units to suit the level of the players and their physical and skilled abilities, where the training curriculum begun on Saturday 30 \ 11 \ 2013 and ended on Tuesday 28 \ 1 \ 2014 where the training curriculum consisted of (24) training unit that spread over 8 weeks, three training modules in the week (Saturday, Monday, Wednesday) , the gradient was used in weekly training modules and the traffic load during the month was (1: 3) and these exercises identified in the main part of the training module at time up to (45 minutes) in the preparation stage of the training season, the intensity was identified through the optimum duplications of the exercises (Mohammad Reda Ibrahim 104: 2008)

Where these exercises have been applied by the team's coaches and under the direct supervision by the researcher , the used skilled exercises are carried out by the player himself at the beginning of the curriculum as well as exercises with two players and exercises with three players to enter the competition and making the training similar to the circumstances of the game, as the exercises of moving were used to the pillars inside the court at different times as well as using the directive exercises by numbers by the coach to move with the specific areas from the frontal and the background of the court and exercises with the rubber cords that bind on the waists player to move inside the court to the corners of the court and exercises by the training stair , all this to develop the kinetic speed for the players, while the skilled compound exercises that used for the development of offensive strikes carried out by the same player at the beginning of the curriculum as well as exercises with two players and exercises with three players to enter the competition and make training similar to the circumstances of the game and used thrower balls device to deliver balls to the player and training to perform repetitions from the frontal and the background of the court and the performance of the offensive strikes through diversification in place of directing the ball to get the development of the level.

**Posteriori tests:** After completion of the training program, posteriori tests were conducted on the research sample in order to know the effect that happens as a result of using these the exercises and that by research tests and find out how effective these exercises to develop the kinetic abilities and the most important offensive skills that selected on Thursday 30 \ 1 \ 2014 through own research and on the courts of Faculty of Physical Education in Jadiriya at third o'clock afternoon.

### 3. RESULTS

Displaying and analyzing test of the numbered circles and test of zigzag running by Barrow way and test of players speed to the corners of the court and test of the frontal and background strike towards the opposite corner and test of accuracy of the side frontal and background strike.

**Table 1 shows the arithmetic means and standard deviations and values of calculated and tabulated (t) between tribal and posteriori tests of the research sample.**

Variables	The test	A	SD	A	SD	Value of (t)		Significance
						calculated	tabulated	
Test of the low lying straight strike from the background part of the court	Tribal	10.62	0.74	1.00	0.53	5.29	2.36	significant
	posteriori	11.62	0.51					
Test of the low lying straight background strike from the background part of the court	Tribal	10.62	0.74	0.75	0.70	3.00	2.36	Significant
	posteriori	11.37	0.51					

The flied frontal straight towards the background corner of the squash court	tribal	37.62	1.06	1.50	0.32	4.58	2.36	Not significant
	posteriori	39.12	0.64					
The flied background straight strike towards the background corner of the squash court	tribal	36.37	0.91	2.25	0.36	6.14	2.36	Significant
	posteriori	38.62	1.06					
Test of zigzag running by the barrow way	Tribal	26.87	0.99	1.12	0.83	3.81	2.36	Significant
	posteriori	25.75	0.70					
Test of the numbered circles	tribal	6.62	0.51	1.12	0.64	4.96	2.36	significant
	posteriori	5.50	0.53					

Table (1) shows the results of the low lying straight frontal strike from the background part of the court as follows ; the arithmetic mean of the tribal test reached to (10.62) and standard deviation (0.74) while the arithmetic mean of the posteriori test reached to (11.62) and standard deviation (0.51) and in order to know the significance of differences between the arithmetic means of the tribal and posteriori tests , law of (T) of the symmetrical samples was used as the results showed the existence of differences between tribal and posteriori tests and in favor of posteriori test as the value of calculated (t) (5.29) which is greater than the tabulated value which is (2.36) and with degree of freedom (7) and of the possibility of error (0.05).

While the results of test of low lying background straight strike from the background part of the court as follows ; the arithmetic mean of the tribal test reached to ( 10.62) and arithmetic mean (0.74) while the arithmetic mean of the posteriori test reached to (11.37) and standard deviation (0.51) and to know the significant differences between arithmetic means for the two tests, (t) law for the symmetrical sample has been used , its results showed the existence of differences between tribal and posteriori tests and for favor of the posteriori test, as the value of calculated (t) reached to (3.00) which is greater than the tabulated value (t) which reached to (2.36) and with degree of freedom (7) and of the possibility of error (0.05).

While the results of the test of the flied straight frontal strike towards the background corner of the squash court as follows; the arithmetic mean of the tribal test reached to (37.62) and standard deviation (1.06), while the arithmetic mean of the posteriori test reached to (39.12) and standard deviation (0.64) and in order to see significant differences between the arithmetic means, law of (t) for the symmetrical samples has been. its results showed the existence of differences between tribal and posteriori tests and for favor of the posteriori tests as the value of calculated (t) (4.58) which is greater than the tabulated value which is (2.36) and with the degree of freedom (7) and of the possibility of error (0.05).

The results of the flied straight background strike towards the background corner of the squash court as follows ; the arithmetic mean of the tribal test reached to (36.37) and standard deviation (0.91) while the arithmetic mean of the posteriori test reached to (38.62) and standard deviation (1.06) and in order to know significant differences between the arithmetic means for the two tests , (t) law for the symmetrical samples has been used and its results showed the existence of differences between tribal and posteriori tests and in the favor of the posteriori tests as the value of calculated (t) reached to (6.14) which is greater than the tabulated value (2.36) and with the degree of freedom (7 ) and of the possibility of error (0.05).

The results of the zigzag running test by the barrow way as follows ; the arithmetic mean of the tribal test reached to (26.87) and standard deviation (0.99), while the arithmetic mean of the posteriori test reached to (25.75) and standard deviation (0.70) In order to know the significant differences between the arithmetic means of the tribal and posteriori tests , a law of (t) of the symmetrical samples has been used and its results showed the existence of significant differences between tribal and posteriori tests and for the favor of the posteriori tests as the value of calculated (t) reached to (3.81) which is greater than the tabulated value that reached to (2.36) and with the degree of freedom (7) and of the possibility of error (0.05 ) .

While the results of the numbered circles test as follows; the arithmetic mean of the tribal test reached to (6.62) and standard deviation (0.51) while the arithmetic mean of the posteriori test reached to (5.50) and standard deviation (0.53) and in order to know the significant differences between the arithmetic means of the tribal and posteriori tests , a law of (t) for the symmetrical samples showed the existence of significant differences between tribal and posteriori tests and for the favor of the posteriori test as the value of calculated (t) reached to (4.96) which is greater than the tabulated value which reached to (2.36) and with the degree of freedom (7) and of the possibility of error (0.05 ) .

The results of the test of accuracy of the background sided strike as follows; the arithmetic mean of the tribal test reached to (35.50) and standard deviation (1.77) while the arithmetic mean of the posteriori test reached to (36.75) and standard deviation (1.28) and in order to know the significant differences between the arithmetic means of the tribal and posteriori tests , the law of (t) for the symmetrical samples has been used and its results showed the existence of significant differences between tribal and posteriori tests and for the favor of the posteriori test as the value of calculated (t) reached to (3.98) which is greater than the tabulated value which reached to (2.36) and with the degree of freedom (7) and of the possibility of error (0.05).



#### 4. DISCUSSION

According to the statistical findings that reached by the researcher the results has been discussed as follows ; as shown in Table (1) the existence of a statistically significant difference between the results of the tribal and posteriori tests and in the favor of the posteriori test for the tests of the motor abilities , compatibility and agility and these significant distinctions are due to using the compound exercises that proved its affectivity in the development of some of the kinetic abilities and precision of the performance of some offensive skills of the game of squash, where the proposed exercises focused on the player performance for more than one skill through his movement inside the court and to change his body conditions by playing balls into the corners of the court , as well as using instruct exercises by the coach to move to the corners of the court as well as instruct exercises by the numbers through numbering the divided regions and the player should move according to instruct of the coach, which proved its affectivity in the development of agility and compatibility among the research sample, as pointed by (Ratib Ahmed and Khaled Al-Kurdi) to that one of the most important qualities that should be available in squash player is an agility in his movement inside the court and in the various directions and without an obstacles the opponent from playing his ball obstruction (Ratib Ahmed Qobaiaa and Khaled Al-Kurdi, 44: 1996) which led to the development of some of the motor abilities and accuracy of performance of the selected offensive skills and the game of squash one of the games that the accuracy of performance plays main role in the superiority of player upon his opponent through the performance of the offensive strikes and with accuracy which do not give the opportunity to the opponent from replying the ball, as the main component in the development of motor precision and adjusting the new motor skills and continuing to add some exercise and motor skills during the athletic training process contribute to ensuring the kinetic workmanship (Qassim Hassan Hussein and Abd Ali Nassif 238: 1988) and from these exercises the performance of the flied frontal and background strikes and the low-lying strikes through the balls thrower which leads to repeat the performance of the skills by moving the player from the middle of the court and exercises by providing the colleague by the balls from different areas of the court to make the exercise similar to the circumstances of the game as the accuracy of the squash is very important to the performance of the player in the game being able to perform the strikes in the right place during the play, leading to control the game and winning (Ian mekenise, 1997: 66).

It was a gradient in the performance of the exercises from easy to difficult in terms of performance and duplications and time of performance of each exercise. And the exercises performed by the players were focused on both sides of the court ; left and right to develop the low lying straight frontal and background strikes in a balanced manner because the good player should move inside the court and perform the frontal and the background strikes accurately and with high concentration and in a balanced manner and should not show to the opponent player his point of weakness through performance frontal strikes only that make the opponent increases playing background balls and makes the player under pressure and thus lose the points . the level of physical and kinetic abilities should be high in order to be the skilled performance best where (Mufti Ibrahim) indicates to "that there is a direct correlation between the level of skilled statement in any sporting activity and the development of the physical abilities and the freedom of this activity "(Mufti Ibrahim 26: 1998). And there was graduation in the exercises from easy to difficult through minimizing and maximizing the divided areas and should be for the player to move and guide the ball to these areas and systematically led to the development of agility and compatibility as well as accuracy of performance of some offensive skills in squash in line with the training phase of the players and this is shown by the results, as the skills especially the offensive ones need to be very precise in the hit on the frontal corners of the court by directing the ball to areas far from the presence of an opponent (Amin Anwar Al-Kholi 2: 2007).

The researcher believes that squash player needs a great deal of accuracy in performance because squash is characterized by sudden change of the ball track for the purpose of deceiving the opponent and not knowing its direction as the sudden change of the various body positions needs a high dynamic accuracy of the possibility of successful rapid response (Qassim Hassan Hussein and Abd Ali Nassif 233: 1988).

#### 5. CONCLUSIONS

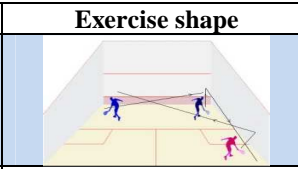


1. The use of the compound exercise has a positive influence in the development of some of motor abilities of the research sample.
2. The compound exercises have a positive impact in the development of some offensive skills in the game of squash.
3. The compound exercises led to the development of accuracy in the performance of the flied frontal and background strikes and the low-lying frontal and background strikes.
4. The proposed exercises led to the achievement of its objectives in the development of the skilled performance as the tests include special skilled training exercises especially inside the court.
5. The development of the results came suitable and appropriate to the research sample and led to obtain a significant development of the performance.
6. The compond exercises led to the development of agility and compatibility among the sample research.






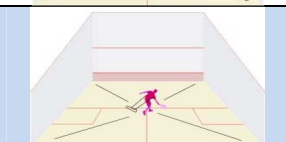


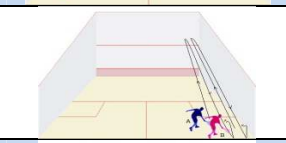
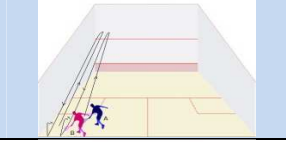
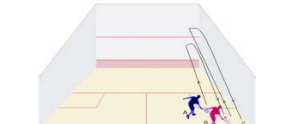
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## 7. APPENDAGES

### Appendage 1 shows the used exercises

Rank	Type of exercise	Exercise shape
1	A performs frontal Side strike, B performs a short counterproductive strike, C performs frontal strike toward the background wall, A performs long frontal sided strike, B performs frontal sided strike, C performs a short counterproductive strike.	
2	4 players stand in the middle of the court , from each side there is player and move to the 4corners by signal from the couch	
3	Two players stand in the middle of the court and by signal from the couch they move randomly by the rackets to one of the 6 corners	

4	Putting a group of balls (4) in each part of background court corners and the player move to the middle and transport the balls to the middle of the court inside can	
5	Putting a group of balls (10) in each side of the frontal court corners and the player move to the middle and transport the balls to the middle of the court inside can	
6	The couch puts 4 rackets on the ground in the four corners of the court and 3 balls on one racket and then transport the balls one by one to the corners by moving on them and then return to the middle of the court	
7	The couch stands in the middle of the frontal part of the court and holds with his hand 3 balls and throws ball on any corner of the court and the couch holds it and return it to the couch to be able to give another ball to another corner	
8	The couch stands in the middle of the frontal part of the court and gives the signal by numbers after numbering of each corner and moving according the signal of the couch about the number of the corner and the couch then return to the middle of the court	
9	The couch stands in the middle of the court and by the presence of the rubber ropes on the waist of the player and the couch tighten the two ends of the ropes and the player should move to the four corners from the court	
10	The player stands in the middle of the court and the balls thrower device to the left from the left sending site to provide the balls with the straight background picture to enable the player to move and perform straight background strikes	
11	A perform frontal sided strike , B perform high strike on the right sending square , C perform flied strikes to the frontal corners of the court	
12	A perform long grounded frontal strike to be rebound from the background wall , B perform long grounded frontal strike to be reboun from the background wall	
13	A perform long grounded background strike to be rebound from the background wall , B perform long grounded background strike to be rebound from the background wall	
14	A perform grounded frontal strike under the cutting line , B perform grounded background strike above the cutting line to be rebound from the background wall and so on	

15	A perform grounded background strike under the cutting line , B perform grounded background strike above the cutting line to be rebound from the background wall and so on	
16	A perform the balls to the player B who do grounded background straight strikes under the cutting line	
17	A perform the balls to the player B who do straight frontal grounded strikes under the cutting line	
18	The player A perform frontal strikes by the sided wall while the player B perform straight background grounded strikes after the background strikes that done by the player A by the sided wall and the player B perform straight frontal strikes	

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# THE PSYCHOLOGICAL SECURITY AND ITS RELATIONSHIP WITH THE PERFORMANCE OF SOME OFFENSIVE SKILLS IN VOLLEYBALL FOR STUDENTS OF FOURTH STAGE /FACULTY OF PHYSICAL EDUCATION

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## Abstract

The need for the psychological security is more important than any other need and comes in the forefront of the psychological needs after the physiological needs that represented by Maslow in the form of pyramid-shaped with seven needs and so the psychological security is necessary for the player as the "psychological stability is a requirement for competition and represented by the psychological security of the player, as the psychological security is considered an important condition that must be met for the player not to ensure the relationship with the coach, but to ensure satisfaction and motivation towards the practice of physical activity. The psychological security is one of the psychological manifestations that facing players in the current era which overfilling with complexities and problems and requirements and the pressures of everyday life, which is "the issue of overlap between the concept of security and a sense of lack of fear and a sense of satisfaction and psychological comfort as the person which is psychologically secure is the one who feels that his needs saturated and that the basic ingredients of his life is not at risk and human which is psychologically secure is in equilibrium and self -compatibility. From the above, the importance of the current research lies in the identification of the psychological security and its relationship with some offensive skills of volleyball, as well as to identify the relationship between him and some of the basic skills of volleyball, as the player who is psychologically secure has a good health and balanced personality and this helps to prepare the player to perform the skills well to reach the best level far from the kinds of stresses that inherent the training process, so the researcher depended on the psychological security scale and applied it on a sample of the volleyball players have reached the psychological importance of the security of the player and reached to the importance of the psychological security of the player and its reflection on the level of the skilled and tactical performance

**KEYWORDS:** Psychological Security. Offensive skills. Overwhelming beating. Transmitter.

## 1. INTRODUCTION

The volleyball game considers one of the grouped interesting games that favorable for kids and adults because of its inherent effects and speed and suspense as a result of the development the level of players physically, skilled , and tactical and psychologically, as it requires a highly perfection of the individual basic skills on one hand and to coordinate the work with the same team members on the other hand, the skilled performance of the good athletic games is a common result of many factors that reach the performance to the highest level, such as the work of the coach and officials on sporting activities and the necessary supplements for the training process and the healthy environment and the mental state of the athlete and other factors, and the psychological aspect considers one of the complex factors that coach or others cannot control on it as being one of the internal factors of the player character , and may see some players feel the lack of psychological security highly which has an effect on the technical level of and the precisions performance, and causes decrease in the skilled and physical energy level.

The psychological factor in the sporting field considered one of the basic components of the science of training and that so any training period no matter how long can not be useful without the intervention of the psychological conditions in it which has a positive influence on the skilled and tactical performance of the team , the psychological security factor is one of the foundations which helps students to perform skills properly which reflecting the required benefit and in a positive direction, the researcher noted as he is coach at the College of physical Education that there is weakness in the skilled and tactical performance of the students of the fourth stage of volleyball which will reflect negatively on the training of generations of leaders in schools also noted attention with the physical and



skilled training without paying attention with the psychological aspect of the skill, which is the closest way to get to the good level of the students.

**Aim of the research:** To identify the relationship between the psychological level of security and performance of some offensive skills in volleyball.

**Research hypothesis:** The presence of statistically significant relationship between psychological security and performance of some offensive skills Volleyball 1.

## 2. MATERIAL AND METHODS

The researcher used the descriptive method by two methods of connective relations due to its suitability with the nature of the research

**The research sample:** The research sample included on the (30) students from the fourth stage at the Faculty of Physical Education, University of Diyala that have been chosen randomly .The percentage of the research sample (44.46%) which is suitable to represent the research community in a real and honest representation ratio.

**Search procedures:** The researcher conducting skilled tests and answering on paragraphs of the psychological security scale on Sunday 16/02/2014 at the Faculty of Physical Education Hall, University of Diyala as it has been answered to paragraphs of scale which amounting to (25) paragraph which is gradated into three gradients (yes, no, not sure) as shown in attachment (1), then the sample perform the skilled tests in volleyball which is about two tests (the overwhelming beating, the transmission from the top or bottom)

## 3. RESULTS AND DISCUSSION

To achieve the first objective of this research, which aims to identify the level of psychological feeling of security among students of the fourth stage of volleyball, the researcher founded the differences between the arithmetic means and the premise mean of the results by using the R test of one sample as shown in Table (1)

**Table 1: shows the mean and standard deviation of the research sample in the psychological security**

The statistical indicators The researched variable	The arithmetic mean	The standard deviation
Overwhelming beating	21.860	1.996
Transmitter	6.320	1.585
Psychological security scale	62.070	5.656

Through tables (1) note that the arithmetic mean of skill of overwhelming beating was (21.860) and the standard deviation of (1.996) as the arithmetic mean of transmitter (6.320) and the standard deviation of (1.585) while psychological security ; the arithmetic mean reached to (62.070) and the standard deviation of (5.656)

Displaying the results of the relationship between the psychological security and the two skills; overwhelming beating and transmitter by volleyball analyze and discuss them.

**Table 2: shows the relationship between the arithmetic mean and standard deviations and the value of calculated (r) for the research variables and the level of significance.**

variables	A	SD	The calculated value of (r)	The tabulated value of (r)	Significance
the psychological security	62.070	5.656	0.390	0.395	Non -significant
The overwhelming beating	21.860	1.996			
The psychological security	62.070	5.656	0.289	0.381	Non - significant
The transmitter	6.320	1.585			

From table (2) note that the value of calculated (r) reached to (0.390) which is smaller than the tabulated value (0.395) which means that the relationship between psychological security and skill of overwhelming beating is insignificant at the degree of freedom (29) and with the level of significance (0.05), the negative relationship means that the student is unable to perform the skill very well because of the lack of a sense of security during performance of skill and fear from the surrounding circumstances, such as increasing the height of the network and the presence of bulwark of the opposing team as well as a small volleyball court and the lack of reaching the student to the good technique because this skill one of the hardest technical skills of the game and the motor performance requires

continuous training modules with practice and repetition, and this agrees with what is said by (Kamel Taha Alwis) ; mastering athletic skills would affect and be affected by the psychological factor , which is built mainly on perfecting the skills that need to pass in all learning and stability stages (Kamel Taha Alwis 188: 1991) and the researcher believes that the irregularity of the students in permanence and the difficult conditions experienced by the students and the lack of equipment and abilities with weakness of the exercises of skill led to the weakness of psychological security of the students which reflected negatively on the skilled performance of students

As can be seen from the table that the relationship between psychological security and the skill transmitter was not significant also, the value of calculated (r ) amounted to (0.389) which is smaller than the tabulated value of (t) (0.381) and with the degree of freedom (29) and with the level of significance (0.05) and the researcher attributes the reasons for the lack of tools and equipment used in the educational and training process and lack of security in the performance of the skill as the student not reached to the good technique of the performance, as well as the lack of learning and training units of the student and lack of time that spent in learning and perfecting the performance of this skill as the self-confidence feature in sport one of the most important psychological aspects that affect the performance of the players in a positive way as motivate them to make the effort to meet the competitive positions in the field of athletic activity and achieving success and can also have a negative impact on them and impede the performance because of uncertainty about the ability to achieve success in the field of the athletic activity (Hana Abd Al- Wahab Hassan and Nagwa Mahmoud Waly, 1993.)

#### 4. CONCLUSIONS

1. There is weakness between the psychological security and skill of overwhelming beating at for the research sample members.
2. There is weakness between the psychological security and skill of transmitter for the research sample members.
3. Find a sample that has a low level of psychological security.

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#### 6. APPENDAGES

**Attachment 1: the psychological security scale**

Rank	Paragraphs	Yes	Not sure	No
1	Do you like others			
2	Do you lack self-confidence			
3	Is your determination easily frustrate			
4	Do you feel comfortable with others			
5	Do you feel Non-friendliness with most people			
6	Are you generally a happy person			
7	Do you often suffer from what you do			
8	Do you have enough faith in yourself			
9	Do you usually consistent with others			
10	Do you have the feeling that you burden on others			
11	Do you find difficulty to express about yourself			
12	Do you feel that life is a big burden			
13	Do you fear from inferiority			
14	Do you usually feel with high spirits			
15	Are you consistent with the opposite sex			
16	Is your feel hurts easily			
17	Do you feel that you are comfortable in this world			
18	Are you worried about the level of your intelligence			



19	Do you feel that people are comfortable with you			
20	Do you usually feel satisfied			
21	Do you act on your nature			
22	Do you have a fear from the future			
23	Was your childhood happy			
24	Can you be in harmony with others			
25	Do you tend to fear from the competition			

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