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A COMPARATIVE STUDY IN OPTIMISM, PESSIMISM & FEAR ACCORDING TO A NUMBER OF BLOOD GROUPS FOR THE 2nd YEAR FACULTY OF PHYSICAL EDUCATION STUDENTS, SALAHELDIN UNIVERSITY / ARBIL

Maha Sabry Hassan
College of Physical Education & Sport Sciences / Diyala University
Email: Drmaha571@yahoo.com

Abstract

The study aims to:

- Show differences' significance in optimism – pessimism variable for the 2nd year students according to a number of blood groups.
- Show differences' significance in fear for the 2nd year students according to a number of blood groups.

The researcher used the descriptive method. As for the population of the study, it is a sample of the 2nd year students from the Faculty of Physical Education (167 students) chosen randomly. Concerning tools of the study, the researcher used optimism – pessimism and fear scales as well as identifying a number of blood groups for the students (A+, O+& B+). The researcher extracted validity and reliability of tests with the use of SPSS statistical method. The most important conclusions are:

1- Average fear level for students in the study sample.
2- Some blood groups with average level of optimism and some other groups with pessimism.
3- The O+ blood group showed average fear level compared with A+ and B+ for female students.
4- The O+ & B+ blood groups showed optimism, while female students with A+ group showed pessimism.
5- The sample of the study of students showed average fear level according to blood groups less in level for B+, O+ and then A+ group.
6- The sample of the study of students showed optimism for B+, O+ and then A+ group showed pessimism.
7- The study showed significant differences for the sake of O+ group for female students in optimism and pessimism and significant differences for A+ group in terms of optimism – pessimism and fear levels.

KEYWORDS: (Optimism – Pessimism), Fear and blood group.

1. INTRODUCTION & PROBLEM OF THE STUDY

Young people at the first world countries are considered the basic structure of society as they perform the main role in work and with efficiency and they need to enjoy physical and psychological health in addition to important aspects of personality that affect their attitudes in positive work and human behavior. Sport psychology is about any activity done by man whether mental, social, psychological or motor activities. At the same time, these activities are accompanied with physical and psychological variables affecting emotional and mental conditions in different situations. Fear is one of the psychological variables that are one of the effective psychological cases affecting people at certain situations and it is sometimes necessary and normal as a reaction sometimes. Fear is related to physiological and behavioral responses. Fear can result in positive or negative behaviors as it is linked to positive reactions that make it ready to attack, but in case of extreme fear individuals react with negative defensive reactions taking the form of escaping or refusal. (Kamel Lewis: 1993, 212).

The concepts of optimism and pessimism are relatively new concepts in the field of psychological specializations and are considered personal variables with relatively consistent importance. The concepts of optimism and pessimism are being greatly concerned at present because they are related to personal disorders. Optimism is positively related to control pressures and successful problem-solving, while pessimism is suffering from distress and low confidence (Charyton: 2009, 66). In addition, fear is one of the psychological conditions that individuals go through especially in life-threatening situations. Fear is the psychological condition that comes at the time of a sudden or life-threatening situation (Nezar & Kamel: 2000, 35).

Among the related psychological studies, there is the study of Shilton as he described physical structure as the most important in explaining human behavior and hypothesis of Cattle & Young saying that there is a possible relation between blood group and personality including psychological variables. In addition, the study of Ezink who said that scientific attempts to link between blood groups and psychological variables include studies and researches that seek to reach specific psychological conditions which may be represented in depression, anxiety, fear, optimism or pessimism. Hence, the study is significant in determining the relation between blood groups and optimism, pessimism and fear for the Faculty of Physical Education's students to determine their understanding and behaviors. This is the first study in this field and can be considered as studying behavioral attributes to understand nature and characteristics of students' behaviors according to their blood groups. The problem of the study lies in that the education

process in its various stages, especially in university stage, represents real support of personality development with its various attributes. Through personality theories, individuals are consisting of relatively stable attributes included in their utterances and behaviors. These attributes are shared factors of genetic and environmental factors as genetics and individual experiences combine together.

Through scientific attempts in some Arabic and foreign studies, we find that Hondlbi formulated the relation between blood groups with human behavior, psychological variables and personality attributes. The researchers conducted the study to identify this relation in 2nd year students of the Faculty of Physical Education and explain the causative relation to be a new addition in modern psychological literature in physical education sciences. The study aims to explore:

1- Differences' significance in (optimism & pessimism) and fear for2nd year students according to a number of blood groups.
2- Differences' significance in fear for the 2nd year students according to a number of blood groups.

2. METHODOLOGY

The study used the descriptive method using a comparative method to suit the nature of the study because descriptive method depends on studying reality or phenomena as they are in reality with accurate description and protected expression (Ismail: 2010, 11).

Population & Sample of the Study:

The sample of the study was selected from the 2nd year students from the Faculty of Physical Education, Salaheldin University / Arbil (167 male and female students) for the academic year 2014 – 2015. Enrollment and registration statistics shows that they are distributed in four groups and according to requirement of the study and then the sample to be chosen purposefully due to blood groups (A+, B+, O+, AB+) as the sample was distributed in the first three groups, but the last group (AB+) did not appear in the sample (104 students) as shown in table (1). It shows the number of the main sample (84 female and male students) with exploratory trial on 20 of the 2nd year students out of the main sample of the study.

Table 1 shows the sample of the study with exploratory trial

Sample	Blood Group		
	O+	B+	A+
Female students	14	5	8
Male students	34	6	17

Fear Scale:

This scale was prepared by Mohamed Abdo, 1992 and used by Eiad Nasser: 2012, 10 in physical education. It was applied on the Faculty of Physical Education and university students. It is consisted of 20 sections and 5 alternatives (always, often, sometimes, rarely, never) with grades from1 to 5 according the highest degree (100) on the scale and the less one is 20.

Optimism & Pessimism Scale:

After reviewing references and resources in literature regarding optimism and pessimism scale, the researcher used the one designed by Afraa Ibraim: 2008, 20 to be applied on university students. It consisted of 32 sections and 5 alternatives (always, often, sometimes, rarely, never) with grades (1 – 2- 3- 4- 5) consecutively for positive sections and the same for negative ones. Total degree of the scale is 32 – 160 and (96) for the theoretical average. We should also refer to the trend towards optimism as the less the degree is, the trend towards pessimism will increase.

Main Trial:

The scales were applied in the final form on the main sample (84 male and female students) of the 2nd year and due to blood groups as scale (optimism & pessimism) and fear forms were distributed after explaining the way of answering the scales by checking (√) in front of each section considered suitable for the respondent and then scales were joined with degrees.

3. RESULTS AND DISCUSSION

Results of differences in (optimism & pessimism) and fear for the 2nd year female students, Faculty of Physical Education due to a number of blood groups:

Table (2): Means and standard deviation (optimism & pessimism) of a number of blood groups:

Blood group / Variables	Measuring Unit	A+		B+		O+	
Fear	Degree	Mean -	S.D ±	Mean -	S.D ±	Mean -	S.D ±
		65	4,898	68	8.074	62	6,536
Pessimism & Optimism	Degree	87,250	5,970	98,200	5,890	101,857	12,476

The above table shows that there is an average level of the sample of female students due to fear scale degrees, but the difference is due to blood groups as O+ group sample possess less level than in A+ and B+. This is explained in the psychological variables,

especially fear, for the female students differ according to individual differences as this depends on behavior, environment and genetic factors. Scientists showed that there are effects of personal elements, especially fear and anxiety related to the environment we live in.

The study of Jogawar: 1983, 216 asserted that the respondents with B+ group obtained higher degrees than psychological disorders, fear and emotions, while the rest of blood groups obtained less degrees than fear and differ according to gender. As for the optimism – pessimism scale, high degrees show that this sample own more optimism compared with less degrees showing pessimism. Table (2) shows that A+ group sample's female students are characterized with pessimism, while groups B+ and O+ have optimism according to the scale with arithmetic mean of 96. This shows that if the degree is more than the average it refers to optimism in the sample and vice versa, but optimism was significant in O+ group students due to good socialization methods. The study of Katz: 2005, 10 asserted that there is a presence of a specific pattern of psychological and social attributes for each group as O+ was characterized by openness and positivity, B+ was characterized by activity and optimism, while the study of McCoy: 2004, 10 asserted that A+ group students are the most likely to be pessimistic and emotional.

Results of Fear Variable for Female Students Due to a Number of Blood Groups:

Table (3) analysis of contrast among the three groups in blood groups at fear scale for female students:

Serial	Contrast source	Freedom degree	Total Squares	Average Squares	F counted Value	Sig Value
1	Inter-group	2	150,219	75,109	1,831	0,182
2	Intra-group	24	984,300	41,012		
3	Total	26	1134,519			

*** significant if sig value is ≤ 0.05**

Table (3) shows that there are no statistically significant differences in fear level for female students due to blood groups.

Results of (optimism – pessimism) Variable for Female Students Due to a Number of Blood Groups:

Table (4) analysis of contrast among the three groups in blood groups at (optimism – pessimism) scale for female students:

Serial	Contrast source	Freedom degree	Total Squares	Average Squares	F counted Value	Sig Value
1	Inter-group	2	109,393	548,697	5,460	0,011
2	Intra-group	24	2412,014	100,501		
3	Total	26	3509,407			

*** significant if sig value is ≤ 0.05**

Table (4) shows that sig value is 0.011 which is less than 0.05 value and this means that there are differences in (optimism – pessimism) variable for female students due to blood groups, so the researcher resorted to the use of the Least Significant Difference LSD test.

Table (5) difference in average of total blood groups in (optimism – pessimism) variable using the LSD test for female students:

Serial	Blood Groups	Mathematical sums	Means differences	Sig	Significance
1	A^+ - B^+	98,200-87,250	10,950-	0.067	Insignificant
2	O^+ - A^+	87,250-101,857	14,607-	0.003	Significant
3	O^+ -B^+	98,200-101,857	3,657-	0.491	Insignificant

*** significant if sig value is ≤ 0.05**

Table (5) shows differences in groups averages in a number of blood groups at (optimism – pessimism) scale showing O+ group as the most group for female students. The sample of the study was characterized with optimism and this can be explained by people of this group being more sociable than others in A+ and B+ groups. They also have open, active and self-confident personalities. The study of Gupla, 1990 was about determining the relation between blood groups and personal attributes showed that O+ students are more balanced and optimistic than others in addition to the study of Ziad Barakat: 2007, 22 that asserted that O+ group students are more likely to be optimistic and less likely to have depression.

Results of differences in (optimism – pessimism) Variable for Female Students Due to a Number of Blood Groups:

Table (6) Arithmetic means and standard deviations in blood groups at (optimism – pessimism) scale for female students:

Blood group / Variables	Measuring Unit	A+		B+		O+	
Fear	Degree	Mean -	S.D ±	Mean -	S.D ±	Mean -	S.D ±
		67,058	7,725	63,166	5,564	66	8,104
Pessimism & Optimism	Degree	86,470	10,819	99,500	9,934	100,545	9,367

Results showed that students were characterized by an average level of fear and the least fear level was for B+ group and then O+ and A+ groups. This results asserts results of the study of Esysenk: 1982, 531 which found that emotion related positively with B+ group, while the study of Neumann: 1992, 88 showed that respondents of A+ group obtained more than high marks in anger, fear

and anxiety more than the O+ group respondents. As for the optimism – pessimism scale according to blood groups, the A+ group was characterized by pessimism unlike B+ and O+ groups and the scale is more than 96 so it tends to optimism.

Discussion of Results of Differences in the Fear variable for students due to a number of blood groups:

Table (7) analysis of contrast among the three groups in blood groups at the fear scale for students:

Serial	Contrast source	Freedom degree	Total Squares	Average Squares	F counted Value	Sig Value	Significance
1	Inter-group	2	67,208	33,604	0,555	0.578	insignificant
2	Intra-group	53	3211,775	60,600			
3	Total	55	3778,982				

*** significant if sig value is ≤ 0.05**

Table (7) shows that there are insignificant differences in fear scale for students according to contrast in the three blood groups.

Results of (optimism – pessimism) Variable for Students Due to a Number of Blood Groups:

Table (8) analysis of contrast among the three groups in blood groups at (optimism – pessimism) scale for students:

Serial	Contrast source	Freedom degree	Total Squares	Average Squares	F counted Value	Sig Value
1	Inter-group	2	2297,636	1148,818	11,878	0,000
2	Intra-group	53	5125,917	96,715		
3	Total	55	7423,554			

*** significant if sig value is ≤ 0.05**

Table (8) shows that there are no significant differences in optimism – pessimism scale for students, so the researchers resorted to the LSD.

Table (9): Difference in means and total blood groups in (optimism – pessimism) variable using the LSD for students

Serial	Blood Groups	Mathematical sums	Means differences	Sig value
1	A-B	99,500-86,470	13,03	0,007
2	A-O	100,545-86,470	14,075-	0.000
3	B-O	100,545-99,500	1,045-	0,812

*** significant if sig value is ≤ 0.05**

Table (9) shows that there are statistically significant differences for students' marks in (optimism – pessimism) scale and due to blood groups for the sake of A+ group and there are no statistically significant differences for O+ and B+ due to contrast in their blood groups in terms of (optimism – pessimism) and fear scales. Results also showed that differences between degrees of male and female students in (optimism – pessimism) and fear scales due to contrast in blood groups showing that there is a difference towards male students as O+ was significant in optimism while A+ in (optimism – pessimism) and fear scales. This agrees with the study of Moussa: 2003, 50 in differences between genders due to blood groups showing differences in characteristics and also the study of (Lester: 1987, 267) which asserted the relation between blood groups with personal attributes and the O+ group is prevalent among individuals. A lot of studies such as (Kett: 2002, 4) asserted that anthropometric and psychological attributes have the greatest effect and blood affects neural system and hormones to play a great role in anthropometric and psychological attributes.

4. CONCLUSIONS

1- Sample of the study was characterized by average fear level foe male and female students.
2- Some blood groups with average level of optimism and some other groups with pessimism.
3- The O+ blood group showed average fear level compared with A+ and B+ for female students.
4- The O+ & B+ blood groups showed optimism, while female students with A+ group showed pessimism.
5- The sample of the study of students showed average fear level according to blood groups less in level for B+, O+ and then A+ group.
6- The sample of the study of students showed optimism for B+, O+ and then A+ group showed pessimism.
7- The study showed significant differences for the sake of O+ group for female students in optimism and pessimism and significant differences for A+ group in terms of optimism – pessimism and fear levels.

5. RECOMMENDATIONS

1- The concern with identifying motivations of human behavior and studying psychological variables.
2- The concern with selections due to blood groups for male and female students of the Faculty of Physical Education.
3- Conducting researches tackling the relation between blood groups and other psychological variables related to intelligence and achievements for the athletes.

6. REFERENCES

- Lewis, K. (1993): "Sport Psychology", 2nd Ed., Ministry of Higher Education & Scientific Research, Baghdad University.
- Al Taleb, N. & Lewis, K. (2000): "Sport Psychology", Ministry of Higher Education, Baghdad University.
- Al Taleb, N. & Lewis, K. (2002): "Sport Psychology", 3rd Ed., Dar Al Hekma Press, Baghdad University.
- Al Ansary, B. M. (1998): "Optimism & Pessimism: Concept, Measurement and Details", 1st Ed., Kuwait, World Publication Center.
- Khalil, I. (2010): "Principles of Physical Education's Philosophy", 1st Ed., Amman, Dar Degla Press.
- Mohamed, M. (2003): "Differences in some Personal Attributes among Males & Females Due to Blood Groups", Journal of Psychology, Vol. 11, pp. 67 – 68
- Khalil, A. I. (2008): "The Relation between Emotional Intelligence and Optimism and Pessimism for a Sample of Female Students of Faculty of Education and Faculty of Sciences for Girls", FFaculty of Education, Baghdad University, Issue. 20, Journal of Artistic Sciences.
- Ibrahim, M. A. (1999): "Scientific Principles & Statistical Methods of Tests & Measurements in Physical Education", 1st Ed., Jordan, Dar Al Fikr Press.
- Al Emam, M. M. et al. (1990) : « Evaluation &Measurement », Baghdad, Dar Al Hekma Press.
- Charyton,C.Huthisoon S.and Snow,L.(2009):.Creativity as an attribute Impact of positive and negative affect on the creative personality : Journal creativity in mental health.
- Katz, v(2005): blood character analysis,can blood groups have common trqits.www.blood girers.com.
- Mccoy ,K(2004): certain features of type A personality liked with high blood pressure.
- Jogaear,r(1993):personality correlates of human blood groups personality , psychological Bullet in.
- Eysenck, H(1982):The biological bais of cross-cultural difference in personality . blood groups.
- Neumann ,J.(1992):personality traits and blood typein duodenal ulcer patieuts healthy controls.
- Lester ,D .(1987) :national distribution of blood groups ,personal violence, and national character "personality and Individual Defference.
- Kett , Jandtrefil , J.(2002) : blood type and health New York : houghton Mifflin company

A WORLD BIO-KINEMATIC MODEL TO EVALUATE ACHIEVEMENTS OF TRIPLE JUMP PLAYERS FOR THE ADVANCED IRAQI

Hussein Mardan Omar [a]
Mazen Anhir Lamy [b]
College of Physical Education & Sport Science, Qadisiyah University

[a] E-mail: Hussein_mardan@yahoo.com

Abstract

The triple jump is one of the vital and important games in the program of track-and-field games. In addition, it is considered one of the technical games as, in performance; it depends on a lot of kinematic variables. Generally, it includes many consecutive technical phases which require research for the purpose of raising the level of technical performance and achieving new Iraqi records. The study aims to determine the values of kinematic values for the world champions and Iraq advanced category champions and put a model for each phase of triple jump performance phases (hop, stride and jump) with the significance of the kinematic variables proposed by the staff which consists of 18 researchers supported by the World Federation of Athletics in Berlin, 2009 and Daegu 2011 for track-and-field games. Population of the study was represented in jumpers and participants in Iraq's clubs and institutions championship held in the capital, Baghdad, on 22/10/2014. The sample of the study was chosen from the top eight. 26 attempts were analyzed of the total of six legal attempts for each jumper and comparing them with 16 attempts of world champions. 4 video cameras with frequency speed of 300 P/s were used and put on the left side of the approaching road on a distance of 7 m. the following variables: (speed and its decrease, touch and take-off angles, angles of knee and trunk, distance of each phase, touch times, etc) were used. The study reached three different models for each phase separately.

Among the most important conclusions, there are: the variable of support duration came at first place of importance in all extracted models and all technical phases, the Iraqi model for the advanced gives importance for not losing horizontal speed at the hopping phase. As for the world model, it does not give great importance for this variable as it does not tend to decrease horizontal speed, but keeping it, the model of Iraqi jumpers is more stable than the world model at both phases of hopping and stride and the reverse in jumping phase. There is an inverse relation in some variables between the world and Iraqi models which means that there is a difference in performance method.

KEYWORDS: Achievement. Triple jump.

1. INTRODUCTION & PROBLEM OF THE STUDY

The triple jump is one of the vital and important games in athletics programs. It is also considered a tactical sport because it depends in performance on many kinematic variables. In general, it includes a lot of consecutive technical phases that made it necessary to research and explore the basic variables through which technical performance level can be enhanced. Therefore, kinematic variables of any performance provide the right basis for teachers and trainers when it comes to teaching or training a certain sport skill. This is through finding suitable solutions for barriers standing before players to make optimal performance of the skill. In fact, there are some of kinematic variables which affect performance efficiency and quality such as approach angles, pushing at take of moments, touching times for each phase. According to these variables, distance of each phase can be determined and, as a result, total distance of each achievement. It is difficult to separate the overlapping variables of each phase as players need to perform these variables optimally to reach achievement. Due to the repetition of take-off phases in triple jump, there is a great importance for the nature of performing these variables to achieve the goal of this game.

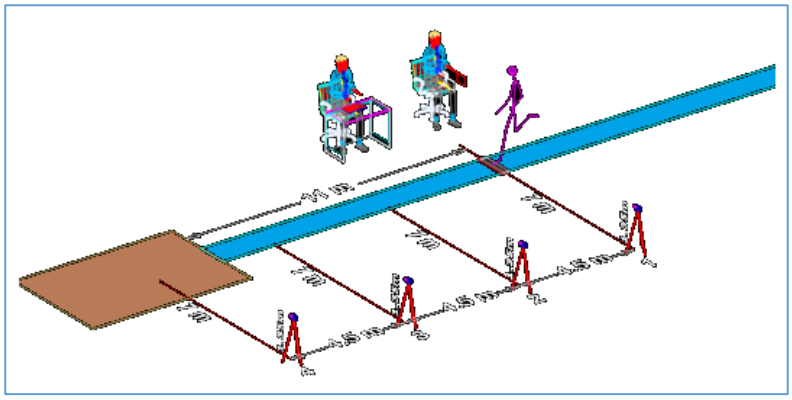
Poor achievement level is noticed in triple jump for Iraqi athletes through the comparison of past and current records. We found that the best Iraqi achievement was recorded at the level of 2015 applicants with the name of jumper Nezar Akram (15.05 m), while we find that the best record was in 1996 by the name of jumper Majed Abdelsada (16.50 m). This shows poor levels in Iraqi performance records. The Iraqi record is "(1.67 m) a way far behind the Arab record (for the youth) recorded by jumper, Mohamed Youssef (16.57) in 2004. This wide difference in numbers requires research for reasons of these results in the light of bio-kinematic results proposed by the assigned bio-kinematic team by the International Association for Athletics Federations (I.A.A.F). Methods proposed in this study are important to evaluate achievement according to models that will be designed through knowing the quantitative importance of each bio-kinematic variable in the designed models. The significance of the study comes from showing strength and weak points in performance appraisal after analyzing the most important bio-kinematic variables of world champions and Iraq advanced champions in addition to determine the order of variables in phase models according to their importance regarding the extracted values. The goal of the study is to:

1- Examine world and Iraqi models according to bio-kinematic variables for each of the technical phases in triple jump for world champions and Iraq's advanced champions.
2- Compare both models and determine the order of variables contributing in each model and percentage of contributing with increase or decrease in distance of each phase of the game (hopping, stride and jumping).

2. METHODOLOGY

Top eight advanced jumpers were selected according to final results of Iraq's Clubs and Institutions Championship held in Baghdad on 22/10/2014. Their anthropometric measurements are: (length: 179 cm 7.59±, weight: 72.37 kg 7.81±). Successful attempts were analyzed due to regulations of the game's international federation (26 attempts: 6 legal attempts for each jumper and 16 attempts for world champions.

Bio-kinematic analysis results were approved by the bio-kinematic team consisting of 18 researchers from six institutions in Germany in planning a great project about biomechanics and organizing it to be applied in international championships and with support of the German federation of athletics (DLV) and the International Association for Athletics Federations (I.A.A.F) (New Studies in Athletics, p. 195) including triple jump. The set of kinematic variables was divided according to technical phases of the game to reach a model for each phase. The sample of the study was pictured at three pm on Friday 24/10/2014 using 4 video cameras (300 pics/s) spreading along the technical phases and according to approved measurements from analysis of world champions. Camera (1) was put 7 meters to the left of the player at the edge near the approach path in a perpendicular position on the take-off panel. At a height of 1.35 m, cameras (2, 3 and 4) are put to the left in a distance of 4.50 m from each other as shown in table (1 – 2):



Form (1 – 2): Field of the main trial and dimensions of the used cameras in the study

3. RESULTS AND DISCUSSION

Analysis & Discussion of Models:

Analysis & Discussion of the Hopping Model:

Table (1 – 3): Bio-kinematic variables for the hopping phase for world and Iraqi champions:

No.	Variables	World Championships		Iraq Championships	
		Mean	Std.	Mean	Std.
1	**Stride Length** (2L)	2.545	0.152	2.151	0.273
2	**Horizontal velocity** (2L)	10.153	0.196	9.180	0.510
3	**Stride Length** (1L)	2.394	0.124	2.103	0.180
4	**Horizontal velocity** (1L)	10.239	0.248	9.128	0.462
5	**Inclination angle at touch-down**	18.938	2.720	20.615	3.371
6	**Trunk angle (touch-down)**	89.688	3.260	87.423	4.483
7	**Horizontal velocity**	9.387	0.389	8.858	0.527
8	**Vertical velocity**	2.256	0.280	2.859	0.619
9	**Loss of horizontal velocity**	0.851	0.294	0.468	0.359
10	**Minimal Knee angle**	138.375	9.373	134.846	6.851

11	**Average velocity of the lead leg**	652.750	90.676	691.058	54.975
12	**Duration of the support phase**	0.125	0.011	0.135	0.011
13	**Trunk angle (take-off)**	88.500	3.120	81.615	4.997
14	**Angle of take-off**	13.544	1.701	16.885	2.535
15	**Hop length**	6.351	0.230	4.976	0.370

Table (2 – 3): Results of teachers' values, importance and order of kinematic variables for the hopping phase according to teachers' values in both models (world and advanced Iraqi models):

No.	Variables	World Championships			Iraq Championships		
		Beta	VIF	Beta Rank	Beta	VIF	Beta Rank
	Constant	-1.45813			6.63517		
1	**Stride Length** (2L)	-0.277818	1.98	6	0.22242	3.84	2
2	**Horizontal velocity** (2L)	0.557564	4.08	2	0.158944	3.80	5
3	**Stride Length** (1L)	-0.43876	1.39	3	0.0516801	3.47	8
4	**Horizontal velocity** (1L)	0.282782	2.79	4	0.0519642	1.55	7
5	**Inclination angle at touch-down**	-0.00019618	2.77	14	0.0296937	1.84	9
6	**Trunk angle (touch-down)**	0.0361567	1.93	10	-0.00898384	2.24	11
7	**Horizontal velocity**	-0.0116736	0.76	11	0.200567	1.06	4
8	**Vertical velocity**	0.280823	2.31	5	-0.113211	1.74	6
9	**Loss of horizontal velocity**	0.203526	1.28	7	-0.219031	1.00	3
10	**Minimal Knee angle**	-0.00330952	2.94	12	-0.00712321	1.93	12
11	**Average velocity of the lead leg**	0.000429845	3.54	13	0.00004707	1.86	14
12	**Duration of the support phase**	5.47175	4.59	1	-20.4584	2.53	1
13	**Trunk angle (take-off)**	-0.0450521	2.42	8	-0.020026	1.82	10
14	**Angle of take-off**	0.0409345	2.82	9	-0.00477954	1.75	13
	R^2	76.6043			81.033		
	DW	2.25165			2.36631		
	MSE	0.151982			0.0505647		

Table (4 – 4) shows values of data inflation factor (VIF) that did not exceed the value (10) which means that independent variables do not include overlapping of lines and this contributes to accurate model building. On the other hand, from its big number, this factor shows that the value lies between (2.5 – 1.5) and multiple correlation coefficient square among independent variables and the dependent variable (hopping distance) (R^2) is accepted to show the importance of the model. The higher is the value, the more accurate the model is. The small MSE value shows close spread of values on regression line which means that the advanced model is more stable than the world athletes' model. It is also noticed through Beta order of variables according to teachers that supporting duration at the moment of touching in the front position came as primary importance, but there is an inverse relation in the advanced model compared with the world model. This means that reducing time in a single unit rate means reduction in 0.14 s instead of 0.15 s which leads to increase achievement in a value of 0.205 m (20 cm and 5 ml). In addition, supporting duration is inversely related to force that can be explained as ground pushing force and from the following rule: force = momentum / time. We can notice that force is inversely related to time (Hussein & Eiad, 2011). Moreover, the increase in touch duration affects the take-off angle which is the adopted method in the world model. The order of the maximum bending for knee angle was the same in both models as the less this angle is the more the distance will be. Through our information, this angle determines the amount of pushing through extension in order to lead body mass center towards a suitable direction with taking-off curve at this phase. One of the important variables between both models is the variable of horizontal velocity loss from 0.33 m/s to 0.32 m/s which means a change in a single unit leading to increase achievement in a value of (2 ml) at the hopping phase. As for the world model, this variable is not given great importance as it is not inclined to reduce horizontal velocity loss, but to maintain it as there are few parts that were changed in this independent variable compared with the supporting duration for example. As for the variable of horizontal velocity of the stride, it came second in terms of ordering variables due to teachers' values of the world model and came fifth in terms of the advanced model. When this variable increased with an amount of 1 cm/s for the world model, it will increase achievement distance with 6 ml. when this variable increases with the same amount for the advanced, achievement distance will increase with a value of 2 ml. we can notice that this slight increase in this variable will increase achievement distance, but this increase should be within suitable limits of the advanced jumpers. Therefore, we have to realize the great importance of this variable during training process to raise the level of achievement. As for the last stride distance length variable, it came at third place in terms of variable order according to teachers' values of the world model and came eighth in terms of the advanced model, but there is an inverse relation

in the world model compared with the advanced one. This shows that the 1 cm decrease in this variable's value found in the world champions will increase achievement distance in hopping (4 ml). As for this variable's 1 cm increase for the advanced jumpers will increase hopping distance (1 ml). The amount of increase for the world champions is bigger than the advanced, so we should work on developing the last stride distance length whose importance was explained in acquisition of horizontal velocity previously.

The variable of horizontal velocity of the last stride came fourth in terms of variables order according to teachers' values of the world model and came seventh in the advanced model. The increase of this variable's value (1 cm/s) for world champions will increase hopping achievement distance (3 ml) and its 1 cm increase for the advanced will increase hopping achievement distance (1 ml). As for the variable of vertical take-off velocity, it came at fifth place in terms of variables order according to teachers' values of the world model and sixth in terms of the advanced model, but there is an inverse relation in the latter compared to the former. The increase in this variable's value (1 cm/s) for the world model will increase hopping achievement distance (3 ml), but decreasing this value (1 cm) for the advanced will increase achievement distance (11.3 cm).

The variable of distance of stride before the last came at sixth place in variables order according to teachers' values of the world model and came second in the advanced model, but there is an inverse relation in the world model compared with the advanced which shows the (1 cm) decrease in this variable for the world model which will increase hopping achievement distance (3 ml). In case of increasing the value of this variable (1 cm) for the advanced, this will increase hopping achievement distance (3 ml). As for the increase of this variables' value (1 cm) for the advanced model, it will increase hopping achievement distance (2 ml). Concerning the variable of trunk angle at the release moment, it came at eighth place in terms of variables order according to teachers' values for the world model and at tenth place in terms of the advanced. It is noticed that teachers' values in both models hold negative sign which means that the decrease in the value of this variable (1 degree) for the world model will increase achievement distance (45 ml), but its decrease in value with the same previous variable will increase achievement of the advanced (20 ml). As for the variable of take-off angle, it came at ninth place in terms of variables order according to teachers' values for the world model and at thirteenth place in terms of the advanced model, but there is an inverse relation in the advanced model compared with the world model which shows that the increase of this variable's value (1 degrees) for the world model will increase hopping achievement distance (14 ml), but its decrease (1 degree) for the advanced will increase hopping achievement distance (5 ml). As for the variable of take-off touch trunk angle, it came at tenth place in terms of variables order according to teachers' values for the world model and at eleventh place in terms of the advanced model, but there is an inverse relation in the advanced model compared with the world model which shows that the increase of this variable's value (1 degrees) for the world model will increase hopping achievement distance (36 ml), but its decrease (1 degree) for the advanced will increase hopping achievement distance (9 ml). As for the variable of horizontal velocity for take-off, it came at eleventh place in terms of variables order according to teachers' values for the world model and at thirteenth place in terms of the advanced model, but there is an inverse relation in the advanced model compared with the world model which shows that the increase of this variable's value (1 cm/s) for the world model will increase hopping achievement distance (20 ml). As for the variable of trunk inclination angle at touch moment, it came at fourteenth place in terms of variables order according to teachers' values for the world model and at ninth place in terms of the advanced model, but there is an inverse relation in the advanced model compared with the world model which shows that the increase of this variable's value (1 degrees) for the world model will increase hopping achievement distance (30 ml).

Discussion & Analysis of Stride Model:

Table (3 – 3): Bio-kinematic variables for the stride phase for world champions and Iraqi champions:

No.	Variables	World Championships		Iraq Championships	
		Mean	Std.	Mean	Std.
1	**Inclination angle at touch-down**	20.687	2.182	19.115	3.603
2	**Trunk angle (touch-down)**	90.125	3.052	90.307	4.831
3	**Horizontal velocity**	8.293	0.187	8.217	0.666
4	**Vertical velocity**	1.998	0.171	2.282	0.677
5	**Loss of horizontal velocity**	1.091	0.297	0.641	0.515
6	**Minimal Knee angle**	132.687	7.542	132.692	9.268
7	**Average velocity of the lead leg**	574.25	70.180	618.758	81.889
8	**Duration of the support phase**	0.163	0.012	0.156	0.014
9	**Trunk angle (take-off)**	81.437	3.915	77.769	4.667
10	**Angle of take-off**	13.606	1.311	16.230	2.371
11	**Step length**	5.271	0.262	3.940	0.321

Table (3 – 4): Results of teachers' values and importance of ordering kinematic variables for the stride phase according to teachers' values in world and advanced models.

No.	Variables	World Championships			Iraq Championships		
		Beta	VIF	Beta Rank	Beta	VIF	Beta Rank
	Constant	2.01727			3.72243		
1	**Inclination angle at touch-down**	-0.0492	2.27	6	0.013757	3.43	7
2	**Trunk angle (touch-down)**	0.00605	1.06	9	-0.0135984	2.36	8
3	**Horizontal velocity**	0.17025	1.87	3	0.424545	4.88	2
4	**Vertical velocity**	0.10945	2.63	5	-0.0930085	3.85	4
5	**Loss of horizontal velocity**	0.17989	1.56	2	0.298491	2.59	3
6	**Minimal Knee angle**	-0.0142	2.17	8	-0.00478979	2.89	9
7	**Average velocity of the lead leg**	-0.0019	2.31	10	-0.00043763	4.75	10
8	**Duration of the support phase**	5.45335	3.89	1	-8.15337	5.01	1
9	**Trunk angle (take-off)**	0.02431	1.69	7	-0.0177973	1.64	6
10	**Angle of take-off**	0.14883	2.65	4	0.0789884	4.01	5
	R^2	62.8289				78.1683	
	Adjusted R^2	-			63.6139		
	DW	1.17065			1.94123		
	MSE	0.0678711			0.0376246		

It is noticed through Beta order of variables according to teachers that supporting duration at the moment of touching in the front position came as primary importance and the same order in both models, but there is an inverse relation in the advanced model compared with the world model. This means that increasing this model's value (0.01) of the second for the world model will increase achievement distance (55 ml) and when this variable's value decreases by the same previous variable for the advanced, it will increase achievement distance (82 ml). We can also notice that thigh angular velocity variable for the leading foot came at the same order in both models with negative sign. This shows the decreasing value of this variable for both models will increase stride achievement distance. As for loss of horizontal velocity, it came at second place in order according to teachers' values of the world model and at third place for the advanced model. It is also noticed that teachers' values for both models hold positive sign which means that increasing the value of this variable (1 cm/s) for the world model will increase stride achievement distance (2 ml). When this variable increases by the same previous amount for the advanced, it will increase stride achievement distance (3 ml). As for loss of horizontal release velocity, it came at third place in order according to teachers' values of the world model and at second place for the advanced model. It is also noticed that teachers' values for both models hold positive sign which means that increasing the value of this variable (1 cm/s) for the world model will increase stride achievement distance (2 ml). When this variable increases by the same previous amount for the advanced, it will increase stride achievement distance (4 ml). By this method, we are able to further explain other variables.

Discussion & Analysis of Jumping Model:

Table (5 – 3): Bio-kinematic variables for the jumping phase for the world and Iraqi champions:

No.	Variables	World Championships		Iraq Championships	
		Mean	Std.	Mean	Std.
1	**Inclination angle at touch-down**	21.25	2.435	19.5	2.319
2	**Trunk angle (touch-down)**	90.125	3.052	86.96154	5.134049
3	**Horizontal velocity**	7.014	0.299	6.215	0.726
4	**Vertical velocity**	2.501	0.295	2.551	0.632
5	**Loss of horizontal velocity**	1.281	0.260	2.001	0.894
6	**Minimal Knee angle**	138.375	5.389	133.384	7.526
7	**Average velocity of the lead leg**	519.5	55.480	549.035	70.134
8	**Duration of the support phase**	0.179	0.015	0.18	0.015
9	**Trunk angle (take-off)**	76.1875	5.833	75.730	6.508
10	**Angle of take-off**	19.762	2.615	17.346	2.841
11	**dist.**	0.456	0.120	0.316923	0.055192
12	**Knee angle (Landing)**	131.875	23.448	146.230	7.875
13	**Hip angle (Landing)**	75.0625	23.459	67.307	15.795
14	**Trunk angle (Landing)**	66.25	20.305	49.269	12.650
15	**Jump length**	5.922	0.290	4.565	0.374

Table (6 – 3): Results of teachers' values, significance and order of kinematic variables for the jumping phase according to teachers' values in world and advanced models.

No.	Variables	World Championships			Iraq Championships		
		Beta	VIF	Beta Rank	Beta	VIF	Beta Rank
	Constant	5.5505			6.49442		
1	**Inclination angle at touch-down**	-0.0741785	3.04	6	-0.00483234	2.15	10
2	**Trunk angle (touch-down)**	-0.00713303	1.53	10	-0.0148247	2.20	7
3	**Horizontal velocity**	0.950018	3.53	3	0.465669	3.62	2
4	**Vertical velocity**	0.463325	1.78	4	0.237051	2.36	4
5	**Loss of horizontal velocity**	0.3557	2.48	5	0.270208	3.08	3
6	**Minimal Knee angle**	-0.0136026	1.63	8	-0.0130624	1.94	8
7	**Average velocity of the lead leg**	-0.00118873	1.80	12	-0.00187573	3.39	14
8	**Duration of the support phase**	-4.5013	3.14	1	-12.1315	3.88	1
9	**Trunk angle (take-off)**	-0.0328051	3.99	7	-0.00686695	2.30	9
10	**Angle of take-off**	0.00437451	1.68	11	0.0155304	2.20	6
11	**dist.**	1.57894	3.58	2	-0.128724	2.38	5
12	**Knee angle (Landing)**	-0.00109365	2.28	14	0.00397018	2.30	12
13	**Hip angle (Landing)**	0.00112531	3.39	13	-0.0029912	3.87	13
14	**Trunk angle (Landing)**	-0.00976671	2.37	9	0.00419194	4.21	11
	R^2	86.631			75.4378		
	Adjusted R^2	-			44.1768		
	DW	2.20458			2.1891		
	MSE	0.0475969			0.0630864		

It is noticed through Beta order of variables according to teachers that supporting duration at the moment of touching in the front position came as primary importance and the same order in both models. It is noticed that teachers' signs hold negative signs which means that the decrease in this variable's value (0.01) of the second for the world model will increase achievement distance (45 ml) and when this variable's value decreases by the same previous variable for the advanced, it will increase achievement distance (12.1 cm). We can also notice that thigh vertical velocity variable for the release came at the same order in both models with positive sign. This shows the increasing value of this variable (1 cm/s) for the world model will increase achievement distance (4 ml). As for the increase of this variable's value (1 degree) for the advanced, it will increase achievement distance (13 ml). As for thigh angle at landing, it came at the same order in both models. It is also noticed that there is an inverse relation for the advanced model compared with the world model which means that increasing the value of this variable (1 degree) for the world model will increase jumping achievement distance (1 ml). When this variable increases by the same previous amount for the advanced, it will increase stride achievement distance (3 ml). As for the variable of distance of weight center to thigh edge, it came at second place in order according to teachers' values of the world model and at fifth place for the advanced model. It is also noticed that there is an inverse relation for the advanced model compared with the world model which means that decreasing the value of this variable (1 cm) for the advanced model will increase jumping achievement distance (1 ml). When this variable increases by the same previous amount for the advanced (1 ml), it will increase jumping achievement distance (1 ml). In case of this variable's increase (1 cm) for the world model, it will increase jumping achievement distance (16 ml) by this method, we are able to further explain other variables.

4. CONCLUSIONS

1- The variable of support duration came at primary importance at all models and for all technical phases for the world and Iraqi champions.
2- The advanced Iraqi model gives importance to the loss of horizontal velocity at hopping phase, but the world model does not give it great importance and does not tend to reduce the loss of horizontal velocity but to keep it.
3- The model of Iraqi jumpers is more stable than the world model at hopping and strides phases unlike the jumping phase.
4- There is a inverse relation at some variables between world and Iraqi models which means that there is a difference in performance method.
5- Order of bio-kinematic variables was not the same between both models in most cases.

5. REFERENCES

1. Omar, H. M., Abdulrahman, E. (2011): "Biomechanics in Athletic Movements), Al Najaf Al Ashraf Press, Iraq, p. 138.
2. Abdulkarim, S. (2006): "Encyclopedia of Motor & Qualitative Analysis", Part. 2, Cairo, Dar Al Fikr Al Arabi, 2006.
3. Ali, A. A. (1998): "Biomechanics & Integration between Theory and Practice in Sports", 2nd Ed., Cairo, Book Center Press, p. 159.

4. Attia, M. A. (2010): "Scientific Research in Education: Approaches, Tools & Statistical Means", Amman, Dar Al Manaheg Press.
5. Allawi, M. H. & Radwan, M. N. (2000: "Measurement in Physical Education & Sport Psychology", Amman, Dar Al Fikr Al Arabi.
6. Elwan, W. (2008): "Jumping Biomechanics", translated article, Baghdad University, Ibn Roshd Faculty.
7. Athlete and Practical Coaching .2000.
8. Biomechanical analyses of selected events at the 12th IAAF World Championships in Athletics, Berlin 15–23 August 2009, A Project by the German Athletics Federation, (© Deutscher Leichtathletik-Verband, Alsfelder Strasse 27, 64289 Darmstadt, Germany), Martin Luther-University Wittenberg-Halle.
9. Hayes,D.Triple Jump in track & Field coaching Manual Human KNMATICS.USA,P149-171 .
10. New Studies In Athletics.2011.
11. Schexnayder, Irving : Mechanics of the Jump Approach ,Journal Modern
12. The IAAF Quar . mag , NSA Round table 7 Vol : 3.1989

COMPARE THE RESULTS OF THE RELATIVE STRENGTH AMONG POWERLIFTING DISABLED WOMEN BETWEEN PARALYMPIC GAMES BEIJING (2008) AND LONDON (2012)

Zuhair Al khashab [a] Samira Zaiya Hurmiz [b] Zeyad Al khashab [c]

[a, c] University of Mosul -college of Physical Educatio

[b] University of Duhok - School of Physical Education

Zuhair Al-khashab - E-mail: Zuhair_alkashab@yahoo.com

Samira Zaiya Hurmiz E-mail: dr.sameraa@yahoo.com

Zeyad Al-khashab E-mail: Zuhair_alkashab@yahoo.com

Abstract

The aim of the research is to compare the results of the relative strength among powerlifting disabled women between Paralympic games Beijing (2008) and London (2012).

The sample consisted (162) players, researchers has used the content analysis of the results of the two Paralympics championship, Beijing /2008and London/ 2012 for women in the sport of powerlifting for the disabled. The best successful trial of the athlete in each weight category and for all categories has been chosen.

The percentage of the female lifters of London Paralympic games were the best in relative strength which has exceeded the double in five weights at 50% of the total weights whereas in Beijing /2008 Paralympic games, it was in three weights at 30% of the total weigh

The discussion of the research indicates from the tables the order has been per maximum relative strength and doesn't agree- for some extent- with the sequence of women's weight categories, the so-called "the direct relation between weight and relative strength in the science of training. Light weight categories (48, 40, 44) have gained the highest relative strength issued by the weight category (48kg) exceeding the double real weight.

The relationship between strength and weight have been converse, in other words the more the weight of the female player, the less is her relative strength The researcher ascribes this to the fact that in light weights, fats are too less in middle weights categories while in heavy weights fats are much more which minimizes the player's adequacy.

Finally, No significant differences have been detected between the mean relative strength of women between the Beijing and2008 and London/2012 Paralympics games, the relative mean strength of women in London/2012 was the best. The researcher submits a number of recommendations proper to the aims of the research.

KEYWORDS: Compare. Relative. Strength. Disabled. Women. Paralympic. Being (2008).London (2012)

1. INTRODUCTION & PROBLEM OF THE STUDY

The analysis and research of the important factors to reach the high level of sport that gives us a real indication of the level of development and delays in sports, if he supported the correct analysis in scientific bases.

Interest has increased rivalries sports for the disabled because it represents human being as well as the objectives of the sports segments of society plagued by blocking him is able to compete with the bad eggs target.

In the Paralympics the athletes compete in several events, including weightlifting, which real heavily on strength, but as the result of T-athlete achieved in strength all linked weightlifting law which requires the athlete to compete in the category of grains and specific power is thus here called relative strength.

There tore the importance of research in the analysis of the results of relative strength of women weightlifting posts in Paralympic games was in two sessions of the Beijing 2008 and London 2012.

The problem of research

Access to high level of sport cannot be achieved without following the best ways of training and scientific and means to achieve goals, and longer analysis and investigation of the results achieved one scientific means and research in the smallest details that up to the required level.

Hence the research problem ,which the analysis of the relative strength of weightlifting women at Paralympic games Beijing 2008 and London 2012 ,to answer the following questions:

1. Is the weight categories in order of relative strength indices?

2. Is the weight categories that evolve from one session to another, and what are the more sophisticated and what are the categories that have no achieved relatively developed?

2. METHODOLOGY

The researchers has used the descriptive analytic method through a statistical technique for its convenience with the nature of the research.

The Research's population and sample:

The population of the research has been chosen intentionally from the athletes participated in the Paralympics games of Beijing/2008 and London /2012 in powerlifting for women, totaling (143) players. [9] [10] [11]

As for the sample of the research, it has included weight lifters (women) and the research sample consisted (162) players who were able to do achievement in the championship (and it was excluded 19 players because of injuries for failure to complete the games). Regardless the order they have gained in the weight category they participated with after excluding the lifters that have failed in gaining any result regarding the weight category they have participated with after they have failed in lifting the required weight for three trials, or those who were excluded from the contests as a result of injury or any other reason prevented them from participating within the specific weight category.

Below are tables show the number of participants and the excluded athletes for each weight category for women in the two Paralympics championship, Beijing/ 2008and London/2012 as follows:

Table 1: shows the number of participants, the excluded women athletes and the percentage of weight categories in Paralympic games Beijing's (2008)

No.	weigh categories	Total number	No. of excluded	No. of participants	%
1.	- 40	8	-	8	100
2.	- 44	8	2	6	75
3.	- 48	9	2	7	77.7
4.	- 52	9	1	8	88.8
5.	- 56	8	-	8	100
6.	- 60	7	-	7	100
7.	- 67.5	10	2	8	80
8.	- 75	7	-	7	100
9.	- 82.5	8	1	7	87.5
10.	+ 82.5	8	1	7	87.5
Total		82	9	73	89.02

Table 2: Shows the number of participants, the excluded women athletes and the percentage of weight categories in Paralympic games London (2012)

No.	Weight categories	total	No. of excluded	No. of participants	%
1.	- 40	8	1	7	87.5
2.	- 44	8	1	7	87.5
3.	- 48	8	1	7	87.5
4.	- 52	8	2	6	75
5.	- 56	7	1	6	85.7
6.	- 60	8	1	7	87.5
7.	67.5	9	2	7	77.7
8.	- 75	8	1	7	87.5
9.	- 82.5	8	-	8	100
10.	+ 82.5	8	-	8	100
Total		80	10	70	87.5

Table 3: Table showing the research community and sample of women and percentage of the participants in two sessions Paralympic games –Beijing (2008) and London (2012)

No.	Session	Total	excluded	No. of participants	%
1.	Beijing 2008	82	9	73	89.02
2.	London 2012	80	10	70	87.5
	Total number	162	19	143	88,27

Means of data collecting:

The researchers has used the content analysis of the results of the two Paralympics championship, Beijing /2008and London/ 2012 for women in the sport of powerlifting for the disabled. The best successful trial of the athlete in each weight category and for all categories has been chosen.

Statistical Analysis: The researchers has used the arithmetic mean, the normative deviation, T-test, percentage and change coefficient to handle the data statistically through applying the statistical package SPSS. [1]

3. RESULTS AND DISCUSSION

Presentation and discussion of results relative strength for women

The order of weight categories accordance with the relative

Strength index in Beijing 2008 and London 2012

Table 4: shows the order of weight categories accordance with the relative strength Index for women in the Paralympic games in Beijing (2008)

Weight Categories Kg	Average relative strength	order of categories
- 48	2.218	1
- 40	2.139	2
- 44	2.046	3
- 52	1.899	4
- 60	1.772	5
- 56	1.695	6
- 67.5	1.627	7
- 82.5	1.578	8
- 75	1.567	9
+82.5	1.273	10
X	1.7814 Kg	

From table (4) of relative strength for women in Beijing Paralympics games /2008, the research findings have shown the following:

The order has been per maximum relative strength and doesn't agree- for some extent- with the sequence of women's weight categories, the so-called "the direct relation between weight and relative strength in the science of training. Light weight categories (48, 40, 44) have gained the highest relative strength issued by the weight category (48kg) exceeding the double real weight.
Relative strength values have ranged between (2.218, 2.139, and 2.046). The other weight categories have come below the double weight and per the sequence of other weight categories except (56kg, 75kg). The relative strength has ranged between (1.899-1.373).
And the relationship here has been converse, in other words the more the weight of the female player, the less is her relative strength
The researcher ascribes this to the fact that in light weights, fats are too less in middle weights categories while in heavy weights fats are much more which minimizes the player's adequacy.

Table 5: shows the order of weight categories accordance with the relative strength index for women in the Paralympic games in London (2012)

Weight Categories Kg	average relative strength	order of categories
- 48	2.298	1
- 40	2.245	2
- 52	2.189	3
- 44	2.110	4
- 56	2.099	5
- 60	1.846	6
- 67.5	1.823	7
- 75	1.665	8
- 82.5	1.563	9
+82.5	1.283	10
X	1.9121 Kg	

From table (5) regarding the relative strength of women in London Paralympics games/2012, the research findings have shown the following:

The order has been per the maximum relative strength and hasn't agreed with the sequence of women's weight categories as known in the science of training or the direct relation between the weight and the relative strength. Light weight categories (48, 40, 52, 44, 56) have gained the highest relative strength issued by the weight category (48kg) exceeding the double real weight. Relative strength values were ranging between (2.298, 2.245, 2.189, 2.110, 2.099) respectively.
The remaining weight categories were below the double weight and per the sequence of other weight categories. Relative strength has ranged between (1.846, 1.283).
A general comparison of the two Paralympics games for women in relative strength shows that London Paralympic games was better in relative strength, exceeding the double weight in five weights, i.e. 50% of total weights. While in the Beijing Paralympic games/2008, it was in three weights, i.e. 30% of total weights.

The comparison of relative strength between Beijing 2008 and London 2012

Table 6: shows a comparison between relative strength in both Beijing and London Paralympics games contests for women

relative strength	Beijing 2008		London 2012		T.Calculator	Error rate
	M	SD	M	SD		
	1.7814	0.29	1.9121	0.33	0.92	0.36

From the table (6) regarding the comparison of the relative strength between the Beijing /2008 and London/2012 Paralympics games for women, the findings of the research have shown the following:

1. No significant differences have been detected between the mean relative strength of women between the Beijing /2008 and London/2012 Paralympics games, the relative mean strength of women in London/2012 was the best.

The proportion of change in the relative strength

Table 7: shows the proportions of change (development) in the relative strength for the weight categories of women in both Beijing's/2008 and London/2012 Paralympics games

No.	weight categories	Beijing 2008 Kg	London 2012 Kg	Chang proportion %
1.	- 40	2.139	2.245	4.95
2.	- 44	2.046	2.110	3.12
3.	- 48	2.218	2.298	3.60
4.	- 52	1.899	2.189	15.27
5.	- 56	1.695	2.099	23.83
6.	- 60	1.772	1.846	4.17
7.	- 67.5	1.527	1.823	12.04
8.	- 75	1.567	1.665	6.25
9.	- 82.5	1.578	1.563	- 0.95
10.	+ 82.5	1.273	1.283	0.78
X		1.7814	1.9121	7.33

From the table (7) regarding the change proportions of the relative strength for women's weight categories between the two Paralympics championships, London/2012 and China /2008, the findings of the research have shown the following:

1. A relative progress has occurred between the two Paralympics games, Beijing /2008, and London/2012 in favor of London's. Positive change proportions have ranged from (0.78% and 23.83%) in nine weight categories.
2. A relative falling behind between the two Paralympics games, Beijing /2008 and London/2012 has occurred in the last weight category (-82.5) kg by (-0.95%).
3. The highest positive change proportion was (23.83%) in (- 56kg).
4. The lowest positive change proportion was (0.78%) in (+82.5kg).
5. Change mean proportion between the two Paralympics games, Beijing /2008 and London /2012 in women's relative strength was 7.33%

4. CONCLUSIONS

1. The sequence relationship of the relative strength values with the different weight categories amongst women was converse.
2. The relative strength among light weight categories was better than that of the heavy weights.
3. The best weight category in the relative strength amongst women and is (48kg).
4. .The female lifters of London Paralympic games were the best in relative strength which has exceeded the double in five weights at 50% of the total weights whereas in Beijing /2008 Paralympic games, it was in three weights at 30% of the total weights.
5. .There have been no significant differences between the relative mean strength of women in both Paralympics of Beijing /2008 and London /2012. The arithmetic mean of women relative strength in London/2012 was the best.
6. .The relative mean strength amongst women hasn't exceeded the double weight in both Paralympics of London and Beijing.
7. The development of the relative mean strength for women has reached 7, 33% between both Paralympics games.
8. The best development percentage in the relative strength for women was in (-56) weight, while the (-82.5) weight has fallen behind.

5. RECOMMENDATIONS

1. Select of the training curriculum, which is working to develop relative strength for outstanding achieve mentis.
2. Development of the relative strength in the heavy weight.

Try to develop or maintain the relative strength in the weight categories that showed rates of evolution and the development of good relative strength in categories which got delayed.

3. Interest in the development of muscle mass in heavy weightlifting cranes by choice of the weight categories of women with lowest weight and same efficiency.
4. Do longitudinal study of the relative strength of women between Olympics games circle to determine the level of development or delay the weight categories?
5. Conduct a study of the absolute strength of men and women.

6. REFERENCES

1. Al-Tikrit Wadyi , Al-Obeidi Hassan : Encyclopedia statistic and computer applications in the research of physical education and sport, Dar al-waffa for printing and publishing , Alexandria , Egypt , 2012 , p. 101.
2. Mohamed Refaat Hassan: Sports for persons with disabilities, part 1,(Disabled Games),2 edition , Kuwait , government printing office ,1987, p.78.
3. Osama Reiad : Sports disabilities ,Medical and Sports foundations.
4. Egypt, Cairo, Arab thought house, 2005, p.21-23.
5. .http://en.wikipedia.org/wiki.
6. http://en.wikipedia.org/wiki/paralympic_games.
7. http://hcdg.org/definition .htm
8. http://www.kayaegypt .com
9. http://www.lover3moon.com.
10. http://www.london 2012.com/Paralympic/powerlifting/
11. www.digstar.com/records +powerlifting.
12. http://Paralympic.Beijing 2008.en/sports/powerlifting/
13. http://www.paralympics.org.uk/Paralympics/powerlifting.
14. http://Shesports.net.
15. http://www.somena.org/uploads/c73_ powerlifting.
16. http://wiki.answers.com/Q/

DESIGNING AND STANDARDIZING THE LEADING BEHAVIOR MEASURE OF SIXERS AND THEIR ASSISTANTS PARTICIPATING IN SCOUTING CAMPS

Majdah Abbas Mohammad Ali

Najaf -Iraq

Abstract

Leading topic has been paid intention widely by scientists from various specialties and it takes up several aspects of individual life, the researcher presents a different methods study. since the active part resulting of making performance group more productive ,its contribution in directing individual behavior , achieving a certain goal and move toward, it is being considered as an essential stimulus and active means in accomplishing their aims of any military , economic , political, athletic institute .The research problem lies in unavailability a specified leading behavior measure to the girl scouts , of leading behavior grade , of the six scout leaders and their assistants levels in scouting and athletic directorates to Iraq-wide level ,because it plays a considerable significance and effectiveness on social relations during camping. The research goals is to build and codifying leading behaviour measure of the six scout leaders and their assistants who they are 190 persons distributed on 19 scouting education directorates ,from 14 Iraqi provinces ,during participating in al Sanyia scouting camp held by Al-Qadysia Education Directorate .The survey sample includes 60 persons of six leaders and their assistants. The structure sample includes 90 persons of the six leaders their assistants. The number of application sample reaches (60) persons of the six leaders and their assistants, all of them have been selected randomly. This process includes research conducting steps , structure steps, codifying this scale ,psychometric properties of the scale, deriving the leading behaviour measure standards of the six leaders and their assistants .Chapter four includes presenting ,analyzing and discussing the outcomes , it also includes statistic estimations of the six leaders and their assistants' leading behaviour level presenting ,analyzing and discussing leading behaviour level of them .The researcher has concluded that the current scale is a tool to show the leading behaviour level of the six leaders and their assistants. The research sample covers five levels of leading behaviour level scale concerned of them where it appears that the highest level was (very good) , the second level represented by (good),then (mediate) , (accepted), finally it comes (weak). The research sample shows that it reaches to mediate level. The researcher has recommended to use the current scale presented by her in order to specify the leading behaviour level and conducting similar studies for identifying the relation between the leading behaviour and the participating scout team's results and conducting similar studies for knowing the social coherence level.

KEYWORDS: Ballistic. Explosive. Strength. Shooting. Handball.

1. INTRODUCTION & PROBLEM OF THE STUDY

Clearly, leading topic has been prioritized by scientists from various fields. Therefore, it has been marked in individual life , introduced in varying approaches , considered as an indispensable stimulus , an active means in realizing goals of all institutes ,such as , military , economic , political , athletic institutes for its role in creative what is called a teamwork spirit . It contributes in guiding individual's behaviour, achieves a definite objective, and plays a remarkable role in creating social cohesion and organizing their conducts. Executive leader must be skilled in dealing with people, has decision making ability, persuasive in his decisions. Leader's success standard of an administrative work relies on his leading proficiency to the others.

The research problem:

The research problem can be shown in lack of leading behaviour scale of sixers and their assistants ,for identifying their leading behavior level , not knowing leading behavior level of sixers and their assistants of Iraqi scouting and sports activities directorates and its important and effective role in effecting the social ties through conducting scouting camps.

The research objectives:

1. Designing and standardizing the leading behaviour measure of sixers and their assistants participating in scouting camps.

2. Knowing leading behaviour level of sixers and their assistants participating in scouting camps.

2. METHODOLOGY

The researcher has used the descriptive approach by survey, for being convenient and study nature requires that.

Research sample:

Research community identified to sixers and their assistants numbered (190) distributed on 19 scouting education directorates from 14 Iraqi provinces. While participating in Al Saniya scouting camp held by Qadysia province Education Directorate, the sample research includes the following.

Table 1: The research samples shown in Research procedures steps:

scale	Survey sample		Building &standardization sample		Application sample		Total
	Percentage	No.	Percentage	No.	Percentage	No.	
Leading behaviour	%31.58	60	%47.37	90	40	40	**190**

Building and standardizing leading behaviour scale producers of sixers and their assistants:-

For achieving the research first objective concerning building and standardizing leading behaviour scale producers of sixers and their assistants, the researcher has followed the scientific steps:

determinethe theoretical framework of leading behaviour scale of sixersand their assistants.

The sixers and their assistants' conforming and standardizing leading behaviour standard:

For accomplishing the research first objective representing in conforming and standardization the sixers and their assistants' leading behaviour standard, the researcher follows the next scientific steps:

Identify the objective of leading behaviour standard to them: In this phase, the researcher aims at building leading behaviour standard sixers and their assistants in scouting camps held in Iraq.

Specify the theoretical framework of leading behaviour standard of them: the researcher has taken in her account the valuable notes presented by experts and specialists concerning

Whether those fields are fit or unfit. For analyzing experts and specialists' views statistically as shown in table II, the researcher uses 2 value for showing their agreement about identical

Table 2: shows chi- square

NO	Fields	Fit	unfit	chi- square	Result
1	Democratic leading behaviour	19	1	16.2	Significance
2	Authoritative leading behaviour	19	1	16.2	Significance
3	Chaotic leading behaviour	15	5	5	Significance
Chi-square in score (1) and significance level equals 3.48					

Chi –square value of leading behaviour fields appears bigger than (3.84) in score (1) and significance level (0,05) shows that leading behaviour fields is significance level.

Initial preparation of scale formula:

Items scale preparation:

After identification the objective of scale and specify its steps, the first step is to write (37) items distributed on the following three fields**.**

Identifying scale items writing and its way: The researcher has been able to obtain (37) items). After the study to those items and analyzed and removing some similar , weak and unclear items , distributed on three fields , the democratic behaviour field contains (13)items , authoritative behaviour contains 12 items , finally , chaotic behaviour contains 12 items.

Identifying suitable items of leading behavior scale

After finalizing the scale item , the researcher presented these scale item to experts and specialists to determine items suitability , positive ones out of negative ones , if some items required adjustment , move items form field to another , where the total number reaches to 37 as it is shown in table (3)

Table 3: shows the proposed leading behaviour fields and its items presented to experts and specialists

No	Fields	Positive items numbers	Negative items numbers	Total No
1	Democratic leading behaviour	13	-	13
2	Authoritative leading behaviour	7	5	12
3	Chaotic leading behaviour	7	5	12

Total results	27	10	37

Based on the experts and specialists views, some item have been adjusted. Chi –square test used for

Acceptance the scale items, where chi- square value was (3, 84) that leads all items to be accepted as shown in appendix (1)

Preparing scale instructions.

Scale instructions has been presented to explain how to answer the question .Also it is mentioned that the way of answering does not rest on the correct answer or the incorrect answer ,but selecting the answer that applies to a sixer and her assistant . Answering all questions found in the scale openly, precisely is necessary, their answers will be secret, where name writing is not required, because that is only for scientific research purposes

Selecting answer alternatives of standard:

The researcher has selected answer alternatives of standard which includes five choices because it is suitable for the research and gives more expression freedom in answer (always, often, sometimes, little, rare)

Survey experiment :-For making sure of scale instructions and test items are clear , knowing the required time of answers and scale application circumstances regarded to obstacles or difficulties , the researcher has applied the scale upon survey sample composed of 40 sixers and their assistants, randomly selected in 3 /14 /2014, in girl flowers camp in Karbala . After conduction this experiment it gets clear that scale instructions and test items are clear ,it takes about (20 -15 minute) to answer its items , so the scale and its items get ready to be applied upon structure sample.

The main experiment: The main experiment was conducted through applying the scale upon structure sample to conduct a statistical analyses process to its items in order to select fit items and remove unfit ones based on their distinctive power, to obtain honesty indications and steadiness of that scale. The scale applied upon sample consists of 90 sixers and their assistants (3 / 18 /2014) in Al Sanyia girl flowers camp held in Qadysia province, the experiment conducted at 10: a.m at the same day.

Correction scale:-The test answers were corrected according to correction key prepared to that purposes.

Statistical analysis of scale items: the researcher follows two methods to analyze scale items statistically

Discriminatory power: This method is considered one of the fittest method to discriminate items. Where the total scores that sixers and assistants arranged in descending order, after scale correction. 24 sixers and their assistants were selected to higher group and 24 to lower group , higher group and lower group represented by (27%) and eliminated (64%) from medium group . Kelly's research (1939) and Mihrinz's research (1973) stressed that (27 %) gives biggest size and discrimination, based on that each group includes 27 %. To calculate discrimination factor of each item out of 37, T –test used to two independent samples by (SPSS), T-test value = 2-013 degree of freedom =46 level of significance =0.05=1. It is shown that T-test ranges between (1610 -4.94) compared with T table values (2.013) when degrees of freedom (46) and level of significance (0.05). All items stay as they are, which numbered (37) item because of its discriminate significance (149:1)

Second: Internal consistency coefficient: The value of this result was extracted by using Pearson correlation coefficient between each item and total score of scale to all individuals sample numbered (90) by using (SPSS)

So the T- table ==0.20 degree of freedom =88 the level of significance =0.05

It is shown that correlation coefficients ranges between (0656 -0.169), when compared with random value of correlation coefficient to all items (37) for statistic value.

Psychometric properties of the scale:

Building the scale requires essential and significant conditions to ensure the scientific way to build it.

Steadiness and honesty are considered important conditions to that scale.

Scale validity: The researcher depends on two types of reliability to make sure of her scale validity as following:-

Content validity: - Content validity accomplished when leading behaviour scale presented to a group of experts and specialists in

psychology , sport psychology and scouting education to approve essential components validity , its item validity , whether those items fit to measure to adjust , blend and move some items.

Construct validity: It is defined that range that is used to know test performance. The researcher uses the following ways to achieve Construct validity. (258:2)

First: Terminal group: The item ability to discriminate between sixers who have leading merit and those who do not is considered as a indicator to construct reliability. It is made sure of that in this scale when the discriminatory power was calculated to items by terminal group and using T –test.

Secondly: Internal consistency:

That can be achieved the measured thing includes an other branches tests and summing all these tests gives test grade

Reliably :It is considered of the essential concepts, it have to be present in scales to be usable.

Split –half method

This method is characterized of time and effort sparing, where it requires one test. It is the most common method in educational and psychological test to find reliability and to achieve this method the items were divided to odd and even ones.

Cronbach Alpha

It is considered as the most common reliability scale and most suitable to scales .It depends on relating items each other and relates each item with the scale as a whole. Where the interrelation between items identifies Alpha .for calculating reliability with Cronbach Alpha, (SPSS) has been applied to the (90) individuals of research sample for that purpose. It show that Reliability is (0.85). When the researcher has finalized the scale , she applies it upon application sample composed of (600 sixers and their assistants in I scouting camp held in Al Najaf Province dates back in 12 /8 /2012 at 10 :a.m . The time ranged from 10 – 20 minute. So it has to transform raw score to standard score to reach standards (18:3).

Standard levels of sixers and their assistants' leading behaviour scale:

To identify those levels, the researcher selects five levels of leading behaviour scale and for transforming raw score to standard score to get Z-score.

3. RESULTS AND DISCUSSION

The statistical estimates of sixes' and their assistants. The statistical estimates of application sample of 60 sixers and their assistants. Individuals

Table 4: shows statistical description of research sample results

Variables	mean	Standard deviation	Skewness	Kurtosis	Lowest value	Highest value
Leading behaviour	149.9	18.24	-0.353	-0.656	109	181

Table 4 shows that mean of leading behaviour scale was (149.9), standard deviation was (18 .24) Skewness was (-0.353) That means research sample individuals was presented normally, so it means that leading behaviour scale of inner structure concerning sixers and their assistants was correct.

Display, analyze and discuss leading behaviour level of sixers and their assistants.

After the completion of leading behaviour scale application of sixers and their assistants which includes 37 items and applied to 60 sixers and their assistants. When the researcher has finished the survey forms .the researcher obtained the following results after conducting arithmetic processes:

Table 5, shows analyze and discuss leading behaviour level of sixers and their assistants.

Variables	Mean	Standard deviation	MEAN	T –test		Level
				Resulted	Table value	
Leading behaviour scale	149.9	18.24	111	13.99	2	Significance

Table 6: shows leading behaviour level, range, replication, mean, standard deviation

Levels	Range	Replication	Mean	Standard deviation
Weak	112 – 95	2	149.9	18.24
accepted	130 – 113	3		
Medium	148 – 131	17		
Good	166 – 149	18		
Very good	184 – 167	3		

The researcher tries to know the leading behaviour levels, range, replication of the research sample within the level and range they are in, to know its results. The table 3 shows that mean was (149.9),deviation (18 .24) , replication of weak level was 2 , the accepted level was (3), the medium level was17 , the good level was 18 , very good level was 3 .

The researcher thinks that generalize the democratic patron among sixers reflect the correct direction that scouting and leading process in scouting community which it is a part of Iraqi community heading toward democratic approach in administrating all institutes, prioritizes humanity relations , believes in partnership principle in decision making and contrives to reduce strict centralization through granting more jurisdictions to individuals .

4. CONCLUSIONS

1- The current scale is considered as a tool for knowing the leading behaviour level of sixers and their assistants.

2- The research sample has included five levels of that scale, where it shows that the highest level was (very good) then (good), (medium) (accepted) (weak)

3-The research sample shows that the result of leading behaviour level of sixers and their assistants was medium

5. RECOMMENDATIONS

1- Use the scale presented by the researcher as a scale to know the leading behaviour level.

2-Conducting similar studies for knowing the relation between the leading behaviour and the participating scout camp team's results.

3. Conducting similar studies for knowing social cohesion level and its relation with the participating scout teams in camps.

6. REFERENCES

1. Safut Faraj: Psychological measure, 1st edition, Arabic thought house, Cairo, 1980.

2. Mohammad H.Alawi and Mohammad Nasr al Deen: Measure in physical Education &

3. Mustafa Bahi: The scientific and practical treatments between theory and application, 1st edition, book center of publication, Cairo, 1999.

4. George .G.Yahuna (others): Learning theory (comparative study), P1, translated by Ali .H. Hajaj

5 .Reviewed by Atyia M.Hana, Knowledge world, No 108, Kuwait, 1986.

7. APPENDIX

APPENDIX 1: The final form of leading behaviour scale

NO	Item	always	often	sometimes	Little	Rare
1	Encourages girl flower on conducting their works quickly and in a good way					
2	Helps girl flowers in solving their private problems.					
3	Calms the situation down when struggle occurs among girl flower.					
4	.Tries new thoughts with girl flowers					
5	.organizes relationships among girl flowers to ensure stability in their work in camp					
6	Always dedicates her time on providing awareness and advices to them in camp.					
7	Helps girl flowers in solving their private problems.					
8	Let's girl flower participate in selecting of what they have to do					
9	Considerate of girl flowers' abilities during they conduct their work					
10	Allocate an adequate listening time to girl flowers and to their proposals					
11	Contributes in					
12	Works on spreading cooperation spirits among girl flowers					
13	Encourages information sharing related to scouting camp.					
14	Makes sure that girl flower present their optimum energy in scouting work.					
15	Inconsiderate to girl flowers' opinions in taking decisions					
16	Holds her views ,considers view exchanging is time waste					
17	Doesn't convince of any excuse or cause when sixers lose in camp					

18	Puts a new way to face girl flowers in camp					
19	Her responsibility confined only on obtaining good results of sixers					
20	Holds girl flower responsible when sixer defeated					
21	Follows scouting work standards					
22	Determines her girl flower colleges regardless relationship among them					
23	Considerate to girl flowers' feelings					
24	Allows no discussions and talks at scouting work.					
25	Prefers dealing with girl flowers strongly and strictly					
26	Does not train sixers on new plans and ways					
27	Does not listen to girl flowers' new views and thoughts					
28	Cares only in relaying camp administration 's decisions					
29	Cares to achieve extinguished results to ensure camp administration 's approval					
30	Tries to find justifications when sixers loses					
31	Sociable with all girl flowers					
32	Changes her views to cope with girl flowers'					
33	Not inclined to be strict with girl flowers who don't work hard					
34	Having girl flowers participate in decisions making					
35	Punctual in meetings					
36	Tries to prevent any problems happen among girl flowers					
37	Pay no attention to administration's approval or dis approval to sixer's results					

EFFECTIVE DIRECTORATE MANAGEMENT OF SPORT EDUCATION DEPARTMENTS ACCORDING TO (VISION, MISSION AND GOALS) FROM VIEWPOINT OF THE TEACHING STAFF

Salah Wahab Shakir
College of Basic Education – Mustansiriya University
Email: Dr.salah62@yahoo.com

Abstract

Largely, progress of societies depends on research results, consulting and innovations that offered by universities and research centers and its researchers ideas.

The clear picture of management reality of educational institutions and effectiveness formation, have become a necessity for these institutions to survival and continuation in a time of increasing competition to achieve outstanding performance in educational services.

The researcher wants to achieve in this study, he is as a faculty member, to address the reality of effective principle management of sport education departments and their effectiveness in leading the department through vision clarity, mission, and goals, and certainly if they were present theperformancecharacterized were excellent, The is no solution come by confusion, disorder in performance and achievement.

The researcher used the descriptive method and survey technique, the sample was selected of (32) teachers, represent a proportion (76 %) of the original population, which they are (42) teachers.

The researcher follow a design form consist scientific steps to identify (effectiveness of administration according to the vision, mission and objectives) which have (42 items), and were identified the appreciation threesome alternatives to answer (yes, sometimes, both) and graded (3.2, 1) accordingly.

Discuss Results

It was clear from the presentation and results analysis of statistical treatments in response to sample, the researcher could be discussed as follows:

The principle management of sport education departments were not effective, and the efficiency at the level relatively modest, it had lack inability and experience in planning functions and decision making, monitoring and evaluation, which constitute a whole management effectiveness, as well as the loss of harmony and lack of teamwork, which reflected negatively on the performance and creativity section.

With regard to that question how we seeing the principle management of sport education departments his mission and goals it was ambiguous and lack of clarity, as well as non-adopted as a daily work approach performance that directed path to booth the principle management and all teachers and Associates.

The all know with study evidence and proof of positive relationship between management effectiveness with vision, mission and goals that all public institutions, educational institutions and private adoption seeking to achieve quality performance and service objectives of the beneficiaries and the community

The researcher's conclusions:

The principle management of sport education departments does not have effective management, and has no vision for future and a clear mission and goals, seeks to achieve in spite of the presence of positive relationship between efficiency and research data.

And the most important recommending of the researcher:

All candidatepersonssubjectingto work in management of department of Physical Education must undergo have advanced level tests, as well as their involvement in modern evolutionary session and rehabilitation management.

KEYWORDS: Management. Sport. Vision. Mission. Goals. Staff.

1. INTRODUCTION & PROBLEM OF THE STUDY

University education seeks to encounter immediate and future challenges by increasing educational quality improvement, which has become the most important universities targets because it has close relate to society, that progress of societies, in fact, depends largely on results of research and consulting services and innovations that offered by these universities and their research centers and the ideas of their researchers.

To display a clear picture of the management bodies reality and educational institutions and effectiveness formation which have become a necessity for these institutions to survival in an period because of increasing competition to achieve exceptional performance in educational services.

The (organization's vision, mission and goals) which be the values and its title for identity, and taken into consideration in educational institution and educational management , as well as stick with them and applied it as the positive factors and effective to lead the educational process, certainly, what helps management in this manner, is realization , faith and confidence of their main tools who they are teaching staff and learners in that clear message, visions and goals of their organization phenomenon of their departments to ensure the achievement of set objectives, and goals that are primarily represent their wishes and aspirations.

The importance of study dealing with very importance topic that, namely, performance and effectiveness management leading to an directorate academic department in College of Basic Education in Al-Mustansiriya University in accordance with vision, message and goals data, therefore this topic is one topics worth and search for, by the fact that success of university's performance is linked to the successful performance in faculties and departments, as well as the importance of performance quality and its superiority has become the most important standards for higher education institutions to success in all educational services.

Research problem:

The researcher seeks in this research to achieve, as a faculty member, to viewpoint the reality of management in directorate department of physical education and its effectiveness in leading the department through vision clarity, message, and achieving desire goals in front of it colleagues. By the fact that the clarity of these three data and interconnection to deal with them as work evidence to constitutes an organizational culture that been lacked and most of us needed, and most of as suffer a lot of knowledge shortage and a sense of it in their daily and in future performance, certainly the present should be characterized by excellence performance, otherwise the confusion and chaos will appear in performance and achievement.

Research objectives:

1- To prepare a questionnaire in accordance with the effective management to collect data on Vision, Mission and Goals.

2- Identify the level of effectiveness management in accordance with the vision, message and goals of physical education department.

2. METHODOLOGY

The researcher used the descriptive approach and questionnaire manner for suitability and problem nature.

Sample Search

The sample was chosen randomly, as numbered of (32) teachers who hold master's and doctorate degrees, and scientific titles (lecture, lecture assistant, assistant professor, professor) except survey sample, which they were (4) teachers, and thus represented a sample rate (76.%) of the original population, of (42) teachers.

Preparation initial version of questionnaire:

1- The researcher follow scientific steps to design questionnaire form in light of latest studies sources and network information (the Internet) and directing personal interviews, and to determine (42 items) associated with field and research nature, the rate of (25 items) represents administration effective in functions of (planning, decision resolution, social and humanity relations, follow-up, evaluation), and (6 items) represents a vision, (5 items) represents the message, and (6 items) represents the goals), as well as these items presented to the experts, to form as a whole questionnaire (effective administration according to the vision, mission and goals), and they were identified alternatives answers (yes, sometimes, no) and graded (3,2,1)

The validity of initial items

To improve validity of questionnaire items (effective administration according to the vision, mission and goals), the researcher presented these items to (9) experts, and adopted the decision percentage validity of questionnaire items, and the percentage of agreement for items ranged between (80-90%). (1:35)

Exploratory experiment

The researcher conducting exploratory experiment on a sample of (4) teachers, at ten o'clock on Monday morning 9/03/2015, for purpose to ensure instructions and items questionnaire clarity.

Scientific basis of a questionnaire

Research questionnaire forms exposed to statistical analysis in order to account validity and reliability and which they are the most important characteristics of a questionnaire standard.

The validity is the basic characteristics that all need to construct our tests and measurements, to examine this kind of validity the researcher prepared questionnaire and determine its items with the help of group of expert teachers in measurement and evaluation in sports management, science education and sports psychology (Appendix 1).

Questionnaire stability

Stability is necessary indicators of our scale, so the researcher rely on split half method to being only one test required, that this method is based on the scale fragmentation to un equal parts, after its application on one group, then divided the items into two halves, odd items and even items, then extracted correlation coefficient between total scores of these two halves by Pearson from raw values, the correlation coefficient between the two halves (0.84).

However, these values represent the stability of only one half the test, so it should be adjust the reliability of or corrected until we get the test coefficient to be became (0.913), which is a high stability coefficient, that will be reliable on it to estimate the stability of the test.(2: 253)

The main experience of questionnaire

The researcher applied his questionnaire as the primary form contains 42 items, with instructions (Appendix 2) on a sample of (32) teachers during the period (11 – 12\03\2015), and after the questionnaire applied reexamined again, all of which were incomplete answer. The total score was calculated from questionnaire and it was equal to the total number of items, that correctly answered by all teachers of experiment sample.

Statistical methods

The researchers depend in processing data on the following statistical methods :(the mean, median, weighted mean, standard deviation, and correlation coefficient and percentage).

3. RESULTS AND DISCUSSION

The results are showing level detection of a sample of research and analysis axes

Table 1: shows the mean and standard deviation of questionnaire axes

Axis	Number of item	Total Score of Axis	Measuring unit	Sample size	Mean	Sta.Dev.	Weighted Mean
management effectiveness	25	75	Degree	32	41.44	6.148	50
Vision	6	18	Degree	32	9.94	2.327	12
Mission	5	15	Degree	32	6.75	2.356	10
Goals	6	18	Degree	32	8.91	2.006	12

Table (1) shows that the mean of effectiveness management axis was (41.44) and standard deviation (6.148), and when compared it with the weighted mean axis of (50) shows that the sample mean was smaller than the weighted mean, and that the mean of vision axis was (9.94), standard deviation was (2.327) and when we compared with the degree axis of weighted mean (12), it shows that the sample mean was smaller than the weighted mean, and the message mean was (6.75) and standard deviation (2.356) and when we compared it with the degree of weighted mean axis (10) shows that the mean of the sample was smaller than the weighted mean, and that the mean axis of goals was (8.91) and standard deviation (2.006) and when we compared it with weighted mean axis degree was (12) which shows that the mean of the sample was smaller than the weighted mean.

4-2- All axis were displayed in tables as seen in tables 2,3,4,5, and then analyzed them as follow:

Table 2: shows the axis results of administration effectiveness

T	N	Yes		Some times		No		Weighted Average	Relatively Importance
		Frequency	%	Frequency	%	Frequency	%		
1	32	2	6.25	9	28.125	21	65.625	1.406	46.875
2		7	21.875	5	15.625	20	62.5	1.594	53.125
3		8	25	7	21.875	17	53.125	1.719	57.292
4		3	9.375	7	21.875	22	68.75	1.406	46.875
5		2	6.25	12	37.5	18	56.25	1.5	50
6		5	15.625	8	25	19	59.375	1.563	52.083
7		1	3.125	30	93.750	1	3.125	2	66.667
8		1	3.125	15	46.875	16	50	1.531	51.042
9		6	18.75	6	18.75	20	62.5	1.563	52.083
10		8	25	6	18.75	18	56.25	1.688	56.25
11		3	9.375	12	37.500	17	53.125	1.563	52.083
12		2	6.25	18	56.25	12	37.5	1.688	56.25
13		4	12.5	3	9.375	25	78.125	1.344	44.792
14		5	15.625	4	12.5	23	71.875	1.438	47.917
15		0	0	0	0	32	100	1	33.333
16		2	6.25	6	18.75	24	75	1.313	43.75
17		4	12.5	3	9.375	25	78.125	1.344	44.792
18		5	15.625	3	9.375	24	75	1.406	46.875
19		2	6.25	8	25	22	68.75	1.375	45.833
20		3	9.375	2	6.25	27	84.375	1.25	41.667
21		1	3.125	9	28.125	22	68.75	1.344	44.792
22		3	9.375	5	15.625	24	75	1.344	44.792
23		5	15.625	2	6.25	25	78.125	1.375	45.833

24		6	18.75	6	18.75	20	62.5	1.563	52.083
25		7	21.875	8	25	17	53.125	1.688	56.25

Table (2) shows that the effectiveness management axis was relatively largest importance value for item 7 which was (66.667%) (Combining appropriate accurate data and information that help in decision-making), which achieved the highest answers in alternative (sometimes), while the smallest importance was relatively (33.333%) for item no. fifteenth (helps other individuals on a sense of been belong to the department in order to ensure job satisfaction in it), which achieved the highest alternative answers over (no).

Table 3: Shows the axis results vision

T	N	Yes		Some times		No		Weighted Average	Relatively Importance
		Frequency	%	Frequency	%	Frequency	%		
26	32	2	6.25	7	21.875	23	71.875	1.344	44.792
27		4	12.5	9	28.125	19	59.375	1.531	51.042
28		5	15.625	2	6.25	25	78.125	1.375	45.833
29		2	6.25	4	12.5	26	81.25	1.25	41.667
30		5	15.625	5	15.625	22	68.75	1.469	48.958
31		1	3.125	4	12.5	27	84.375	1.188	39.583

Table (3) shows that the vision axis was the largest importance value (45.833%), in item no. twenty-eighth (the directorate consistent its vision with mission and goals), which achieved the highest answers over alternative (no), while the smallest relative importance was (39.583%) of item no. thirty-first (the directorate department engages its members in drawing vision and setting goals), which achieved the highest alternative answers (no).

Table 4: Shows message axis results

T	N	Yes		Some times		No		Weighted Average	Relatively Importance
		Frequency	%	Frequency	%	Frequency	%		
32	32	2	6.25	1	3.125	29	90.625	1.156	38.542
33		8	26.667	2	6.667	22	68.75	1.563	52.083
34		6	18.75	4	12.5	22	68.75	1.5	50
35		4	12.5	5	15.625	23	71.875	1.406	46.875
36		3	9.375	6	18.75	23	71.875	1.375	45.833

Table (4) shows that the axis message was the largest importance (52.083%) in item no thirty (the directorate of the department shows the services which can provide to its members), which achieved the highest answers to the alternative (no), while the smallest relative importance was (38.542%) for the item no. thirty-two (the director of the department explain to his members and students the purpose of its existence), which achieved the highest answers over (no).

Table 5: shows the results of goals axis

T	N	Yes		Some times		No		Weighted Average	Relative Importance
		Frequency	%	Frequency	%	Frequency	%		
32	32	2	6.25	1	3.125	29	90.625	1.156	38.542
33		8	26.667	2	6.667	22	68.75	1.563	52.083
34		6	18.75	4	12.5	22	68.75	1.5	50
35		4	12.5	5	15.625	23	71.875	1.406	46.875
36		3	9.375	6	18.75	23	71.875	1.375	45.833

Table (5) shows that the largest importance item no. forty was (47.917%) (All seted goals are reviewed periodically for purpose of readjusted if necessary), which achieved the highest answers over alternative (no), while the smallest importance for item no. forty-first was (35.417%) (The department directorate engages its members in writing department goals), which achieved the highest answers over (no).

Showing relationship of management effective results with his vision, mission and its goals:

Table 6: shows multi-link results between management effective and its vision, message and goals

Axes	Effective principle management of sport education departments			
	Multiple Correlation Coefficient	Sig	Statistical significance	Direction of the relationship
Vision	0.684	0.001	Function	Proportional
Mission				
Goals				

N = 4 level (0.05), a function of the degree of the relationship if (Sig)> or = (0.05)

Table (6) shows that the value of multi-correlation coefficient between the management effectiveness results with all axis's of vision, mission and goals were (0.684), and of the degree of (Sig) was (0.001) which is smaller than (0.05) and so the relationship is statistically significant and has positive direction.

Results Discussion:

Evidenced results from table (6) above, and the following results from tables (2,3,4,5), which belong management effectively of the department, the researcher can be deliberated as follows:

There were no any management effectiveness of directorate of sports education department, and the level of efficiency relatively modest, lack of ability and experience in planning functions, decision making, monitoring and evaluation, which constitute a whole effectiveness of the management, as well as the loss of harmony and lack of teamwork, which negatively reflected negatively on the performance and department creativity.

With regard to vision, mission and goals of directorate of sports education was ambiguous and lack of clarity, as well as did not adopted daily work performance approach directed the path of the directorate and all teachers and associates.

All knew with study proof and that positive relationship between management effectiveness and it competence with vision, mission and goals which all public institutions, educational institutions and private adoption are seeking to achieve performance quality and objectives service of the beneficiaries and the community.

4. CONCLUSIONS

1- The directorate of sport education department does not has effective management.

2- There is no clear vision for the future and in sport education department

3- There is no message reflecting actual performance in sport education department.

4- There are no drawn goals to pursue in sport education department.

5- There was significant correlation and positive relation between effective management and Vision, Mission and goals.

5. RECOMMENDATIONS

1- Subjecting candidate persons who lomenta to direct sport education department to do management test.

2- Involve persons who tack over a position as a directorate at sport education department in developmental courses for administrative rehabilitation.

3- Adoption vision, mission and goals as framework in institutions and as organizational culture and all should respect it.

6. REFERENCES

- Wheeb Maged AL-Kubaisi; psychometrics between theory and application: (Lebanon, United World, 2010).
- Salah al-Din Mahmoud Allam; evidentiary statistical methods in psychological, educational and social research analysis (parametric and Allabaramitrih): (Cairo, Dar Al Arab Thought, 2010)..
- Najm Abboud Najm; administrative leadership in 21.t century 1: (Amman, Safa House Publishing and Distribution, 2011.(
- Khudair Kazem and Rowan Munir; quality management in organizations outstanding.ed 1: (Amman, Dar Al Safa for publication and distribution, 2010).

IMPACT OF ENVIRONMENTAL METHOD TRAINING ON THE ACCURACY SHOOT FIXED IN BASKETBALL

Zerf Mohammed
EPS Programs Laboratory Optimization
University Abdel Hamid Ibn Badis Mostaganem, Mostaganem 27000, Algeria
Email: biomeca.zerf@outlook.com

Abstract

Free throw lanes are very often repeated gestures by players in training, as well as double-step. It is indeed a chance to score without opposition, for lot of number points in every game, given after a foul or violation. (Delobel, Karine, QA International Collective, Fourny, Denis, 2000.p266) indicates there average in with 25 per faults committed by team in competition that the statistics they represent a possibility of 35 points per game. As that, we confirm the advantages of the investing in the free throws that are fundamental technical factor, which we must consist in our training player's basketball. Previously, our study came to shows the impact and the importance of the methods to develop the precision in shooting in basketball. Our aims in this study:

Comparing the advantages of our tool fabricant based on the probability surfaces (sin α = the diameter of the balloon / diameter of the hoop) to demonstrate the prospect of initial position in three dimensions (face the haunts (small and large square) of the table, left and right (away from the haunts of the table)).

With the status of SHARPE (smaller diameter circles 1975) and SAMIKOP (circles inclined to the horizontal 1976) in the Shooting Fixed on Basketball.

KEYWORDS: Environmental Method. The Accuracy. Shooting Fixed in Basketball.

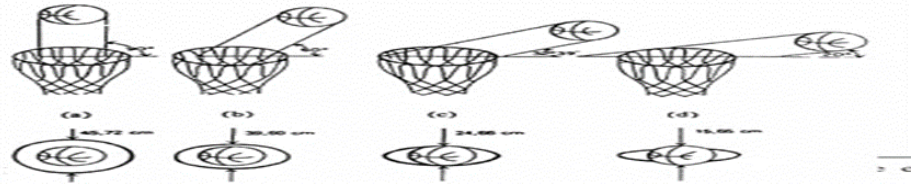
1. INTRODUCTION & PROBLEM OF THE STUDY

This research it low on the work of B. Grosgeorge that have mentioning in his article "Address in Shooting Basketball" that the Environmental method make the goal visible. Moreover, SHARPE (1975) and SAMIKOP (1976) are the first couches who posed the problems planning middle in learning of Free throw lanes Shooting Fixed in Basketball.

The first uses in highly trained players smaller diameter circles and the second uses circles inclined to the horizontal to cause beginners.

On this basis, this study dismisses:

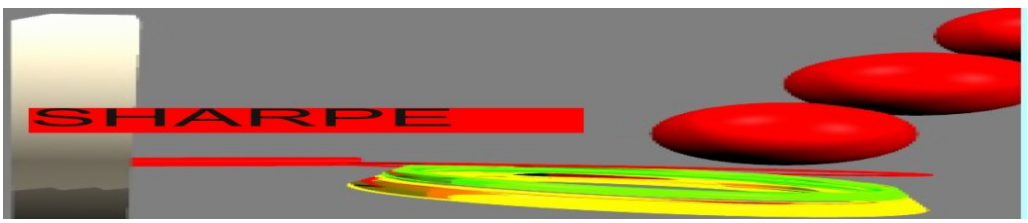
The impact of the proposed tool to recruit the input angle as stimulates in 3D situation from the initial position in basketball and regulate the shot trajectory Fig.1 Probability surfaces that allows the ball to goal (RZiane B grosgeorge, 1998)



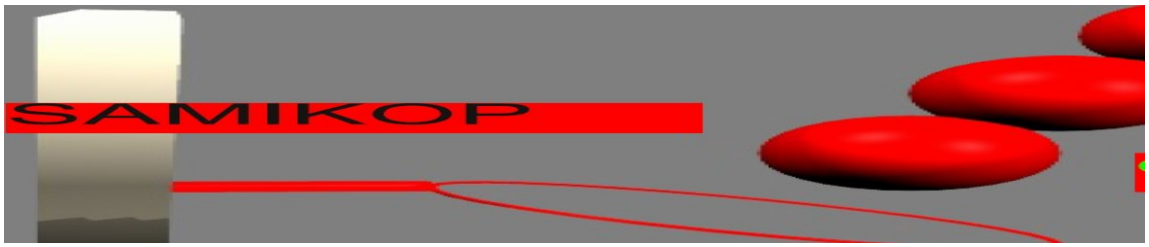
Our aims are to examine the impact of the three methods in performing the accuracy in Shoot Basketball.

2. METHODOLOGY

In this study, the researcher compared the two methods described by B. Grosgeorge (and SHARPE SAMIKOP) with its experimental protocol



SAMIKOP (1976) uses in highly trained player's smaller diameter circles Fig.2



SAMIKOP (1976) uses circles inclined to the horizontal to cause beginners Fig.3

The proposed tool to recruit the input angle as stimulates in 3D face to Cart, skillful and left the table in a 3D situation from the initial position in basketball, to regulates shot trajectory. **Fig.4**

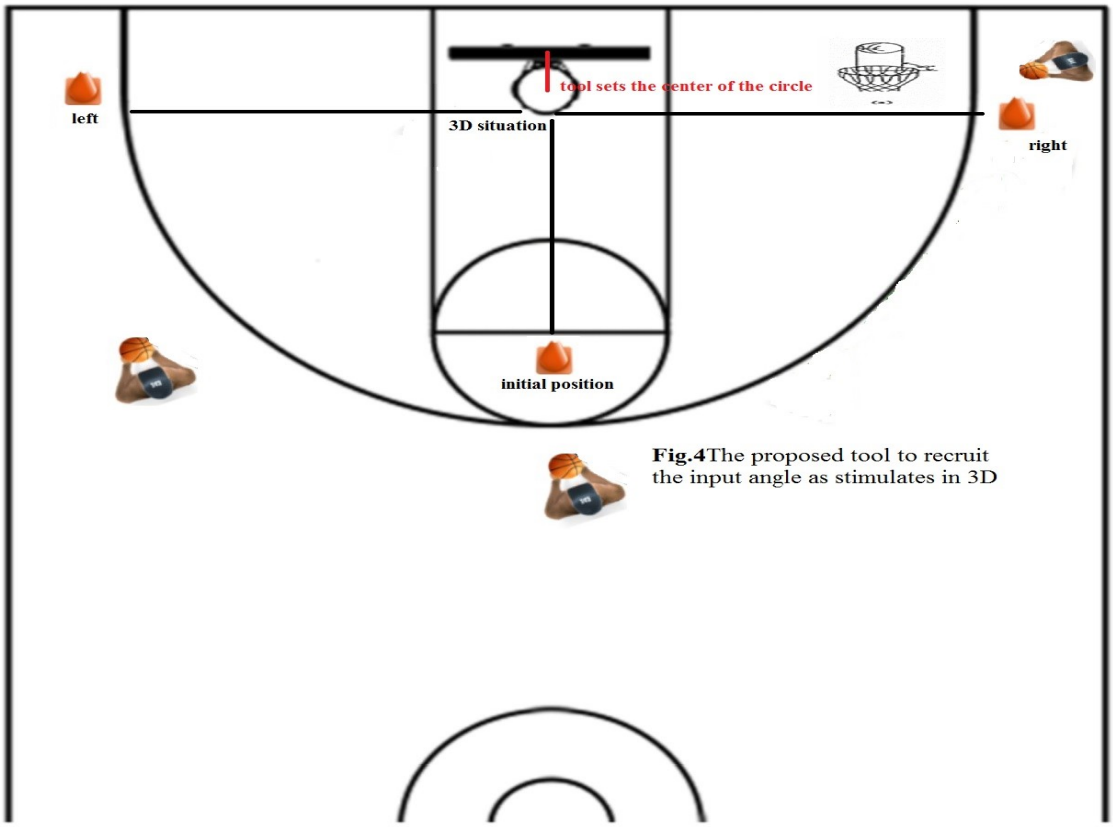
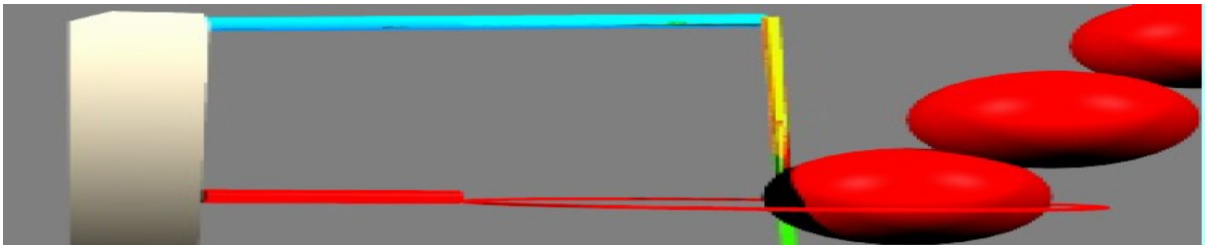


Fig.4 The proposed tool to recruit the input angle as stimulates in 3D



Data Collection

Subjects

We have selected the experience as a model to test the three methods, for a period of 1week we have integrates the three protocols as an exercises at the end of them session in the benefit of the team Mostaganem (2014-2015) which was distributed in three homogeneous groups (age, sex, weight, length, success in Shooting Fixed in Basketball and vision)

Table 1: represents homogeneity of the three experimental groups

indics		Sum of squares	df	Mean square	F	sig
free throw	inter-group	,500	2	,250	,600	,569
	intra-group	3,750	9	,417		
	Total	4,250	11			
âge	Inter-group	,667	2	,333	,231	,798
	Intra-group	13,000	9	1,444		
	Total	13,667	11			
weight	Inter-group	17,167	2	8,583	,391	,688
	Intra-group	197,750	9	21,972		
	Total	214,917	11			
length	Inter-group	,002	2	,001	,290	,755
	Intra-group	,024	9	,003		
	Total	,026	11			

3. RESULTS

Table 2: shows the anova pretest three experimental protocols

		Sum of squares	df	Mean square	F	Sig
Pretest	Inter-group	7,167	2	3,583	8,600	,008
	Intra-group	3,750	9	,417		
	Total	10,917	11			

Table 3: shows multiple comparisons LSD method

Variable dépendante	(I) VAR00002	(J) VAR00002	Différence de moyennes (I-J)	Error standard	Signification
Comparaisons Des trois méthodes	SHARPE	SAMIKOP	-,25	,46	,597
		calcul	-1,75*	,46	,004
	SAMIKOP	SHARPE	,25	,46	,597
		calcul	-1,50*	,48	,009
	Calcul (chercheur)	SHARPE	1,75*	,46	,004
		SAMIKOP	1,50*	,46	,009

From the results tables 2and3 the ANOVA is significant at the 0.05 level.

Which allows user to calculate the LSD that show the impact of the excremental method of researcher that it is the most appropriate method for training on free throws.

4. DISCUSSION

Our hypothesis is based on the comparison of the three environmental methods, that (R.Leca) confirms the impact of these methods are in the helps to make the goal or the objective visible, which allowing to the practicing the decisive proper initiation of the action, were the learning takes place based on the assessment. For (B. Grosgeorge) he confirms that SHARPE (1975) and SAMIKOP (1976) are the first researcher and couch that poses the problem of the environment in the learning and training of basketball free throw.

Our experience confirms the disadvantages of the two methods described in fig 2and 3 to the Paid time experience Lost in the limits of search we confirm:

That calculation method are the most method to train and develop precision in less time in comparison with the other two methods. Our basic explanation that it is make the clearest goal on the sensory and informational plan that (Farid Bouaoune, April 2005) explains in the impact of vision for SCHMIDT the indicator of good perception called the motor programs stored that we explain in an important role to locate the objective target of the shoot.

5. CONCLUSIONS

Form this reason; the researcher indicates that the method of calculating is the ideal situation that presents:

1- The environmental deferent difficulties and visual sensory-motor (left / right and front table)
2- Imposed of the shooter to the repaired sets by the tool based on the 'entry angle from the small to the widest angle (Serge Galica) fig1 develop the Accuracy in the less time
3- The researcher set the advantage of our method as forgotten possibility in the method of SHARPE and SAMIKOP.

6. RECOMMENDATIONS

1. Integration the Environmental Method in deferent sports.
2. The three methods improves the address in free throws basketball Ball.
3. The SHARPE method is the most difficult of the three methods.
4. The method of calculation is the most appropriate method for training free throws

7. REFERENCES

- B. GROSGEORGE. (s.d.). L'ADRESSE DANS LES TIRS AU PANIER EN BASKET-BALL., (p. 6).
- Delobel, Karine,autres. (2000). Encyclopédie visuelle des sports. Amazon France.p266.
- Farid BOUAOUNE. (avril 2005). Tir de Lancer Franc., (p. 1).
- Serge Galica. (s.d.). Le bon tir au basket. http://coachbob.free.fr/.
- RZiane B grosgeorge.(1998) Etude biomécanique du lancer de franc conséquence sur l'entrainement L'UFR DE STAPS.p3
- R.Leca . (s.d.). Corrigé Aménagement matériel du milieu. france: Ecrit 2 CAPEPS IUFM Bourgogne.

PERFORMANCE AND ITS RELATIONSHIP TO SOME PHYSICAL ABILITIES AND MOBILITY FOR MEN FOR FOIL PLAYERS HAVE FENCING

Noor Hatem
Faculty of physical education and Sport Science University of Baghdad
Email: Noorhatem23@yahoo.com

Abstract

The process of evaluating performance all the master craftsman in this type of sports is of great significance and capabilities center, including its doers curricula, and that access to high-level sports requires access to full and accurate information about the performance of the players and activity in all cases of play, which is through Careful research to assess individual performance master craftsman, which we mean to follow the performance of the group as a whole during the match From the experience of the researcher found the players who master the lever movements and legs and move to the stadium Forward and backward who brought the best level, therefore considered it a researcher studying the problem and identify the extent of the relation some physical mobility has played in special fencing, which reflected on the level of performance master craftsman to the game.

It is therefore felt that capacity researcher physical mobility has played in special fencing, which is reflected in the level of master craftsman performance to the game.

Research objectives - to identify the relationship between some physical abilities and performance master craftsman foil weapon. - Identify the relationship between capacity and performance kinetic master craftsman in foil.

Search assumptions: -. The presence of Relation of link between physical capacity and performance master craftsman in foil. - .A relation link mobility between capacity and performance master craftsman in foil.

Research approach was taking 16 good student in this game, who accounted for 10. 66) From the original community was the special testing capabilities under research and compilation of unloading forms master craftsman and assess performance a relationship between performance and capabilities master craftsman physical mobility under discussion.

-Conclusions: - the consensual capacity agility an important factor and effective in improving performance in the master craftsman Fencing. - The existence of a relation between each link from (the force of speed, muscular capacity Two Men) master craftsman performance in foil.

Recommendations: - the need for attention to the physical capacities and capabilities mobility when developing programs continuously for golfers almbarzh in view of the importance of these two elements in performance master craftsman in Epee. -The necessity of holding capacities of other similar studies, which were used in the search. - taking into account the Capacity test when selecting player fencing.

KEYWORDS: Performance. Physical abilities. Mobility. Fencing.

1. INTRODUCTION & PROBLEM OF THE STUDY

The importance of physical education is part of the educational process and highlight its importance in the general development of physical and intellectual abilities, develop and improve the social, health and psychological well-being of players, as well as educational and scientific goals. Duel game is a game which has its requirements and objectives of the sports and social, psychological and pedagogical exercises according to certain laws and regulations especially control between the duel showdowns

. Therefore, the performance in this kind of great importance is the sports and physical abilities including effective curriculum, access to sports requires access to complete and accurate information about the performance and activity of players all playing situations and through careful research to evaluate individual performance and that we mean it track the performance of the whole team during the game. Herein lies the importance of research to identify the significance of this relationship being given a clear indication of just how important certain physical abilities and special motor duel game which is reflected at the level of performance in that game.

Problem of the researcher

as a court School of fencing found that performance evaluation depends on objective evaluation of experts through a performance without competition, is neglecting the performance during the competition, which includes time and performance time attack and points earned, points failures and recorded it as well as cruise, compatibility and accuracy in performance during the competitions are dueling game from games that require significant effort from the player, and must meet specific conditions were characterized by high fitness and ability to compatibility Because the motor performance is the result of slim synergies between physical capacities and capabilities. Through the experience of the researcher found that players who have mastered the arm and leg movements and move the pitch back and who are the best, so the researcher felt that studying this problem and recognize the relevance of certain

physical abilities and special motor duel game which is reflected at the level of performance in that game. So the researcher felt that physical abilities and special motor duel game which is reflected at the level of performance in that game.

Research objectives

- Identify the relationship between certain physical abilities and performance skills in fencing. 2. identify the relationship between motor capacity and performance skills in fencing

Hypotheses:

- The existence of a significant correlation between moral physical abilities and performance skills in fencing. 2. the existence of a significant correlation between the moral capacity and performance skills in fencing و research area: players who participated in the League among students. Temporal domain: from 12/05/2015-25/5/2015. Spatial domain: fencing Hall at the Faculty of physical education and Sport Science.

2. METHODOLOGY

Researcher used descriptive survey method lmlaemth research.

Community research:-sampling who participate in the College of physical education and Sport Science for the academic year 2014-2015, out of the total 150 community student of the third phase divided 30 student for each Division and was taking 16 good student in this game who accounted (10.66) from the original community.

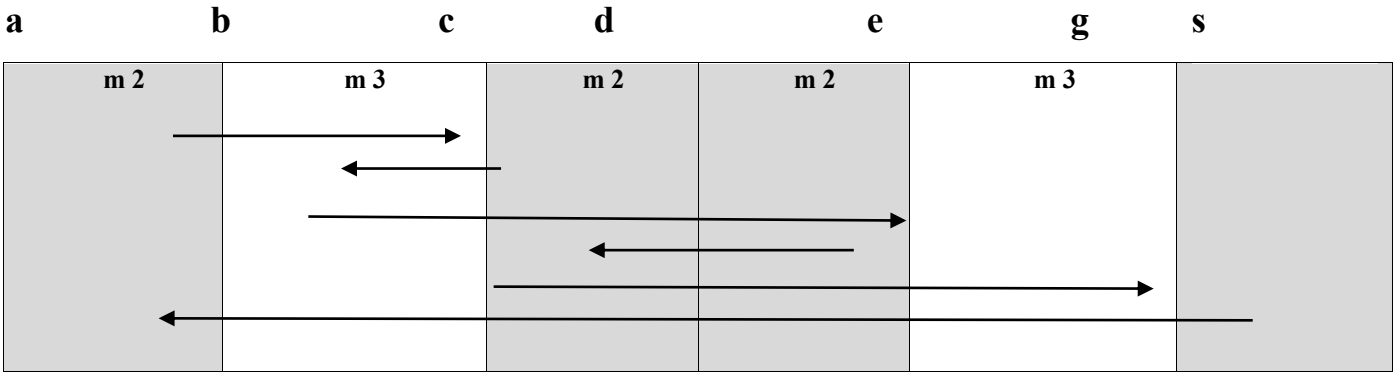
Search tools and appliances:-a device for measuring length. -Medical scales for measuring weight. -References and scientific sources. -Fencing. -Tape measure. -Stopwatch. -Chalk-registration form results.

Tests used in the search: 2.4.1-akhtbaralothb of steadiness (norhatm: 2009:56):-objective test: the explosive force measurement for men of alaonkard mode. -Performance specification: stand the player develop alaonkardkhlf starting line and when you hear the signal leap forward one. -Registration: measured distance (cm) between the inside edge of the starting line and another impact player legacy when touching the rear foot to the ground. -Give the player two attempts and record try better.

Test of strength with speed to jump from the alaonkard mode (alkhaqani: 1997:194) test: three strides forward together the development alaonkard. The goal of the test: measurement of force with speed for both men and aalaonkard performance specifications:-stand the player in standby mode with extended angles, front foot almost forward and the other heading to the side and the distance between them is 1.5 feet, double chins slightly, front arm armed form obtuse angle with the weapon with the weapon arm is parallel to the ground fault and introduction of arms heading forward to be a fly on the level of the eyes of the player. The rear arm is raised behind the head by placing loose. -Place the player presented the background behind the starting line. -Operate the player to extend the legs firmly and push the land with feet to jump forward and three consecutive strides beyond distance possible whilst in standby mode. Registration:-the distance is measured from the inner edge of the starting line until the last trace left by the player when touching the rear foot to the ground. -Gives the player the best distance record attempts.

Compatibility test (alkhaqani: 1997:87)-objective test: see compatibility through movement. -Tools used: weapon Shish (2), a measuring tape, a stopwatch, a format for recording results-performance: stand the player forward taking both her hands in order to force the front and side, the lab sits on a Chair malnabdaamel stopwatch is challenging the forward side and be time during the addaltkrarat in the second tested the movement stops noand stopped work at and compute loop through (15) again.

Fit (Abdulhadi Al-Tamimi: 2004:18)-the name of the test: progress and retreat over less time as possible. -The purpose of the test: measuring fitness. -Tools: measuring tape and stopwatch. Performance description: stand the player on the starting line when the signal to start the stopwatch starts to work the player to progress from point (a) (c) and then retreat from (c) to (b) and normal (b) to (e) and then retreat from (e) to (c) and normal (c) to (g) and then retreat from (g) to (a) then stops working stopwatch and record the second attempt (s).



Performance was evaluated performance through its form paragraphs for each degree is divided into (3/1, 3/2, 1) gives form to each arbitrator * with video disc photography and works on the Tribunal evaluate the player knowing that each player has its own form.

	Paragraphs	3/2 Class The relative weigh	Full class	3/2 Class	3/1 Class
1	Invest the time game each time time 3D complete bout 5 touches aozmn 9 d complete 15 touch bout				
2	The time between attack word play and Word Whoa				
3	Use the appropriate type of attack positions play				
4	Use appropriate defense positions play				
5	The number of legal touches either attack or counterattack				
6	The number of touches (it)				

Exploratory experience:-the researcher conducted an exploratory test on a sample of adult students the number 5 for the following purposes:-to identify the sample. -See the elapsed time. -See team Assistant. -Know the cons and pros facing major experience researcher. -Know the validity of devices and tools used.

main experience has been testing research by conducting periodic b 5 days then when making the League including filmed and put on a CD and distributed to the arbitrators, and each game two one player left and the second to the left, so the number of alabat then after taking the forms of rulers the researcher by taking the arithmetic mean for each player to extract performance skills then the searcher to find the relationship between capacity and performance.

Statistical means:-the spss statistical pouch used to extract results.

3. RESULTS AND DISCUSSION

To present, analyses and discuss the results of strength with speed and muscle men and their relationship with performance fencing:

Table 2: shows the mean and standard deviation and the value of the correlation coefficient calculated and indexed level indication of the search variables.

Data tests	Arithmetic mean	Standard deviation	The calculated value (r)	The tabular value (r)	Level indication
Performance skills	72,8	1،09	0,78	0،497	moral
Power plus speed	3.35	0.53			
Muscle power of men	1،8	0,25	0،73		

Under the level of dlalh (0, 05) can be seen from the table (2) that values performance covariance master craftsman for fencing Had the (7 , 8) with a standard (1, 09) Either covariance values to test the speed of 1, 8) with a standard (25) , and for the purpose of testing the hypothesis of a relationship between performance bdlalh master craftsman and distinctive force as quickly as was the use of correlation coefficient simple Pearson, it was clear that the values ($) Calculated had reached (0 (73) The values (r) Tabular trend display when a him a free access 14 (and possible error) (0.5)had reached (0 (497) and the (r) calculated the largest of its values (r) Tabular trend display, this means that there is a relation between link The force of the speed and performance master craftsman. because when the use of force and speed of before fencer In that one become (r) force of speed, which is one of the components The key to successful performance in practice many sport activities such as the clash (Kemal Dervis: 1999:45). the arithmetic ability muscle men (8, 12), standard deviation (1.25) (r) calculated (0.82) value (t) indexed at freedom (14) and the probability of error (0, 05) amounted to (0, 497.) as (r) calculated is greater than the value of (r) table there is a relationship between muscle and performance skills in fencing this is consistent with the findings of Ashraf massad to a relationship link ICH between muscle and the level of performance in the sport of fencing (Ashraf massad: 1998:28). This achieves the second purpose of the search.The researcher attributes to that muscle men is one of the physical requirements for the sport of fencing performance skills both ears offensive and defensive requires muscle power of men to give the player the opportunity to surprise performance.

To present, analyse and discuss the results of agility and interoperability and performance relationship by fencing:

Table (3) shows the arithmetic mean, standard deviation and the value of the correlation coefficient calculated and indexed level indication for the search variables.

Data tests	Arithmetic mean	Standard deviation	The calculated value (r)	The tabular value (r)	Level indication
Performance skills	72,8	1,09		0,497	moral
Fitness	18.775	1,25	0,89		
Harmonic capacity	16,21	0,89	0,77		

Under the level indication (0,0 5) can be seen from the table above that the value of the arithmetic mean of performance (7, 8) and standard deviation (1, 9) the value of the arithmetic mean of the test harmonic capacity reached (16, 21) and standard deviation (0, 89) for the purpose of hypothesis testing concerning the significance of finding the relationship between performance and capacity, interoperability is the use of simple Pearson correlation coefficient, it turns out that (r) calculated amounted (0 89) (r) indexed at freedom (14) and the probability of error (0, 05) amounted to (0, 497) as the value of (r) calculated is greater than the value of (r) this table There is a correlation between performance and moral capacity, interoperability and the researcher attributes this to the harmonic capacity effective level of performance and the results of the tests show that featured this assertion (Ellen depositary) compatibility hwahadi motor power components that are important in determining the level of performance it is integrating multiple movements with each other (Allen meek: 2003:256) and confirmed (Bassam Abbas) the need for compatibility between the movement of the arm movements and armed men in attack and defence. (Bassam Abbas: 1981:70).(

Either the mean fitness (8, 12), standard deviation (1.25) (r) calculated amounted to (0, 77) (r) indexed at freedom (14) and the probability of error (0, 05) amounted to (0, 497) as the value of (r) calculated is greater than the value of (r) indexed there is moral relationship between performance and agility, and due to the agility is important in most sports activities in General and in particular fencing and attributed this to the fact that the researcher duel games that require the ability to change the conditions of the body as a whole Or some of it and maybe change the direction of the body to achieve a touch the duel you need to lightly smooth and high performance, all achieved in the case of developing agility to win and reach the level of achievement required. Recalling (Mohammed Subhi Hassanein: 1987:362) agility is an important factor in the performance of all sports, it is the ability to change body positions, whether on land or air to win.

4. CONCLUSIONS

1. Interoperability and agility is an important factor in improving performance in fencing.

2. The existence of a correlation between (power plus speed, muscle power of men) and performance skills in fencing.

5. RECOMMENDATIONS

1. The need for attention to physical abilities and motor capabilities when establishing training programmes for duel players in view of the importance of these elements in performance skills in fencing.

2. The need for similar studies of other abilities are not used in the search.

3. Taking into account the test these capabilities when selecting player dueling.

6. REFERENCES

1. Ibrahim Nabil Abdel Aziz, the technical foundations for the duel, I 2: (Cairo, Center for book publishing, 2001).
2. Ellen meek; experience in games for kids and adults, 2nd Edition: (Alexandria, Arab thought, 2003).
3. Ashraf massad; some relationship physical and physiological variables and mental performance players duel with talented school athletes: (Cairo, research published in the journal of sports science and arts, Helwan University, 1998).
4. The statement of carlabeasley, the key parameters to test rookies in the sport of fencing: (Ph.d. thesis, University of Baghdad/College of physical education, 1997).
5. Bassam Abbas proposed to develop software quickly and accurately challenge players in EPEE fencing :(master, Faculty of physical education University of Baghdad, 1981..(
6. Kamal Darwish, Mohammed Subhi Hassanein; new in sports training methods and models for all games and sports levels :(Cairo, Center for book publishing, 1999).
7. Abdul Hadi Hamid Al-Timimi; design test to measure agility in sport fencing, no. 5: (Diyala University, the journal of the Faculty of physical education, (2004
8. Mohammad Hassanein district; evaluation and measurement in physical education: (Cairo, Dar Al fikr al Arabi, 1985).
9. Norhatm; training curriculum proposal Varistors as albiokinmatikih indicators and their impact on some special physical abilities the accuracy and speed of movement challenge duel: (Master thesis, College of Baghdad University/physical education, 2009).

PHYSICAL AND PHYSIOLOGICAL PARAMETERS EVALUATION OF SPORT SCIENCE STUDENTS

M. Ogan [a] D.Ozturk [b] M.E.Ozturk [a] Y. Buzdagli [a] H.Sajedi [c]

[a]Department of Physical education and Sport Science, Kazim Karabekir Education Faculty, University of Ataturk (Erzurum), Turkey

[b]Department of health services Vocational school Ataturk University, Turkey

[c]Department of Physical education and Sport Science, University of Ataturk (Erzurum), Turkey

Corresponded author: Heidar Sajedi

E-mail address: Sajedy_haeidar@yahoo.com

Abstract

The purpose of this study is the evaluation of the training effects on the physical and physiological parameters of students. In order to evaluate the effects on anaerobic power and standing long jumping parameters of student, was tested some students that were selected as voluntary. Coordination test, anaerobic power test and standing long test was performed. The training influenced on the parameters significantly in compare to the first state of them, at 1 and 5 probability level. But coordination tests showed negative significant results. This study concluded the difference time and strength of the training with more exact to do for different student with wide age limitation.

KEYWORDS: Physical parameters. Anaerobic power. Jumping, Coordination.

1. INTRODUCTION & PROBLEM OF THE STUDY

Today sports and exercise are applied by millions of persons in order to move away from stress, raise their quality of life (Tas et al. 2008). By doing long-term practice, play sports can promote metabolism. Physical exercise is planned to make propel changes in body that occur to body and organ system's metabolism so as to improve each organ system structure and functions, make it a series of higher adaptability that causes to human physical quality can strengthen (Wang et al., 2012). During sports process persons have some changes in their physiological properties and parameters, such as muscle excitement, breathe speed increasing, heart rate promotion, perspiration, temperature changed. These physiological parameters have close relationships with sports amount and sport process duration. Information of sport physiological factors change is helpful for physical education teaching and sports training (Deng et al., 2004). College students are sometimes under heavy learning responsibility, great learning pressure that causes them in tight plans. As a result of this case, they do not have time to do exercise. In this way physical quality gets worse so that cannot support heavy learning, damaged circles generate. It can be shown that physical exercise is important to college students. By analysing the physical education exercise characteristics, after discovering the measurement sport physiological parameters, make real time analysis of such data can play important information transfer role in physical education training and matches and provide important bond to effective development of physical education teaching (Li, 2012). Performance is included physical, physiological, biomechanical and psychological product that produced by the athletes. When structural factors are considered in addition to physiological factors; body measurements and proportions as well as physical and body compositions become important factors that affect physical performances (Colakoglu et al., 2014). The aim of the study was to evaluate physical and physiological parameters of the college students. With our study can be illustrated the sport science reaction strength to the physical and physiological parameters.

2. METHODOLOGY

Subjects: The study population was consisted of 33 male students of Ataturk University, Kazim Karabekir sport science and physical activity Education faculty. The students were selected as voluntary. This study took 14 weeks during education semesters.

Physical and physiological measurements: The age, height and body weight of the student was measured and noted. Some test was applied such as Coordination test, Sargent Jump Test and Standing Long Jump Test.

Coordination is the ability to move two or more body parts under control, smoothly and efficiently. Manual dexterity tests or tests of hand-eye coordination also fall into this category.

To measure the anaerobic power test was used of Sargent Jump Test. The Sargent Jump Test also known as the vertical jump test was developed by Dr. Dudley Allen Sargent (1849-1924).

The athlete's anaerobic power was measured by this formula:

$P = (\sqrt{4.9}\ (w)\ \sqrt{D}\ )$

P: Anaerobic power (kg.m/sec)

W: Body weight (kg)

D: Jumping distance (m)

$\sqrt{4.9}$: Standard time (sec)

The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power.

Procedure of standing long jump: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed.

Procedure of Sargent Jump Test:

- The athlete warms up for 10 minutes.
- The athlete chalks the end of his/her finger tips.
- The athlete stands side onto the wall, keeping both feet remaining on the ground, reaches up as high as possible with one hand and marks the wall with the tips of the fingers (M1).
- The athlete from a static position jumps as high as possible and marks the wall with the chalk on his fingers (M2).
- The assistant measures and records the distance between M1 and M2.
- The athlete repeats the test 3 times.
- The assistant calculates the average of the recorded distances and uses this value to assess the athlete's performance.

The measurement of height and body weight:

To measure the persons height was used of medical measurement tool that used when the persons ere with naked foot. The body weight was measure by the medical measurement tool after the person undressing and only wears shorts.

Table 1: Descriptive statistics

	Count	Mean
Height	33	176.75 (m)
Age	33	21.84 (year)
Body weight	33	71.93 (kg)
Coordination 1	33	18.47 (sec)
Coordination 2	33	17.73 (sec)
Coordination 3	33	16.92 (sec)
Anaerobic power 1	33	98.72 (kg.m/Sec)
Anaerobic power 2	33	109.18 kg.m/Sec)
Anaerobic power 3	33	109.84 kg.m/Sec)
Standing long jump 1	33	2.30 (m)
Standing long jump 2	33	2.34 (m)
Standing long jump 3	33	2.37 (m)

Training program:

Training name: Rapid force

Training aim: Development of rapid force (Anaerobic power)

Training time: 15-25 sec

Loading density: %40-60

Seri number: 3-5

Rest: 3-5 min (Between series)

Movements:

1. Jumping to right and left on the gymnastics bench
2. Skip and transition between Slalom rods
3. Somersault to front cushion straight
4. Vertical jumping
5. Shuttle and push-up movement performance

6. 9 meters running straight

3. RESULTS

In this study was evaluated the effect of anaerobic power training of the 20-24 years old of sport science and physical activity students on the physical and physiological parameters during 14 weeks and 2-3 times doing technique training during week. For the experimental group, before study, the principle of anaerobic power training showed parallelism for the performed training principle number and other effects plan for the selected study. Anaerobic power showed increasing as 11 kg.m/sec and the first amount and the end amount of anaerobic power had significant difference at 1% probability level (fig. 1). Standing long jump had raising as 4 cm and the first and the end measurement of this parameter had significant difference at 5% probability level (Fig. 2). According to the results, there was significant and negative difference between coordination tests at 1% probability level (fig. 3).

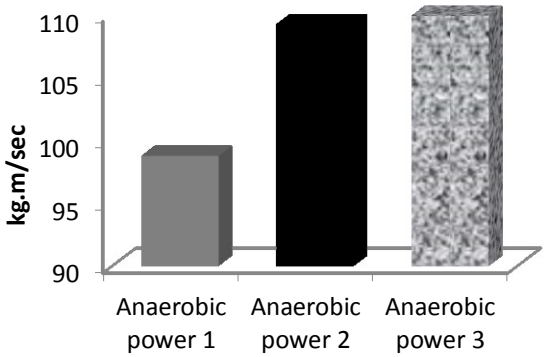


Fig. 1: Anaerobic power tests

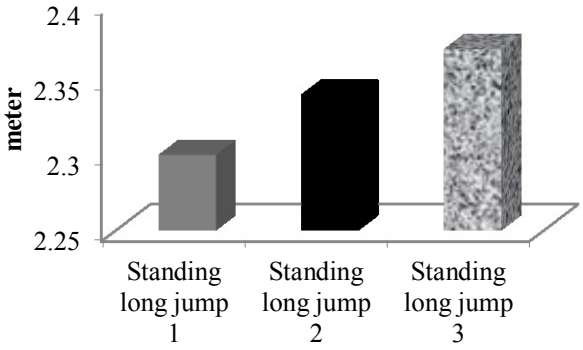


Fig. 2: Standing long jumping tests

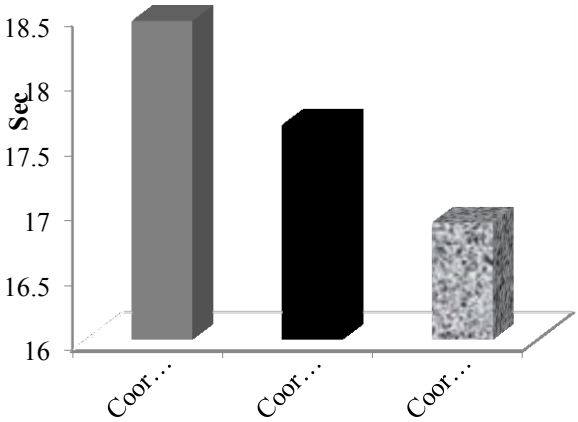


Fig. 3: Coordination tests

4. DISCUSSION

In a study on the 16 students with 15 mean years was determined the aerobic power as between 49.4-60.4 kg.m/sec (Brown et al., 1986). The results had a study on female handball players and applied 8 weeks straining on experimental group. Analyzes showed that mean of first and last 20 meters shuttle run test of experimental group were 3.99±0.27 and 3.60±0.23 sec, respectively and 20 meters shuttle run test mean of either first and last tests of control group was 4.04±0.34 sec. Physical training can cause significant changes in the parameters of body composition and it is important factor in the regulation and maintenance of body mass (Cvrino et al., 2002). Ceiling effects might explain our defeat to identify significant changes in physical self-perception among boys in the resistance training groups. The effects of exercise on self-concept are most likely to occur among participants with initially low levels of physical self-perception (Fox, 2000). The results have shown that there are significant increases in leg strength after 8 weeks of strength training in female and male group, but no improvements in vertical jump were observed (Faigenbaum et al., 1999). A study by Weltmann et al. (in 1986) showed that the group who completed a strength training intervention for 14 weeks had significantly better results in the vertical jump than the control group. Studies of adolescents have also shown positive performance changes in response to long-term strength training interventions (Keiner et al., 2012).

5. CONCLUSIONS

In this study after 14 weeks training performance was shown increasing and development for the anaerobic power and standing long jump. Training should be done with more exact and with a true plan. By this way, this training can be have positive and significant effects on the athletics. For this study is suggested that is evaluated the different time and strength of the training for the different persons.

Practical applications:

Training and exercise improved the anaerobic power players and standing long jumping but the coordination tests had negative and significant results after training period. The movement types were very important to effect on the studied parameters.

Acknowledgment

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6. REFERENCES

- Brown, M.A., Mayliew, J.L., Boleach, M.A. (1986). Effect of plyometric training on vertical jump performance in high school basketball players. Journal of sports medicine and physical fitness, 26, 1-4.
- Colakoglu, T., Er, F., Ipekoglu, G., Karacan, S., Colakoglu, F.F., Zorba E. (2014). Evaluation of physical, physiological and some performance parameters of the Turkish elite orienteers. Procedia - Social and Behavioral Sciences, 152, 403 – 408.
- Deng, W., Sun, X., Fan, X. (2004). An analysis system of physical training workload based on Polar Sports Tester. Journal of Biomedical Engineering, 21(5), 779-783.
- Faigenbaum, A.D., Westcott, W.L., Loud, R.L., Long, C. (1999). The effects of different resistance training protocols on muscular strength and endurance development in children. Pediatrics,104:e2
- Fox, K.R. (2000). Self-esteem, self-perceptions, and exercise. Journal of Sport and Exercise Psychology, 31, 228-240.
- Keiner, M., Sander, A., Wirth, K., Schmidtbleicher, D. (2012). Ergänzendes Krafttraining im Nachwuchsleistungssport. Schweizerische Zeitschrift für Sportmedizin und Sporttraumatologie 60, 8—13.
- Li, K. (2012). Kinematical Analysis on Technology of Overhead Smash between Badminton and Tennis. Journal of Shenyang Sport University, 31(2),111-113.
- Taş, M., Kıyıcı, F., Kishali, N.F. (2008). Chronic effects on nitric oxides after 4 weeks exercise in Alp skiers. Physical activity and sport science Journal, Turkey, 10, 34-41.
- Wang, J., Zheng, L., Li, Z. (2012). Physical activity self-monitoring and weight loss: 6-month results of the SMART trial. Medicine Science and Sports Exercise, 27(2), 138-142.
- Weltman, A., Janney, C., Rians, C.B., Strand, K., Berg, B., Tippitt, S. (1986). The effects of hydraulic resistance strength training in pre-pubertal males. Medicine Science and Sports Exercise, 18, 629—38.

SOME MENTAL ABILITIES RELATED TO THE DISCUS ACHIEVEMENT

Sanaa Majid Mohammed
College of Physical Education and Sport Sciences / University of Baghdad
E-mail: Sanaa_altamimy@yahoo.com

Abstract

because the discus competition has plenty of interested people who were studying and developing its skills and its tactics, therefore the recent studies have turned to the subject of mental abilities to search for different ways and means to develop this competition , as the concept of mental abilities is one of the concepts that have emerged in the field of sport studies and in unlimited number of different sport games, the studies which were interested in the concept of mental abilities and its relationship with the skilled performance in many theories, opinions , ideas and thoughts that tried to study this concept in behavioral and Knowledgeably frame, on the sport field, which was till recently depend in its training programs on the physical, skill and tactical aspects only, ignoring unintentionally the mental abilities and its measuring methods and its ways to improving it and its relation with movement skills which leads in the end to the skilled performance of various sport competitions including discus.

According the researcher, there is no scientific study mentioned the mental abilities in discus for elite players and its relationship with the achievement of the discus, so the statement of the problem is to know if there is a relationship between some of the mental abilities with the achievement of discus for elite players. The goals of the research:

1. Identify the most important mental abilities of elite players in discus competition.
2. To identify the relationship between some of the mental abilities with the achievement of discus for elite players.

The researcher selected the research sample intentionally from elite players of discus for the sport season 2014 - 2015, (6) players were selected, and another (3) players were selected but not from sample of the research for the exploratory experiment.

The researcher is clarifying them as follows: (Bourdon- Anvimov) modified test for attention, Sense-Movement recognition test

Conclusion:

1. There is significant correlation relation between mental ability (attention intensity) with discus achievement for elite players.
2. There is significant correlation relation between mental ability (attention concentration) with discus achievement for elite players.
3. There is significant correlation relation between mental ability (Sense - movement recognition) represented by the sense recognition of the grip strength test with discus achievement for elite players.
4. There is correlation relation between mental ability (Sense - movement recognition) represented by the sense of time estimation test with discus achievement for elite players.

KEYWORDS: Mental. Related. Achievement.

1. INTRODUCTION & PROBLEM OF THE STUDY

The mental abilities is among the most essential components that contribute to access the upper levels for both male and female players and it's a fundamental part of the psychological preparation and training to achieve the desired goals, as recent studies have tended to correct and develop a lot of sports games, including the discus, through taking care of developing the mental abilities that the player needs, because it has a great importance in improving the performance.

The mental abilities is also one of the important essential components needed by the athletics coaches as it works on assisting developing the movement capabilities and developing the tactical skills and contribute in linking the movement sequence through developing the movement skills, mental visualization, attention concentration and the sense- movement recognition of the players, and it is known that the discus is one of the exciting game in both Olympic and international competitions, and improving the record level of discus player cannot be done without knowing the scientific foundations related to the type of training.

The importance of research is the attempt to identify the importance of studying the mental abilities and its effects on elite players of discus and it's a attempt to study its relationship with the achievement of discus because it's one the athletics activities that needs improvement, in addition to the contribution of the this study with previous studies in enriching the sport Library with what is useful to develop the competition and serve the players and coaches as well.

because the discus competition has plenty of interested people who were studying and developing its skills and its tactics, therefore the recent studies have turned to the subject of mental abilities to search for different ways and means to develop this competition , as the concept of mental abilities is one of the concepts that have emerged in the field of sport studies and in unlimited number of different sport games, the studies which were interested in the concept of mental abilities and its relationship with the skilled performance in many theories, opinions , ideas and thoughts that tried to study this concept in behavioral and Knowledgeably frame, on the sport field, which was till recently depend in its training programs on the physical, skill and tactical aspects only, ignoring unintentionally the mental abilities and its measuring methods and its ways to improving it and its relation with movement skills which leads in the end to the skilled performance of various sport competitions including discus.

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The goals of the research:

1. Identify the most important mental abilities of elite players in discus competition.
2. To identify the relationship between some of the mental abilities with the achievement of discus for elite players.

2. METHODOLOGY

The researcher used the Descriptive method for its convenience with the goals of the study

Research sample: The researcher selected the research sample intentionally from elite players of discus for the sport season 2014 - 2015, (6) players were selected, and another (3) players were selected but not from sample of the research for the exploratory experiment.

Means of data collecting and tools: The researcher used the arabic and the foreign resources, the Internet, Tests and measurements, personal interviews, forms for mental abilities tests and Form of discus achievement.

Steps to accomplish the research: The researcher has read the arabic resources and the available studies, she settled down to work on identifying the most important mental abilities that are suitable for discus players, which are (Attention and Sense-movement recognition), and clarifying the research tests, the researcher is clarifying them as follows:

First / (Bourdon- Anvimov) modified test for attention (Ahmed Mohamed Khater and Ali Fahmi:1978:492)

The researcher has used (Bourdon - Anvimov) modified test for attention , which is one of the most important tests for athletes used to measure five attention aspects (intensity, concentration, Stability, distraction, diversion) . Only the values of concentration and intensity of attention aspects have been calculated due to the job of the researcher is limited to them, and the scale is a form contains (31) lines of arabic digits, each line contains (40) digits and thus the test has (1240) digits and the digits in each line are in groups placed in standardized way, each of which consists of (3-5) digits in a different arrangement to ensure that it would not be saved by the player.

1. Attention intensity test:

- Purpose: to measure the attention intensity of elite player.

- Tools: form of scale, stopwatch, and a pen.

- Procedure : When word (go) is being heard the player starts to take the test at the same time the stop watch starts ticking, the player searches and writes-off of number (97), line after line and from left to right

- Conditions: test time is one minute, and when the word (stop) is being heard the player puts a mark next to the reached digits.

- Calculating the results: extracting the following indicators: -

A: Overall size of the seen part of test (the amount of digits that have been seen) from the beginning till the STOP word.

S: The number of digits that should be written off in the seen part.

B: The number of errors in general (the number of digits that did not write-off plus the number of digits that mistakenly written off).

E: Work equation

$$E = \frac{(S - B) \times 100}{S}$$

Attention intensity: A × E

2. Attention concentration test:

- Purpose: to measure the concentration of attention for elite player.
- Tools: light and audio distraction device, form of attention scale, stopwatch and a pen.
- Procedure: the same system that used in measuring the attention intensity, but when the start signal is given, the distraction device gives a flash of light each (5 seconds) and a sound each second (60 time per minute) , The device is placed one meter away from the player with his eyes level
- Conditions: When the word (stop) is being heard the player buts a mark at the end of written off digits and the distraction device turns off automatically.
- Calculating the results:
- The results of measuring the attention intensity in quiet case = **U1**
- The results of measuring the attention intensity in distraction case = **U2**.
- Concentration = the difference between the quiet case and the distraction case.

Attention concentration is B = U1 - U2

Second / <u>Sense-Movement recognition test:</u>

1. The recognition test for the grip strength (Abu Ela Ahmed and Mohamed Hassanein:1997:175)

The purpose: Measuring the variations of the sense recognition according to muscle strength

Tools: dynamometer for grip strength and, a blindfold

Procedure:

1. Measuring the maximum grip strength with dynamometer ,the player has three attempts , only the best attempt is counted (one minute break between each attempt and other).
2. Determine 50% of the maximum grip strength that achieved in the previous step .
3. Three attempts would be given without the blindfold and another three attempts with the blindfold alternately trying to achieve the (50%) of the maximum grip strength, that means the first attempt when the player can see and the second attempt when the player cant not see and so on until finishing the two sets.

Calculation:

- Calculating the attempts with the blindfold ,whether its above 50% of the maximum grip strength (positive) or less than (50%) of the maximum grip strength (negative) or exactly (50%) of the maximum grip strength (zero).
- The amount of error is calculated for each attempt and then finding the arithmetic mean of the total errors in the three attempts.

2. Test of time estimation sense (Mohammed Ali Abu alkoshk & Mazen Raoof Hatamleh:1996:62**)**

The purpose: Measuring the sense of time estimation

Tools: electronic stopwatch

Procedure: First phase / the player should do the test without looking at the electronic stopwatch, the player should start and stop the watch at the times (5, 7 and15 sec.) the player should repeat this procedure for the three times above Second phase / the player should do the test without looking at the electronic stopwatch while the player is standing up looking forward with the arm fully extended a length with the body side then the player starts and stops the stopwatch at the time (7 sec) and repeats this test three times in a row.

Calculation: Calculating the results of the three attempts at the time (7 sec), separately. Calculating the error in each attempt whether if it was more or

Less than the (7 sec) finally finding the arithmetic mean of the three attempts.

Pilot study: The pilot study is a practical training to stand on the negativities that the researchers may face during applying the study to avoid them(negativities) in the future, therefore, the researcher did this pilot study in 09/03/2014 on sample of (3) discus players .

Scientific bases of the tests: Although the tests of mental abilities (Bourdon -Anvimov test, and Sense - movement recognition tests) have high reliability and validity coefficient, the researcher has done the blow:

First / <u>validity:</u> the mental tests and measuring have been showed to a number of experts and specialists in, track and field, test and measurement and sport psychology, all of them agreed 100% on the validity of test and the measurement that been used in the research,in addition of calculating the Index validity to be sure of the tests validity , as shown in Table (1).

Second / reliability: The researcher did the pilot study in 09/03/2014 and found the reliability coefficient of the test after applying the tests on a sample not from the same sample of this study consist of (3) discus players in the sports season 2014 - 2015 and then re-apply the same tests on the same sample four days later, in 14/03/2014 , using the simple correlation coefficient of Pearson between the first and the second measurements, the result is that all the tests have high reliability because all the calculated values were greater than the tabular value which is (0.950) when the degree of freedom (2) and the level of significance (0.05) As shown in Table (1) also.

Third / Objectivity: The researcher has extracted the objectivity of the tests by calculating the value of simple correlation coefficient of Pearson between the scores of the first and second provisions, and found out that it has high objectivity because the calculated values were all greater than the tabular value (0.950) when the degree of freedom (2) and significance level (0.05) as shown in Table (1) also.

Table 1: Shows the validity, reliability and objectivity of mental abilities tests

	Tests	Reliability	Significance	Index validity	Objectivity	Significance
1	Attention intensity	0.875	Mora	0.935	0.944	Mora
2	Attention concetration	0.891	Mora	0.943	0.951	Mora
3	Grip strength	0.924	Mora	0.961	0.972	Mora
4	Sensing the time	0.843	Mora	0.918	0.942	Mora

Discus competition: The researcher did the discus competition test and measured the total distance for each player in order to get the best achievement.

Main experiment: After confirming the validity of all tests the researcher did the main experiment from (16/03/2014) until (10/4 / 2014), all tests were applied on the main sample of the work which was (6) discus players in the sports season 2014-2015.

Statistical laws: Using the **(SPSS10)** application for finding (mean, standard deviation, median, skewness coefficient, simple correlation coefficient of Pearson).

3. RESULTS AND DISCUSSION

Specifications of mental abilities tests and discus achievement:
The researcher has extracted the arithmetic means, standard deviations, the value of the median as well as the value of the skewness coefficient for all candidate tests of mental abilities and the achievement of discus as shown in Table (2) the researcher has reached that all values of skewness coefficient were smaller than (+3) This is a prove of good distribution The sample homogeneity.

Table 2: Arithmetic me n , standard deviations, and the value of the scenes coefficient of the mental abilities and a discus achievement

	Variables	Arithmetic mean	Mediator	Standard Deviation	Convolution coefficient
1	Attention intensity	118.833	120	9.600	-0.364
2	Attention concentration	0.187	0.187	0.006	0
3	Perception of the strength of the grip	1.394	1.192	0.319	1.899
4	The sense of estimating time	0.708	0.717	0.036	-0.75
5	Achievement discus	54.500	55.500	5.540	0.451

Presentation and discussion the correlation between the tests of mental abilities with discus achievement:

It was reached to a matrix of correlations coefficients for the tests of mental abilities and achievement of discus as shown in Table (3).

Note that the calculated values of correlation coefficients is greater than the value of the tabular correlation coefficient (0.811) when the degree of freedom is (4) and the level of significance is 0.05 which are **(intensity of attention, the concentration of attention, perception of the grip strength, and the sense of time estimation**) which shows a significance correlation relationship between some tests of mental abilities with discus achievement.

Table 3: Matrix of correlations coefficients for tests of mental abilities with discus achievement

Tests	discus achievement (Value of Calculated R)	Value Tabulated R	Significance
Attention intensity	0.861		Mora
Attention concentration	0.850		Mora

Perception of the grip strength	0.877	0.811	Mora
The sense of estimating time	0.834		Mora

The researcher believes that because there is significance correlation relation between the attention intensity and attention concentration with the achievement of the discus therefore the result matches the scientific resources, the player can not throw the disc to a far the distance without having high level of attention intensity in spite of the presence of distractions during his attempt to throw the disc.

The result that reached by the researcher agrees with (Abdul Sattar Jabbar 2000) in defining the concept of the intensity in the sports field " It represents a degree of toughness or difficulty that can be made by the player toward a distractions and thus whenever the attention intensity increased because of a distraction, the more mental and nervous energy are required in the process of attention " (Abdul Sattar Jabbar:2000:66)

It's also agrees with (Esmat Darwish and Nihad Munir 1996) that "the importance of the attention intensity is its impact on the player ability to accomplish the high achievement "(Esmat Darwish alkurdi and Nihad Munir Battikhi:1996:61)

And also agrees with (Tariq Hamoudi and Walid waadalah in 1995) that "concentration is the important mean to lift up the level of the athletes and them abilities to observe things accurately and clearly "(Tariq Hamoudi Amin and Walid Waadalah Ali :1995:259) .

The researcher believes that there is a significance correlation relation for the sense-movement recognition with discus achievement, because the competition needs the mental ability (sense-movement recognition) during the throwing , as the recognition of the movement and feeling it lead the player to perform steps and rotation harmonically in order to Get the best distance, and this result matches with (Wasan Jassim 2002) that " the player systemic and muscular system, and the mental abilities has main role in understanding and getting the information and one of these metal abilities is the sense - movement recognition, which is responsible for moving acts, and its interpretation and its execution by knowing the environment to do the movement (Wasan Jassim Mohammed al-Qaisi–:2002: 2)

4. CONCLUSIONS

1- There is significant correlation relation between mental ability (attention intensity) with discus achievement for elite players.
2- There is significant correlation relation between mental ability (attention concentration) with discus achievement for elite players.
3- There is significant correlation relation between mental ability (Sense - movement recognition) represented by the sense recognition of the grip strength test with discus achievement for elite players.
4- There is correlation relation between mental ability (Sense - movement recognition) represented by the sense of time estimation test with discus achievement for elite players.

5. REFERENCES

- Ahmed Mohamed Khater and Ali Fahmi pick; measurement in the field of sports, : (Alexandria, Egypt Knowledge House, 1978).
- Abu Ela Ahmed Abdel-Fattah and Mohamed Sobhi Hassanein; methods of measurement and evaluation, : (House of the Arab Thought , Cairo, 1997).
- Tareq Hamoudi Amin and Walid Ali Waadalah Ali; relationship of attention concentration with accuracy of some basic skills in tennis, Journal of Education, Science, No. 18, college of Physical Education / University of Mosul 0.1995.
- Abdul Sattar Jabbar Aldmd; Physiology of mental processes, : (Dar fikir for printing and publishing, Amman, Jordan, 2000) .
- Esmat Darwish alkurdy and Nihad Munir Battikhi; comparative study of some aspects of attention for tennis players, Jordan , Scientific Research , University Jordan , Dirasat Magazine , Volume 23 , vol (1) March 1996 .
- Mohammed Ali Abu elkushk and Mazen raoof Hatamleh; the impact of the mental training with skills training to develop some variables of Senses - movement recognition for gymnastic for the students of the college of Physical Education (Journal of Studies and Research of Physical Education, Basra University, college of Physical Education, vol 6, 1996) .
- Wasan Jassim Mohammed al-Qaisi; sense - movement recognition and its relationship with the accuracy of performing some basic skills in volleyball, unpublished Master Thesis, college of Physical Education / Baghdad University, 2002.

THE EFFECT OF A QUALITATIVE TRAINING PROGRAM WITH SUPPLEMENTS ON SOME PHYSIOLOGICAL, PHYSICAL VARIABLES & SKILL PERFORMANCE IN FOOTBALL

Nabeel Khleel Ibrahim

Faculty of Basic Education – Mustansiriya University

E-Mail : neeliraq@yahoo.com

Abstract

One of the problems facing trainers in the training season is unstable levels of their players. This motivated researchers to conduct studies that raise the level of player's performance physiologically as this aspect affects their physical and skill performances. Improving physical performance and late appearance of tiredness are from the important aspects that all trainers seek to achieve. Tiredness is a physiological problem that has a negative effect on physical performance and may deter performance improvement. Levels of football players are affected by supplements which are a compound extracted from natural nutritional components of nutritional meals. They are readily produced with various forms and sizes whether containing nutritional substances or nutritional cores that needs to increase for athletes in body or muscular cells to obtain necessary energy or to increase muscular cells area according to the specialist efficiency in order to obtain the highest achievement. The study aims to identify the effect of a qualitative training program with supplements on some physiological and physical variables and skill performance in football. The researcher used the empirical method as it is proper for the nature of this study by designing two empirical and control groups. The sample of the study was chosen purposively from Itthad Sporting Club for the youth class. The sample included 20 players divided into two empirical and control group (10 players each). The researcher reached sample equivalency and concluded that the empirical group that used the qualitative training program with supplements achieved a clear advance in physiological, physical and skill aspects understudy. In addition, the qualitative training program used by the researcher was suitable in terms of using exercises such as velocity, strength, jumping and weights for the study.

KEYWORDS: training program, supplements, physiological & physical variables, skill performance, and football.

1. INTRODUCTION & PROBLEM OF THE STUDY

One of the problems facing trainers in the training season is unstable levels of their players. This motivated researchers to conduct studies that raise the level of player's performance physiologically as this aspect affects their physical and skill performances. Improving physical performance and late appearance of tiredness are from the important aspects that all trainers seek to achieve. Tiredness is a physiological problem that has a negative effect on physical performance and may deter performance improvement. The level of football players is affected by multiple factors including physiological, morphological, educational or psychological effects, but physiological factors came on top of these factors as they are closely related to training loads and different adaptation processes of body systems and their ability to resist tiredness and continuous performance along the time of the match.

Supplements are a compound extracted from natural nutritional components of nutritional meals. They are readily produced with various forms and sizes whether containing nutritional substances or nutritional cores that needs to increase for athletes in body or muscular cells to obtain necessary energy or to increase muscular cells area according to the specialist efficiency in order to obtain the highest achievement. The study also discusses the role of physical training and its effect on biological components of energy such as glucose and lactic acid production in addition to the role of biological organizers and hormones (such as cortisol) that contribute to metabolism of nutrients and affect different metabolism processes. Trough the researcher's work in football field, he noticed that most trainers of junior club teams do not know the role of supplements on one hand. On the other hand, there is not enough knowledge about suitable doses of supplements (including phosphocreatine which is one of the most important supplements). In addition, a lot of trainers do not know the ability of these supplements to develop any physical or skill characteristics or physiological variables for young football players.

Objectives of the Study:

The study aims to identify the effect of a qualitative training program with supplements on some physiological and physical variables and skill performance in football.

Hypotheses of the Study:

There are statistically significant differences between results of pre and posttests in some physiological and physical variables and skill performance in football between members of the empirical and control groups.

2. METHODOLOGY

The researcher used the empirical method as it is proper for the nature of this study by designing two empirical and control groups.

Sample of the Study:
The sample of the study was chosen purposively from Itthad Sporting Club for the youth class. The sample included 20 players divided into two empirical and control group (10 players each) and the researcher reached sample homogeneity equivalency.

Table (1) Homogeneity of the groups of the study in length, weight and age and physiological variables:

Serial	Statistics / Variables	Measuring Unit	Empirical Group		Control Group		Chi² Counted	P Value Significance
			Arithmetic Mean	Class mean	Arithmetic Mean	Class mean		
1	Age	Year	13.00	10.5	13.1	10.5	0.00	1.00
2	Length	Cm	149.00	11.95	150.00	9.05	1.219	0.270
3	Weight	Kg	59.95	9	60.23	12	1.305	0.253
4	Pulse Rate	s/m	78.7	11.55	79.60	9.45	0.660	0.417
5	Contraction Pressure	ml/mercury	124.00	9.95	122.00	11.05	0.182	0.669
6	Extension Pressure	ml/mercury	83.50	10.35	83.00	10.65	0.014	0.907

Table (2) shows statistically significant differences of Kruskal-wallis test in pre-test in variables of age, length and weight and physiological variables understudy between empirical and control groups as the P value is more than 0.05 at all variables of the study which means that there are no statistically significant differences between both groups and reflects homogeneity of their members.

Table (2): Equivalency of the empirical and control groups in physical and skill variables:

(N = 10)

Serial	Statistical Data / Variables	Measuring Unit	Empirical Group		Control Group		Chi² Counted	P Value Significance
			Arithmetic Mean	Class mean	Arithmetic Mean	Class mean		
1	30 m dash	Second	7.88	8.2	7.880	12.8	3.048	0.81
2	long jump from stationary	Meter	1.478	10.1	1.55	10.9	0.092	0.76
3	Barrow Test	Second	12.64	12.1	12.80	8.9	1.492	0.222
2	Ball air control	Number	3.85	10.95	4.50	10.05	0.12	0.729
3	Running with ball	Second	17.56	10.2	18.00	10.8	0.058	0.809
4	Long pass in football	Meter	17.99	9.6	19.00	11.4	0.474	0.491

Table (2) shows statistically significant differences of Kruskal-wallis test in pre-test in variables of age, length and weight and physiological variables understudy between empirical and control groups as the P value is more than 0.05 at all variables of the study which means that there are no statistically significant differences between both groups before conducting trial.

Field Procedures of the Study:

In order to determine tests that measure physical, psychological and skill abilities in football, the researcher used legalized tests with scientific conditions and suitability to the sample of the study as follows:

Physical Tests: (Al Zohery: 2009, 54, 76 & 62)

1- Dash training.
2- Long jump from stationary.
3- Barrow Test.

Physiolohgical Tests: (Amir: 1999, 68, 70 & 87)

1- Pulse Rate Tests.
2- Extension Pressure Rate.
3- Contraction Pressure Test.

Skill Tests: (Hedayat: 2004, 75, 45 & 44)

1- Air Ball Control.
2- Running with the Ball.
3- Long Pass in Football.

Pre-Tests of the Sample:

Pre-tests were conducted on 17 – 18/03/2015 consecutively at 9:00 am for physiological and skill tests and 6:00 am for physical tests related to the empirical group. As for the control group's tests, they were conducted at the same playground the next day. Physiological and skill tests were performed at 9:00 am and physical tests at 6:00 am. The researcher put certain conditions for tests

in terms of time, place, selection method and work team in order to achieve the same conditions or any similar conditions when performing post-tests for the sample of the study.

Qualitative Training Program & Supplements:

The qualitative training program includes two control and empirical groups subjected to pre-tests to check their status before including the empirical variable. The researcher depended on applying daily training methods for both groups and with the same applied sizes with the difference of adding velocity exercises related to approve absolute velocity exercises, strength training with weights and different jumping exercises to develop the understudied variables. The researcher implemented three additional qualitative training units as empirical variables into methods used by both groups and on the empirical group only to show the effect of these exercises on developing physiological, physical and skill abilities. These units were applied in the morning on Saturday, Monday and Wednesday starting from Saturday 24/03/2015 and applied absolute velocity exercises on Saturday morning, jumping strength exercises on Monday morning and weights exercises on Wednesday morning each week for a period of eight weeks. The researcher unified training intensity of these exercises each two weeks and move in intensity to a higher level for the following weeks. For example, the start was with 95% intensity for velocity exercises and with of 8:1 rest (effort ratio to rest). As for jumping exercises, they started with the same intensity and rest, but weights exercises started by 75% intensity and 4:1 rest. As for the following two weeks, rest period was shortened among repetitions to ensure the training effect and this applied to the rest of training aspects on this basis. The researcher used highly intensive training on which positive rest depends between repetitions and groups with working intensity 85 – 95% which is under the maximum intensity. After that, the researcher conducted post-tests for both groups to determine their cases after applying the empirical variable on the empirical group to make difference between results of pre and post tests resulting from the effect of the empirical positive variable on the empirical group as well as details of the nutritional program of phosphocreatin on a group of experts and specialists with the help of attached instructions with supplement packs which was being given to the sample during 8 weeks in addition to the training course of the trainer for players of the empirical group only.

Post-Tests of the Sample:

Post-tests were conducted on 12/04/2015 at 9:00 am for physiological and skill tests and 6:00 am for physical tests related to the empirical group. As for the control group's tests, they were conducted on 13/05/2015 at the same playground the next day with achieving the same possible testing conditions of pre-tests.

Results of the Study:

Table (3) Significance of differences between pre and post tests for physical, skill and physiological variables for the control group:

Serial	Statistics / Variables	Measuring Unit	Control Group				Z Value	P Value Significance
			Pre-test		Post-test			
			Arithmetic Mean	Class Mean	Arithmetic Mean	Class Mean		
1	30 m dash	Second	7.880	17.6	7.81	16.6	2,032-	*0,042
2	Long jump from stationary	Meter	1.55	10.00	1.487	12.40	2,023-	*0,043
3	Barrow Test	Second	12.80	19.5	12.64	18.70	2,060-	*0,039
4	Air ball control	Number	4.50	6.15	4.51	9.50	2,032-	*0,042
5	Running with the ball	Second	18.00	22.00	18.94	20.65	2,023-	*0,043
6	Long pass with football	Meter	19.00	23.05	18.72	24.75	2,032-	*0,042
7	Pulse rate	s/m	79.60	13.3	69.70	10.7	2.070-	**0.038
8	Contraction blood pressure	ml/mercury	122.00	17.60	120.50	17.40	2.207-	**0.027
9	Extension blood pressure	ml/mercury	83.00	13.60	81.00	13.10	2.032-	**0.042

Table (4): Significance of differences between pre and post tests for physical, skill and physiological variables for the empirical group:

Serial	Statistics / Variables	Measuring Unit	Empirical Group				Z Value	P Value Significance
			Pre-test		Post-test			
			Arithmetic Mean	Class Mean	Arithmetic Mean	Class Mean		
1	30 m dash	Second	7.88	16.75	6.970	14.55	3.059-	**0.002
2	Long jump from stationary	Meter	1.478	1.00	1.63	2.00	2.871-	**0.004
3	Barrow Test	Second	12.64	20.00	10.97	19.00	2.739-	**0.006
4	Air ball control	Number	3.85	6.25	6.27	12.45	2.739-	**0.006
5	Running with the ball	Second	17.56	22.30	15.45	21.00	2.236-	**0.025
6	Long pass with football	Meter	17.99	23.15	19.81	25.25	2.955-	**0.003
7	Pulse rate	s/m	78.7	12.7	75.9	11.60	2.220-	**0.026
8	Contraction blood pressure	ml/mercury	124.00	17.75	121.50	17.25	2.226-	**0.026

9	Extension blood pressure	ml/mercury	83.50	13.95	90.00	13.55	2.214-	**0.027

Table (5): Significance of differences between control and empirical groups in physical, skill and physiological variables

Serial	Statistical Data / Variables	Measuring Unit	Empirical Group		Control Group		Chi² Counted	Significance
			Arithmetic Mean	Class mean	Arithmetic Mean	Class mean		
1	30 m dash	Second	6.970	5.50	7.81	15.50	14.340	0.000
2	Long jump from stationary	Meter	1.63	15.35	1.487	5.65	13.472	0.000
3	Barrow Test	Second	10.97	15.50	12.64	5.50	14.318	0.000
4	Air ball control	Number	6.27	15.50	4.51	5.50	14.593	0.000
5	Running with the ball	Second	15.45	5.50	18.94	15.50	14.593	0.000
6	Long pass with football	Meter	19.81	15.10	18.72	5.90	12.295	0.000
7	Pulse rate	s/m	75.9	15.50	69.70	5.5	14.504	0.000
8	Contraction blood pressure	ml/mercury	121.50	13.10	120.50	7.90	4.049	0.044
9	Extension blood pressure	ml/mercury	90.00	13.20	81.00	7.80	4.275	0.039

3. RESULTS AND DISCUSSION

Tables (4) and (5) show that there are statistically significant differences at significance level 0.05 in all physiological variables for the control and empirical groups for the sake of post-test. The researcher attributes the reason for this due to the use of the qualitative training program that used multiple kinds of physical exercises such as velocity, strength, jumping and weights as well as suitable training intensity and supplements used with the qualitative training method. This training developed members of the empirical group over the empirical group's with different doses of nutritional aids such as criatin which helps in late emergence of tiredness and enhances physical performance to generate the needed energy for muscular work. The study results also asserted that there are statistically significant differences between both groups for the sake of the empirical group. For example, the increase in sugar level in blood such as the increase in cortisol led to improve all physical and skill variables. If this hormone decreases (cortisol), it will lead to imbalance in nutritional representation of carbohydrate substances. In addition, excess in its increase leads to changes in nutritional representation of food components and the transformation of ameno acids into carbohydrate substances with the increase in glycogen and fats. Thus, we can conclude that the empirical group achieved better than the control one in physical, physiological and skill tests due to legalized percentages of phsphocreatin which is rich with energy. Since the time of exercise performance is within the non-aerobic system, it will certainly develop physical ability due to the increase of this compound reserve.

We can also conclude that the empirical group is better than the control one according to the effective (CPK) enzyme in physiological variables. The researcher attributes this due to the phosphocreatin supplement. Since its concentration increases automatically after any maximum effort, this is due to het nature of this enzyme which stimulates and accelerates the reformation of (ATP) once again which was asserted as the CPK remains at its normal limits at break times and increases during exerting any highly intensive effort in muscles and blood as it breaks chemical bonds of the phosphocreatin, carbohydrates and muscular glycogen (Radwan: 1998, 45). The researcher thinks that the nature of football gives players a certain amount of energy on aerobic – phosphate work and due to changing playing cases. The strong and quick moves performed by football players such as jumping, shooting and 15 m fast running depend on the non-aerobic phosphagenic ability represented in the phosphagenic system of maximum muscular contractions with energy (Al Kott: 2002, 17). Moreover, the source of energy in this system is the solution of phosphocreatin stored in muscles through the CPK enzyme as breaking the phosphocreatin to get energy is made by this enzyme which means that the phosphocreatin gives energy after stimulation by this enzyme (Allawi: 1984, 353).

4. CONCLUSIONS

1- The empirical group that used the qualitative training program with supplements achieved a clear advance in physiological, physical and skill aspects understudy.
2- The qualitative training program used by the researcher was suitable in terms of using exercises such as velocity, strength, jumping and weights suitable for the study.
3- The highly intensive training is more suitable with the used supplements.
4- Development of physical and physiological abilities had an important effect on skill performance level for football players.

5. RECOMMENDATIONS

1- The qualitative training program with supplements can be approved to develop physiological, physical and skill abilities and can be given to junior football teams.
2- Asserting that football trainers should consider training courses and nature of players' nutrition and their physiological conditions.
3- There should be an interest in supplements for players of various sport activities especially in football and benefit from results of this study by football trainers with conducting similar studies that enhance physiological, physical and skill efficiencies of players.

6. REFERENCES

- Anita Penn (2004): "Integrated Nutritional Program for the Athletes", translated by Khalid Al Amery, Dar Al Farouk Press, Cairo, 1st Ed.
- Aziz, H. A. (2007): "The Effect of Maximum Speed Exercises and Phosphocreatin on developing some Biochemical variables and quick individual attack in handball", Unpublished Master Thesis, Faculty of Physical Education, Qadesiya University.
- Salama, B. (1999): "Representation of Biological Energy in Sports", Dar Al Fikr Al Arabi, Cairo.
- Abdelfattah, A. M. (2000): "Biology of Sports & Health of Athletes", Dar Al Fikr Al Arabi, Cairo.
- Abdelfattah, A. M. (2000): "Physiology of Training & Sports", Dar Al Fikr Al Arabi, Cairo.
- Al Emary, M. R. "Practical Clinical Chemistry", Technical Institutes Press, Baghdad.
- Al Nejefy, T. S. (1987): "Life Chemistry", Dar Al Kotob Press, Al Mawsil University.
- Al Kaaby, J. R. (2007): "Physiological & Chemical Principles of Athletic Training", Qatar International Press.
- Hussein, Q. H. (1998): "Athletic Training for Different Ages", Dar Al Fikr Press, Amman, 1st Ed.
- Saleh, A. Z. (2005): "The Effect of using Weights & Ply metric Exercises on Muscular Ability and some Skills for Young Football Players", Unpublished Master Thesis, Faculty of Physical Education, Al Mawsil University.
- Boleveski, S. (2010): "Physical Exercises", Translated by Alaa Eldin Mohamed Elewa, Maher Press, Alexandria, 1st Ed.
- Mahmoudm, G. S. (2008): "Concepts & Training in Football", Zaki Office Press, Baghdad, p. 39.
- Al Zohery, R. K. (2009): "Designing & Building Tests to Measure some Elements of Fitness related to Football Fives Game", Unpublished Master Thesis, Faculty of Physical Education, Al Mawsil University.
- Amir, K. J. (1999): "Physiological Tests & Measurements in Sports", 2nd Ed., Zat Al Salasel Press, Kuwait.
- Hedayat, N. K. (2004): "The Effect of using Different Types of Feedback in Learning some Basic Football Skills", Unpublished Master Thesis, Faculty of Physical Education, Diala University.
- www.iraqaced.org/lib/samia3_htm,2007.
- Robert A. Roberges , Scott O . Roberts : Opcit , P . 256
- http://www.arabcoach.net/articles.php?subaction=showfull&id=12

7. APPENDAGES

Week	Day	Details	Intensity	Repetition	Break within repetition	Groups	Break within groups	notes
First	**Saturday**	Velocity exercises Running (50 m sitting with 5 time repetition x 2 groups, and 95% intensity which cuts a distance in 6 s and break ratio 1 : 7 in one minute within repetitions and 2 – 3 within the two groups						
	Monday	Jumping Strength exercises Hopping (80 m consecutively on right and left legs with 5 time repetition x 2 groups, and 90% intensity and break ratio 1 : 6 in one minute within repetitions and 2 – 3 within the two groups						
	Wednesday	Strength exercises with Weights Training (lifting a weight 40 kg) bending knees and standing 10 times x 5 repetitions x 2 groups with 60% intensity and break ratio 1 : 4 in 45 minutes break within repetitions and 2 – 3 minutes within the two groups						On the moltgum device

THE EFFECT OF ANIMATED IMAGES WITH AND WITHOUT MUSICAL RHYTHMS ON LEARNING FOREHAND AND BACKHAND SHOTS IN TABLE-TENNIS

Twana Wahbi Ghafoor

Dean,s of College Physical Education / University of Halabja
E-mail: twana_wahbi@yahoo.com

Abstract

The study aims to:

1- Identify the effect of animated images with and without musical rhythms between pre and post tests on learning forehand and backhand shooting skills in table-tennis.
2- Identify the differences among groups of the study in post-measurements to determine the best educational method in learning forehand and backhand shooting skills in table-tennis.

The researcher used the empirical method as it is proper to the nature of the study. Sample of the study was chosen purposively from second grade students at School of Physical Education, Halabja University for the academic year 2014 – 2015 (44 students) and they were divided into four equal groups: three empirical groups and one control group. The total numbers of sample are 36 students; each curriculum consisted of 10 units for each group (two units a week). The researcher used slow and loud music with applied exercises of both skills of straight forehand and backhand shots for the second and third groups.

The researcher reached a set of conclusions including:

1- Using animated images with and without musical rhythms had a positive effect on learning forehand and backhand shooting skills in table-tennis.
2- The third empirical group excelled (animated images with loud musical rhythms) over the second empirical group (animated images with slow musical rhythms) and the control group in learning forehand and backhand shooting skills in table-tennis.

KEYWORDS: Musical. Rhythms. Learning. Table-Tennis.

1. INTRODUCTION & PROBLEM OF THE STUDY

Modern media helped learners, researchers and educators in the field of physical education to change and skip old-fashioned means and methods. Dependence on modern scientific means leads to accelerate skill learning. Variability in the use of different education methods helps relieve boredom for students as achieving goals cannot be made in the use of a single or traditional method. Since each method has its positive and negative sides after application, creativity and renewability in designing an educational method achieves a great percentage of goals within the set time of lessons according to characteristic of learners, nature of goals and qualities of skills.

Movement education is one of the sport sciences that lead learners to achieve the best performance within the educational process in many sports including table-tennis. This educational process helps learners get suitable responses and situations as well as the interest in establishing movement's structure through the aid of a lot of main requirements that increase quick learning to achieve the total process and economizing efforts in order to reach the planned goal accurately such as the use of animated images. Animated images help in movement learning process through building movement perception for learners. Through presentations, there may be a positive effect on building and developing movement perception in addition to enhance performance characteristics and quick learning. (Bassam, 2002:156) refers that errors are fixed and showing correctness are always made through images.

Musical rhythm is one of the effective means in learning as it is related to movement sensitivity, so there should be more concern with musical rhythm to get flexible movement and quicker performance of moves and skills. (Ginan, 1993: 19) asserted that working with a rhythm is often made by perceiving the rhythm of movements through hearing and then movement response. The use of animated images with musical rhythms in movement learning and mastering technical aspects play an important and effective role especially in learning skills for beginners which allows them to get rid of errors that may occur during performing the move correctly.

Table-tennis is considered one of the games that are characterized by speed and variability of shots, so a learner should learn, master and apply it well especially in forehand and backhand shots. (Mohamed, 2007: 211) asserts that the importance of shooting accuracy in table-tennis increases more than in other games due to the small size of a table tennis playground, bats and the increase of ball speed that is controlled using fore and back bat faces. Therefore, researchers should search for new means which cope with learning motivation, and the researcher exerted great efforts to use animated images and insert accompanying music rhythms in order to raise learning process.

Accordingly, the idea of the current study is represented in trying to use animated images with musical rhythms and determine its effect on learning forehand and backhand shooting skills in table-tennis in an attempt to find some solutions that may contribute to accelerate and facilitate learning and raise skilled performance level in table-tennis lessons.

Problem of the Study:

Means used in learning process and mastering table-tennis skills including forehand and backhand shooting skills are unchanging nowadays. This leads to make learners feel bored as many of these means became traditional with extremely slow effect on educational development which leads to waste a lot of time and efforts. There are a lot of difficulties from which students suffer in learning forehand and backhand shooting skills in table-tennis as lessons are based on explanation and models and modern means still unused in faculties and departments of physical education. This is inconsistent with development in this game in terms of using it to raise educational process at present in addition to the increase in student numbers which increases burden on teachers and their need to exert more effort to teach both skills. Therefore, the researcher found that it is necessary to conduct this study to identify the effect of the animated images with and without musical rhythms in learning forehand and backhand shooting skills in table-tennis as a means that can be a new addition to these helping means in teaching and developing skills for its effective influence on creating correct movement perception and reaching better level for students.

Goals of the Study:

1- Determine the effect of the animated images with and without musical rhythms in learning forehand and backhand shooting skills in table-tennis.
2- Determine differences among groups of the study in post-measurements to reach the best educational method in learning forehand and backhand shooting skills in table-tennis.

Hypotheses of the Study:

1- There are statistically significant differences between pre and post tests for groups of the study in learning forehand and backhand shooting skills in table-tennis for the sake of post-measurement.
2- There are statistically significant differences in post-test for groups of the study in learning forehand and backhand shooting skills in table-tennis for the sake of third empirical group including animated images with loud musical rhythms.

2. METHODOLOGY

The researcher used the empirical method as it is proper to the nature of the study.

Population & Sample of the Study:

The population of the study was determined purposively (44 students representing A and B sections) and they were divided into four equal groups: three empirical groups and one control group. The total numbers of the main sample are 36 students (81.81% of total sample after eliminating 8 players). Table No. 1 shows groups of the study, educational method and sample members:

Table (1): groups of the study, the used educational method and sample members

Sample No.	Educational Method	Group
9	Animated images (without musical rhythms)	First empirical group
9	Animated images + slow musical rhythms	Second empirical group
9	Animated images + loud musical rhythms	Third empirical group
9	The followed method (verbal explanation + practical model)	Control group
36	Total	

The Used Tests in the Study:

Test of Straight Forehand and Backhand Shooting Skills: (Mohamed, 2007: 323 - 328)

The purpose of this test is to measure the accuracy of straight forehand and backhand shots. The used tools: table, bats, table-tennis ball (25), 1.5 m graded ruler and a ruler to divide the table into five equal parts. Performance: the learner stands at the middle of the table in a ready position for the skill of straight forehand and backhand shots and the trainer stands at the other half of the table and serves balls to the learner who returns it to the specific area with 25 repetitions for each skill. Test Instruction: the middle of the table is divided into five equal parts as in table (1) with dimensions of 27 cm wide, 152.5 cm long and 3 ml line thick. Correct attempts are counted if the ball falls in the limited area. Scoring points: If the learner hits a forehand and backhand straight shot in area (A), he gets 5 points, in area (B) he gets 4 points, in area (C) he gets 3 points, in area (D) he gets 2 points, and in area (E) he gets 1point. Total points are counted from a total of 25 attempts.

Note: the highest mark of the test is 125 marks

From (1) test of straight forehand and backhand shots

Pre-Test:
Pre-test was conducted on the four groups of the study for the straight forehand and backhand shots on Thursday 15/01/2015.

The Main Trial (Educational Curriculum):
Each curriculum consists of 10 units for each group in a period of 5 weeks and two units for a single week for each group which equals 40 units. Period of each group is 90 minutes distributed on the departments as follows:

First: Preparatory Section (15 minutes):

Second: Main Section (70 minutes) distributed as follows: educational activity (10 minutes) including 5 minutes of animated images for straight forehand and 5 minutes for backhand shots for the three empirical groups and the control group with the traditional method (verbal explanation + practical model) without animated images and the applied activity (60 minutes) including: applied exercises of straight forehand and backhand shots with slow and loud music for the second and third groups and with only animated images (without musical rhythms) and for the fourth (control) group using the traditional method.

Third: Final Section (5 minutes)
Educational curricula started implementation on the sample of the study on Monday 18/01/2015 and for each group on Monday and Thursday. Implementation of the program ended on Thursday 19/02/2015.

Post-Test
Post-test was conducted on the four groups of the study for the straight forehand and backhand shots on Monday 23/02/2015 using the same method used in pre-tests.

3. RESULTS AND DISCUSSION

Results of differences in values of straight forehand and backhand shooting skills between pre and post tests for the four groups of the study:

Table 2: Results of differences in values of straight forehand and backhand shooting skills between pre and post tests for the four groups of the study:

Groups \ Statistics		Pre-test		Post-test		Counted T Value	Probability	Significance
		Mean	S.D	Mean	S.D			
1st E. G.	Forehand	51.11	5.30	77.11	7.94	9.61	0.000	Significant
	Backhand	48.22	6.64	71.44	8.20	8.02	0.000	Significant
2nd E. G.	Forehand	52.77	7.96	81.44	4.47	8.65	0.000	Significant
	Backhand	48.55	5.12	76.00	7.48	8.73	0.000	Significant
3rd E. G.	Forehand	51.66	6.12	85.77	4.32	15.72	0.000	Significant
	Backhand	48.33	7.26	79.33	8.64	9.28	0.000	Significant
C. G	Forehand	51.55	6.00	71.44	4.82	6.85	0.000	Significant
	Backhand	48.77	7.46	68.22	5.86	5.93	0.000	Significant

* Probability value is significant if ≤ (0.05)

Table (2) shows that there are significant differences among means of pre and post test marks in straight forehand and backhand shooting skills. The T counted values of the straight forehand shooting skill were 6.85, 15.72, 8.65 and 9.61 consecutively, total probability values were 0.00 which is less than (0.05) significance level. As for counted T values for the straight backhand shooting skill, they were 5.93, 9.28, 8.73 and 8.02 consecutively, total probability values were 0.00 which is less than (0.05) significance level. Accordingly, we can conclude that there are significant differences between pre and post tests for the four groups of the study in learning forehand and backhand shooting skills in table-tennis for the sake of post-test. The researcher found that the reason for that is due to the effectiveness of the four educational programs used in the research, their clear effect on learning both skills and explanation and model presentation and animated images with and without musical rhythms which led students to achieve better results in the post-test.

The researcher attributes the reason for significance of the first group which used animated images in learning forehand and backhand shooting skills is due to animated images that include explanation for stages of technical performance of both skills which led to increase students' concentration on all parts of movement skills which helps them to finish correctly. Joseph refers that: "animated images are among the effective educational means that can be employed in educational programs as they are dynamic and movable means at first place and among the best means used in transferring impressions and experience" (Joseph, 1990: 337). In addition, the researcher also found the reason for that is that animated images help draw students' attention and stimulate them to exert effort and not to feel bored as perception of good information depends on variability of methods of presenting this information to students. Moreover, visual information given to learners through animated images plays a great role in supporting learning. The feedback which is given to learners via animated images gives accurate movement correction. Learning cannot be

effective unless there is a process of prior performance correction and knowing its results. Accordingly, (Abdelaziz, 1995) asserts that: "knowing results is an external feedback or information about the response effect". (Aida: 1999: 101)

In second and third empirical groups using animated images with (slow and loud) musical rhythms, there are significant differences for the sake of post-tests. The researcher found that the reason for that improvement in forehand and backhand shots is due to contribution of the animated images with musical rhythms which led to quick perception and acquisition of learning forehand and backhand shooting skills in addition to improvement of movement performance requirements for learners which was asserted by (Magda 2012: 39), as she found that playing music provides an interesting atmosphere encouraging the target group to positively participate. In addition, (Allen, 2002: 195) found that presenting a live model contributes to a great extent to raise learners' abilities to recognize and understand movement skills. Further, (Mahdy, 2003: 17) from (Sfery & Sadek, 1978) asserts that music plays an important and effective role in the learning process. Variability in using educational means contributes to a great extent in involving more than one sense of learners at the same time as the use of visual and audio means (animated images and musical rhythms) is among the most significant educational means that served this purpose. This agrees with (Wafika, 1997: 193) as she said that "learning methods that utilize more than one sense lead to more effective learning and always more than learning through one sense".

The researcher thinks that animated images accompanied with musical rhythms made learners more concentrated on learning and its speed with the factor of marketing and variability to take learners away from boredom that is negativity reflected on their skilled performance and mental response. This was asserted by (Magda, 2012: 150) as she said that: "music accompanying some parts of an educational unit plays a great role in drawing students' attention and increase their motivation and suspense". It was said by Yaareb from (Dillon, 1952) in his study about the role of music in swimming that groups which learn with music as a background performed better than groups which did not use music and the empirical group was faster than the control group in swimming speed test (Yaareb, 2002: 187).

In the control group using verbal explanation and models, there were significant differences for the sake of post-test which refer that this method has a positive effect in learning forehand and backhand shooting skills as it is consistent with the level of the sample of the study. The teacher presented and explained skills and their performance in front of the students and then students' performance of skills and providing them with feedbacks through correcting errors if happened in addition to suitable number of frequencies. All of this information helped students learn the level of skilled performance and with correct forms. (Manar, 2010: 104) rom (Maysa, 2006) refers that the used method (verbal explanation and practical model) is important as they contributed positively to learning. The researcher found that this method helped learners greatly to understand the educational material as it gave them sufficient opportunities to understand technical aspects of performing the required skill because verbal explanation reaches directly the minds of learners directly if used properly, clearly accurately and briefly reaching to the brain that enables learners to recognize what is needed from them. Thus, the use of verbal explanation and model performance is very necessary to describe how to perform the skill. This agrees with (Aida, 1999: 12) that found the importance of verbal explanation as an audio means through the uttered word during movement and correcting errors by teachers and then learners orally compare what should be done with what has been already done and mentally recognized in order to continue movement consistency and accelerate the educational process.

Results of (F) analysis among the four groups of the study in post-test for straight forehand and backhand shooting skills and analyzing them

Table 3: results of analysis among the four groups of the study in post-test for straight forehand and backhand shooting skills and analyzing them:

Statistics / Skills	Variance Source	Total Squares	Freedom Degrees	Average Squares	(F) Counted Value	Probability	Significance
Straight Forehand Shot	Inter-groups	1013.00	3	337.66	10.79	0.000	Significant
	Intra-group	1000.88	32	31.27			
	Total	2013.88	35				
Straight Backhand Shot	Inter-groups	1859.77	3	216.32	3.72	0.021	Significant
	Intra-group	648.97	32	58.11			
	Total	2508.47	35				

* Probability value is significant if ≤ (0.05)

Table (3) shows that there are significant differences among the four groups in post-test of straight forehand and backhand shooting skills. The F counted values of the straight forehand shooting skill were 10.79 and 3.72, the probability values were 0.000 and 0.021 which is less than (0.05) significance level. Since variance analysis test does not refer that differences were for the sake of any of the four study groups, the researcher resorted to the use of testing the least significant difference (L.S.D) among means of degrees of the four groups.

Results of comparing differences of arithmetic means with the least significant differences (L.S.D) in post-test among the four groups of the study for the straight forehand and backhand shooting skills:

Table (4): Comparing differences of arithmetic means with the least significant differences (L.S.D) in post-test among the four groups of the study for the straight forehand and backhand shooting skills

Skills	Groups	Mean	Difference between means	Probability	Significance
Straight Forehand Shots	2-1	81.44 – 77.11	4.33 –	0.110	Insignificant
	3-1	85.77 – 77.11	8.66 –	0.002	Significant for the sake of 3rd group
	4-1	71.44 – 77.11	5.66	0.039	Significant for the sake of 1st group
	3-2	85.77 – 81.44	4.33 –	0.110	Insignificant
	4-2	71.44 – 81.44	10.00	0.001	Significant for the sake of 2nd group
	4-3	71.44 – 85.77	14.33	0.000	Significant for the sake of 3rd group
Straight Backhand Shots	2-1	76.00 – 71.44	4.56 –	0.214	Insignificant
	3-1	79.33 – 71.44	7.88 –	0.036	Significant for the sake of 3rd group
	4-1	68.22 – 71.44	3.22	0.377	Insignificant
	3-2	79.33 – 76.00	3.33 –	0.368	Insignificant
	4-2	68.22 – 76.00	7.77	0.038	Significant for the sake of 2nd group
	4-3	68.22 – 79.33	11.11	0.004	Significant for the sake of 3rd group

Table (4) shows that the 3rd empirical group which applied animated images with loud musical rhythms excelled over the other groups in the straight forehand and backhand shooting skills of table-tennis followed by the 2nd empirical group which applied animated images with slow musical rhythms and then the 1st empirical group which applied animated image and finally the control group. The researcher found that the reason for the excel of the 3rd empirical group is due to the use of sight and hearing together so it gave the best results which helped in memorizing and remembering in addition to consistency of performance, similarity in both forehand and backhand shooting skills with loud musical rhythms and the adjustment of musical rhythm with movement performance of this group's students as these skills need quick performance and this agrees with Karageorghis' study that showed that music is useful as a result of similarity between rhythm and movements and continuous co-occurrence of music with exercises increases levels of working results among participants in the exercise. Moreover, (Yaareb, 2002: 187) refers that music is useful for athletic performance and loud rhythmic music helps consistent movements and desire of performance. This agrees with (Marwan, 2002: 48) who said that: "hearing sense is one of the very important senses for the blind as it plays a great role in learning movement skills as ears receive sound waves to transmit them, in turn, to the brain's movement organs which in turn translate these sound waves to connect them together and show movement perception. The researcher thinks that animated images with loud musical beats played an effective role in conveying the educational material to learners' minds and contributed to clarify and understand the movement duty. This led to recognize both straight forehand and backhand shooting skills and clearly acquire them, so learning was good and quick. This also agrees with (Murtada et al, 2013: 23) as he thinks that rhythms in exercises is an important and effective factor in applying straight forehand and backhand shooting skills. Moreover, (Nagah & Mazen, 2010: 191 – 192) assert that musical rhythms help enhance learner's movement balance as skills stay inside the brain to enable learners to perform movement at anytime through organizing the relation between extension and contraction of operating muscles using music. Moreover, (Nagah & Akram, 2000: 103, Nagah, 2010: 191 – 192) found that musical rhythm is a useful method in learning motor rhythm and developing it in sport games. The researcher also attributes this excellence to present suitable methods to learners that help form a correct picture of both skills which agrees with (Ahlam, 2009: 102) who said that recognize motor sense. In addition, musical rhythms can be used as a stimulus for motor skill and performance. (Karageorghis: Online) adds that music is a helping factor on stimulating players for the match on one hand, and a mitigating factor due to anxiety felt by players on the other, so the use of music as a relaxing technique leads to sporting progress. (Karageorghis: Online).

4. CONCLUSIONS

1- The use of animated images with and without music rhythms had a positive effect on learning forehand and backhand shooting skills in table-tennis.
2- Music with animated images led to accelerate learning forehand and backhand shooting skills in table-tennis.
3- Musical rhythm with skilled performance gave better results than just field training in learning forehand and backhand shooting skills in table-tennis.
4- The third empirical group (animated images with loud musical rhythms) excelled over the second empirical group (animated images with slow musical rhythms) and the control group in learning forehand and backhand shooting skills in table-tennis.

5. RECOMMENDATIONS

1- It is necessary to learn the use of animated images during learning forehand and backhand shooting skills in table-tennis.
2- It is necessary to involve music among educational units for students in order to reach quick learning and time investment.
3- It is necessary to use animated images with loud musical rhythms with students in learning forehand and backhand shooting skills in table-tennis.

4- It is recommended to conduct similar researches using animated images with musical rhythms in learning other offensive and defensive skills in table-tennis and with various age categories. Students should know their effect on them and on other sport games.

6. REFERENCES

1- Hassan, A. T. (2009): "The Effect of Aerobic Exercises with Music using Balls in Developing Motor Rhythm and sensitive-motor perception for the Technological University's Female Students", Journal of Contemporary Sport, Vol. 8, Issue. 11.
2- Farag, A. W. (2002): "Games for the Young and the Old", 2nd Ed. Alexandria, Monshaat Al Maaref.
3- Mohamed, A. B. (2002): "The Effect of using some Educational Methods in Learning the Accuracy of Stabbing in Fencing for Female Students", Journal of Physical Education, Baghdad University, Faculty of Physical Education, Vol. 11th, Issue. 4.
4- Mohamed, S. G. (1993): "The Effect of Rhythm Adjustment on Quickness of Completing some Consistency Systems in Breast Swimming", PhD Thesis, Baghdad University, Faculty of Physical Education.
5- Zaghir, R. M. (2002): "The Relation of some Indications of Aerobic and Non-Aerobic Ability with Accuracy of Performing Basic Common Skills in Bat Games", Master Thesis, Babyon University, Faculty of Physical Education.
6- Al Bayati, A. A. H. (1999): "The Effect of Using Some Helping Means in Learning some Motor Skills in Technical Gymnastics for Women", PhD Thesis, Baghdad University, Faculty of Physical Education.
7- Kambash, M. H. (2012): "Education Techniques & Technologies in Teaching Methods", Diala, Central Press.
8- Ahmed, M. K. A. (2010): "The Effect of an Educational Program using Animated Images in Learning Swimming for beginners", PhD Thesis, Zagazig University, Faculty of Physical Education for Girls.
9- Abdallah, M. A. (2007): "Scientific Principles in Table-Tennis & Measuring Methods", Zagazig, Ayat Press & Computer Center.
10- Mansoury, M. A. L. et al. (2013) : "Table-Tennis: Technical, Mechanical and Training Principles", 1st Ed, Cairo, Dar Al Fikr Al Arabi.
11- Ibrahim, M. A. (2002): "Physical Education for Visual Disability", 1st Ed., Amman, Dar Al Thaqafa Press & Al Dar Al El Meya Press.
12- Alawneh, M. N. (2000): "The Effect of Learning Musical Education on Problem Solving Ability for Students of Higher Basic Stage at Nablus Governorate", Master Thesis, Al Nagah National University, Faculty of Higher Studies.
13- Shalash, N. M & Sobhy, A. M. (2000): "Movement Learning", 2nd Ed., Al Mawsil, Dar Al Kotob Press.
14- Shalash, N. M & Sobhy, A. M. (2010): "Movement Learning Principles", 2nd Ed., Al Najaf, Dar Al Diaa Press.
15- Salem, W. M. (1997): "Water Sports: Goals, Teaching Methods, Training Basics and Evaluation Methods", 1st Ed., Alexandria, Monshaat Al Maaref.
16- Khayoun, Yaareb. (2002): "Motor Learning between Principle & Application", 1st Ed., Baghdad, Al Sakhra Press.
17- Joseph R.Dominick; The Dynamics of Mass communication: 3rd ed, Mcgraw - Hill publishing company, USA. 1990.
18- Karagearghis; Accredited Sport and Exercise Psychologist, Brunel University, UK, 1996, Online.

THE EFFECT OF PEDAGOGICAL TRAINING IN PHYSICAL EDUCATION ON FEELING TIC COMPETENCE

Ayman Guemri [1,2] , Tarak Jbali[3] , Morad Bahloul[4]

[1] Study group of développent and the social environment. - Tunisia.

[2]Institute of Sport and Physical Education of Sfax – Tunisia

[3]National center of science medecines of sport – Tunisia

[4]Higher Institute of Business Administration Sfax– Tunisia

E-mail: ayman.guemri@yahoo.fr

Abstract

The use of information technology and communication (T.I.C) is all the more essential in the training of teachers in different subjects (Pasquier et al 2008), especially pedagogical training in physical education. According of Karsenti (2002) integration of TIC in pedagogical training in physical education is a considerable advantage. This kind of technologie belongs the repository of professional skills as compétence transversale affecting specially, the act of teaching. This aim of this study is to search the effect of pedagogical training in physical education on feeling TIC competence. The French version scale of Perrault (2010) was used to calculate these effects. Our sample consists of 234 training teachers of higher institute of sports and physical education in Sfax, who voluntarily participated in this study after a 8 month internship in different schools of the city of Sfax. The results showed a non-significant effect at $p < 0.05$ internship on the feeling of TIC competence. This can be explained by the specificity of the discipline of physical education and sport which has always struggled to find its identity in the school system compared to other disciplines of intellectual rather than physical (Perlebas, 2009). But the result does not agree with the studies of **Uwamariya (2005); Matousi (2008).**

KEYWORDS: Sense of competence. Pedagogical training. Cross competence.

1. INTRODUCTION & PROBLEM OF THE STUDY

Currently, in the world, the number of Internet users is increased from 15 million in 1996 to about 700 million in 2006. The excessive use of various types of TIC in society and among adults, students... . Yet there are TIC in the training of future teachers. The Tunisia is among the countries that promotes the integration of TIC in these future teaching (Mattousi, 2008) training programs. Indeed, more than 86 teachers have received this training, among them, 60 use these means in the preparation of their courses (TAP, 2015). But there are difficulties (TIC) integration in Tunisian teaching, especially in physical Education and sports (ibid.). Further efforts for the spread of TIC in all disciplines and especially the physical education and sports (Matousi, 2008). The objective of our research is to look for the effect of student teaching on the sense of competence in ICT literacy among future teachers of EPS in the region of Sfax (Tunisia).

2. METHODOLOGY

Hypothesis: the educational course of EPS influence the sense of competence in TIC literacy.

Population: Our population is rhyming 234 trainee teachers (95 girls and 139 boys) of the higher Institute of sport and physical education of Sfax. According to the following table:

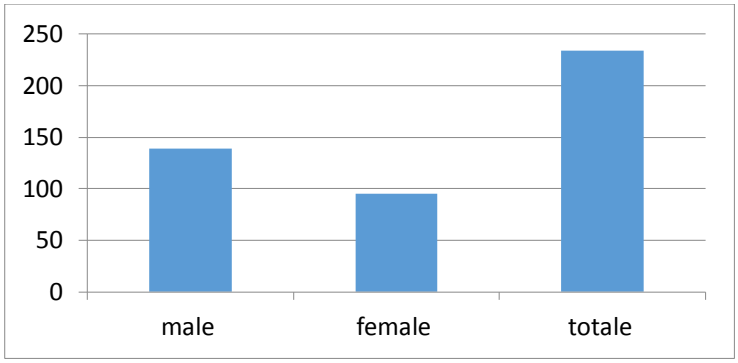

Table n° 1 : This population is participated voluntarily Participation in the survey. The measuring tool is the scale of measurement of the feelings of competence (Perrault et al. 2007; inspired by Gérard, 2003). In this range there are 8 terms of response measuring the 10 skills of the french repository.

In our research we will focus on items (13, 17 and 25) the jurisdiction of mastery of TIC which are respectively:

- Item 13 : Use TIC to network with colleagues ("facebook" social networks, e-mail, forum...).
- Item 17 : Integrating TIC into sessions with students.
- Item 25 : Use TIC to update its knowledge and to train.

The notice of the participants is unauthorised mainly before and after 8 weeks of training.

3. RESULTS

Based on the methodology of Gérard (2003) found the following results:

The results mentioned above there is heterogeneity rate decreased post-

Compétence	Period	The average	standard deviation	The homogeneity
control the competence of TIC	Pre-internship	3,93	2,11	53,81 %
control the competence of TIC	After the internship	5,15	2,34	46,10 %

The results mentioned above there is that the rate of heterogeneity decreased after the internship (46.10%) compared to the levels of departure (53.81%). so there is a level fortfaible before the internship that is greater than 15 .It explains that the student teaching of EPS has did not reduce the gap that existed at the beginning of the internship, which explains that learning had effect of 'equity', in other words, differences in levels skills among trainee teachers of EPS are not reduced and subsequently the student teaching of EPS has therefore not participated in a larger «sharing' skills».

Compétence	The learning effect
control the competence of TIC	30,93%

According the results yet we notice that there is a positive learning effect on the sense of self efficiency with a relative gain of 30,93%. This indicates that trainee teachers of EPS believe have actually improved during the teaching course of EPS.

Note a slight improvement in the competence of the mastery of TIC. This results is manifested by a rate 30: a significant heterogeneity between the responses of participants. In addition there is an average relative gain 40: participants do not believe have really progressed in their mastery of TIC.

4. DISCUSSION

The results of our research shows that the educational course of EPS had not participated in development of TIC literacy skills. This is consistent with the results of Villeneuve (2012) which shows as the pedagogical course does not affect the jurisdiction of communicztion in General and information technology

And does not accord with Uwamariya (2005); Manohar (2008). Refered to Amin Mehdi (2011): the results of investigation showed a malfunction of the dissemination strategy of ICT in University Geography in Tunisia. On the other hand, French experience in educational technology is very well advanced in the context of the widespread use of TIC in teaching of geography in the country. I proposeTo generalize the found results, this study must be carried out by expanding on all regions of the Tunisia and taking into account socio-economic, cultural and social differences of each region (ISSEP Ksar Saïd, ISSEP Kef, Gafsa ISSEP)

5. REFERENCES

- Gerard (2006). Évaluer l'efficacité pédagogique d'une formation ou d'un cours à l'aide d'un outil d'autoévaluation. 19ème colloque international ADMEE-Europe (2006).
- KARSENTI, T., et al (2007). La formation des maîtres et la manifestation de la compétence professionnelle à intégrer les (TIC) aux fins de préparation et de pilotage d'activités d'enseignement-apprentissage, de gestion de l'enseignement et de développement professionnel. Rapport détaillé de recherche. Montréal: CRIFPE, Université de Montréal.
- Mattoussi (2008). Attitudes des enseignants face a l'integration des tic. cas de l'enseignement secondaire tunisien - Ticemed 2008 Tunisie .
- Parlebas. (2009). *congrée internationales « la réalité de l'éducation physique : une éducation motrice ou sportive ? quelle tendance ? le 28, 29 et 30 avril 2009, Monastir-Tunisie*.

- UWAMARIYA, A. et MUKAMURERA, J. (2005). Le concept de « développement professionnel » en enseignement : approches théoriques. *Revue des sciences de l'éducation, 31(1), 133-155*
- Villeneuve(2012) .Les futurs enseignants du Québec sont-ils technocompétents? Une analyse de la compétence professionnelle à intégrer les TIC. 2012 - Revue internationale des technologies en pédagogie universitaire, 9(1-2).

6. ANNEXES

Competences	Items
Competence 1 :	(4) Enter the value of the Tunisian Republic in his professional practice (fight against discrimination, equal opportunities... …)
	6) Act on a daily basis in its class in compliance with the Regulation (rights, duties of officials, official texts).
	12: Ensure a framework guaranteeing the safety, security and respect for all students (integrities physical and moral of the students, sanction, authority, justice...)
Competence 2 :	(7) Be careful to the quality of the language among students.
	10) Integrate in its practices 107(a) of the mastery of oral and written language activities by students.
	(11) Being exemplary in its use of language.
Competence 3 :	(1) control the disciplinary knowledge necessary to teach
	(2) identify links between the disciplines to contribute to their articulation
Competence 4 :	(15) analyze the observed performance and determine the causes of errors
	(16) Teaching with reference to the objectives and content of formal programs of EPS.
	20) choose pedagogic and didactic means (group work, media,...) adapted to the learning objectives
	(22) adapt the conduct of the meeting on the basis of the effective work of the students
	(24) build learning situations based on skills to provide skills to students
Competence 5 :	(18) organize situations learning developing participation and cooperation among students
	19) create a climate of confidence (attitude, respect, rules, management of conflicts...) in the class supported learning
	(26) choose teaching situations that involve students in learning
Competence 6 :	(27) differentiate his practice according to the needs of students
	(30) develop with colleagues from projects in school or institution
	(33) To ensure monitoring etou orientation of students in collaboration aves relevant institutional partners (services orientation, medical services, protection of children...)
Competence 7 :	(13) build a progression of learning
	(21) to evaluate the skills of the common-base (the common base of knowledge and skills this what all students should know and master at the end of compulsory schooling)
	23) design at the different times of learning assessment to make account of student assessment
Competence 8 :	(14) use tic (information and communication technology) for networking with colleagues ("facebook" social networks, e-mail, forum...)
	(17) integrate ICT ((technologie d'information et de communication) in sessions with students)
	(25) use ICT (information and communication technology) to update his knowledge and develop
Competence 9 :	(28) Build relationships with external partners (sporting, artistic or cultural projects, relations with the professional world...)
	(29) develop with colleagues from projects in school or institution
	(31) be able integrating students with special needs or disabilities
	(32) dialogue with parents or families on his teaching and on the monitoring of students
Competence 10 :	(3) Identify and appeal to those who can provide help and support in exercise of the profession.
	(5) Take into account in his teaching the contributions of school and teaching research.
	(8) Analyze its business practices.
	(9) Formulating its vocational training needs.

THE EFFECT OF RECURRING TRAINING IN THE PERFORMANCE PHYSICAL AND SKILL AT VOLLEYBALL PLAYERS

Labeeb Zouyan Mosiseek [a] **Nabhan Hamed Ahmeed** [b]

Collage of physical Education/ Anbar University

[a] E-mail: aa77mm79@yahoo.com
[b] E-mail: nabhanhamed56@yahoo.com

Abstract

Sport training, according to the recurring training, is considered one of the important fundamentals that all rapid sports depend. Volleyball is one of these important sports. Raising up the level of skills requires major training effort that can be known through the physical and functional competence. Volleyball depends fully on the system of the anaerobic energy Through at Recurring training due to the nature of this sport that requires quick response for the players' limbs so as to face some sudden difficult balls. That system does not need oxygen foe a very short period of time. The physiological variables give a general assessment of the efficiency and capacity of the muscles to work in the absence of oxygen. This requires coaches and players to be aware of the functions of the various parts of the body. Thus, they determine the components of training load to improve the level of sports. Areas of Research 20 players was divided into two groups the first experimental and the second control group. Conclusions it The recurring training, lead to a positive change in the proportion of the rapid interaction activity in muscle and lead to raising up the level of the kinetic response. Codifying the elements of training with the high interval training style has a significance to improve the physical and physiological competence. Special exercises used in the training curriculum effectively contributed in improving the performance for Physical performance and skill of volleyball player.

KEYWORDS: Ballistic, Explosive, Strength, Shooting, Handball.

1. INTRODUCTION & PROBLEM OF THE STUDY

Volleyball, one of the events that given collective widespread attention by those managing sports. As characterized by this game from other games with the basic skills of offensive and defensive, which are linked together while playing, and whatever team master of attack is bound to be as much as of defense to receive and recover balls and pass it to another player to do the attack opposite against the opponent. the fact that volleyball requires speed in performance, they rely on the energy system of anaerobic is very large and the system works strongly high contractility contribute movements and rapid strides when faced with balls " work is muscular high for a period of 20 -45 seconds leads to the consumption of a large amount of the compounds of phosphate in the muscle and that work quickly in order to reconfigure the energy for body. (Scott, 2001, 127).

Importance of this study is through the vital elements and functional in the muscles of the body that have a key role in motor responses, as well as the legalizing sports training. Because of the lack of study on actively volleyball which is linked with the Physical performance and skill side, which depends on speed. Must therefore put physical exercise and skill according to the anaerobic energy system, in order to activity of some muscle cell interaction during the performance of motor responses player in the game, and that are commensurate with Physical performance and skill in order to develop the level of volleyball players.

The research a problem

After informed researcher on some local matches for volleyball in Iraq, and the fact that the researcher learn to play, discerned a weakness in some of the training programs, which is linked to responses kinetics of the players, as well as the lack of interest in exercise anaerobic that have a significant impact on physical performance and skill of through functional efficiency of the muscles of the body. Add to focus the attention of the players on the offensive skills are more of them for defensive skills. So I choose researcher recurring training in accordance with anaerobic system, which has an effect on Physical performance and skill. In order to get the players to the speed of the motor response during the performance, to develop the skills to volleyball

The research aims to identify

Effect of Repetition training in physical performance and skill of Volleyball players.

2. METHODOLOGY

The researcher used the experimental method in a manner equal groups, to suit the data and procedures in the search. The empirical research is characterized by exactly the control variables, and the curriculum is the only one that shows the relationship between cause and effect more precisely (Mohammad, 1999, 104).

The Research Sample:

Consisting of (20) player of clubs Anbar province, volleyball, were divided into two groups, the experimental group (10) players and the control group (10) players. It was to find a synergy between players using law coefficient sprains see Table (1).

Tests used in the Research:

Basic research tools must be adopted by the researcher in order to achieve the results required to achieve the goals of the research (Nuri., Qubaisi., 2004,75) Used an integrated set of research tools and some special services through which to get the data to come up with the final results.

Table 1: Homogeneity of the sample through the coefficient of torsion of the variables age, height, weight and length of

S	Statistical Variables	Unit Measurement	Arithmetic Mean	Standard Deviation	Mediator	Coefficient Sprains	Signify
1	**Age**	Year	18,45	1,37	18	0,98	Moderate
2	**Weight**	Kg	73,56	6,05	75,5	-0,96	Moderate
3	**Length**	Cm	181,35	5,94	182	-0,32	Moderate
4	**Training period**	Year	4.8	1.11	4	0.26	Moderate

Testing the Performance bulwark skill

Objective: To measure the accuracy of skill bulwark.

Gadgets: Volleyball legal, balls (5), colored duct tape to divide the pitch

Performance specifications: divide the front area of the stadium into three regions of equal standing player in the center (2) to perform bulwark against the balls that the trainer beat overwhelming on a table in front of the player and across the network. Each player (3) attempts from each center (2,3,4) to be calculated and the correct class majority (27) degrees and all as Form (1).

Registration: the player takes on the degree of the region that falls out of the ball as in the forms below.2.3.2 Test the speed of the motor response.

Test the speed of the motor response:

Use of the device called the illuminating lamps (Batak) to measure the speed of the motor response. Is a modern Korean-made origin contains (12) lamp and Powered by electricity, see (Form 2).

Tests Defense Skills in Volleyball (Juma M., Khalil I., 2011, P6**)**

The first test: Diving Anterior:

. The goal of the test: Restore the ball from the diving anterior.

. Tools: balls (10), volleyball court legal.

. Performance: Player standing in the center of play (6) at a distance (3 meters) from the circles beside volleyball court (playing center 2 and 4).Radius of the circle (0.5 meters). Coach standing in the other half of the pitch and throwing (5) balls across the network to each department. Player moves the ball to re-dip the front of both (2 & 4), see (Form 3).

. Registration: (3 points) for each attempt and go up the ball between the edges of the top and bottom of the network and (2 points) for each attempt to rise higher than the network and (1 point) if it touched the ball and failed to replay and (zero) when failing to touch the ball, Great class for the test (30 points).

Second Test: Rolling Side:

. The goal of the test: re-balls by rolling sideways.

. Tools: volleyball court legal, (10) balls**.** **. Performance:** The player stands between the two circles side radius (50 cm) in the center of play (2&4) with instruct the player moves toward the ball fired by coach to one circuit to bring it back, Five balls to each circle (Form 4). **. Registration**: (3 points) if the ball went over the level of the upper edge of the network, (2 points) if the rose between edges of the top and bottom of the network, (1 points) if the ball went from the earth without the lower edge of the network and (zero) if he fails the player touching the ball "The maximum score for the test (30 points)".

The Field Procedures

Exploratory experiment

Conducting exploratory experiment by a team of assistance on a sample of (4) players from outside the main sample. The goal is to find out the validity of the tests and devices to understand and realize time to test and measurement.

Pretest: After (7) days from conducting exploratory experience, the staff assistant to the intended application of the tests on the sample at the place and time specified then get the desired results.

Figure (1) Show Testing the performance bulwark skill in Volleyball

The Experience Main

After a pretest, apply special exercises on the sample through training modules that are given by the coach. Are three units in the week and within your stage setup for three months by (36) unit and start at four in the afternoon. And given exercises with the use of some tools sometimes. Be physical training according to the time of the anaerobic energy system and the use of the ball in defensive skills in volleyball own. That's where training modules starting from 85% to 100% of the highest intensity possible for the player according to time. Gradient in pregnancy by changing the number of iterations and aggregates and rest periods.

Figure (2) Illuminating Lamps device to measure the speed of the motor response

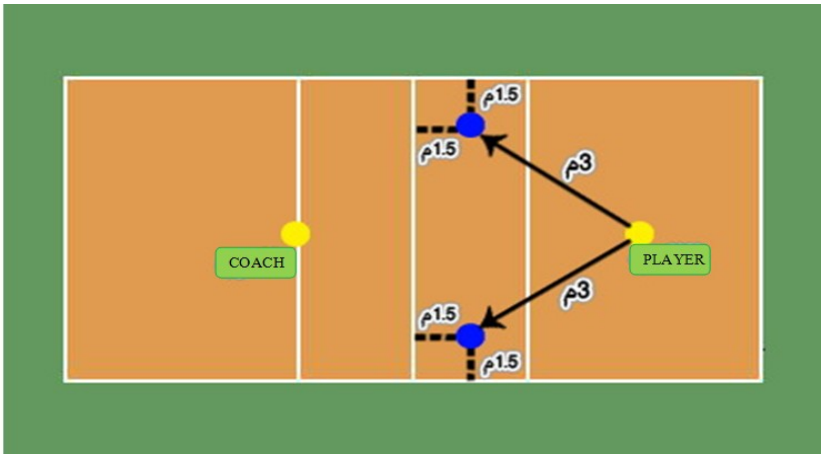

Figure (3) Test Dive Anterior

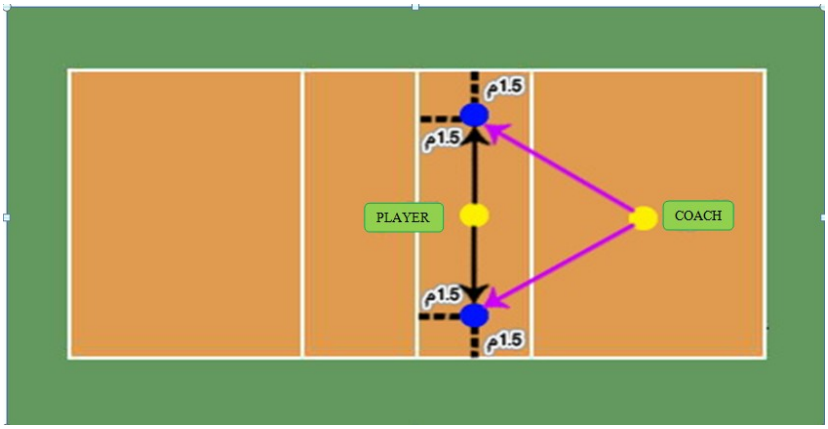

Figure (4) Rolling Side

The posttest : Assistant team has applied the same tests on the sample the tribal. The same conditions of time and place and then get the data for statistical processing.

Statistical methods

The researcher used the statistical means of the following: (Wadih , 1999,101)

1. The arithmetic mean:

2. Standard deviation:

3. Value (T) of the samples associated with:

4. Coefficient sprains and Broker:

3. RESULTS AND DISCUSSION

View and analyze the results of the pretest and posttest in the experimental group

Through the table (2) to test bulwark skill in Volleyball of the experimental group. It turned out that the value of the arithmetic mean of the pretest was (31.74) and the standard deviation was (2.51). As for the post test became the arithmetic mean value (35.14) and standard deviation (0.85) and value (T) was (5.64) which is greater than the tabular value of (2.10). The level of significance (0.05), which indicates the existence of a real difference between the results of the two tests for the benefit of post-test.

The results of tests skills in defense (Diving Anterior). Appeared in the pretest to the arithmetic mean value was (19.7) and the standard deviation was (4.83). In the post test became the arithmetic mean value (23.3) and standard deviation (2.86) and value (T) was (7.26) which is greater than the tabular value of (2.10). The level of significance equal to (0.05). Which indicates the existence of a real difference between the two tests for the benefit of post-test.

The results of tests defensive skills (Rolling Side). Appeared in the pretest to the arithmetic mean value was (17.9) and the standard deviation was (0.99). In the post test became the arithmetic mean value (22.1) and standard deviation (2.80) and value (T) was (10.60) which is greater than the tabular value of (2.10). The level of significance equal to (0.05), which indicates the existence of a real difference between the two tests tribal and posttest for the benefit of post-test.

View and analyze the results of the pretest and posttest in the Control group:

Through the table (3) to test the bulwark skill in Volleyball of the control group. It turned out that the value of the arithmetic mean of the pretest was (31.51) and the standard deviation was (2.19). As for the post test became the arithmetic mean value (32.27) and standard deviation (1.53) and value (T) was (3.14) which is greater than the tabular value of (2.10). The level of significance (0.05), which indicates the existence of a real difference between the results of the two tests for the benefit of post-test.

The test results defensive skills in volleyball (diving anterior). Appeared in the pretest to the arithmetic mean value was (18.8) and the standard deviation was (4.34). In the post test became the arithmetic mean value (18.0) and standard deviation (4.98) and value (T) was (0.95) which is greater than the tabular value of (2.10).The level of significance equal to (0.05). This indicates that there is no real difference between pretest and posttest.

The results of tests defensive skills in volleyball (Rolling Side). Appeared in the pretest to the arithmetic mean value was (17.7) and the standard deviation was (3.62). In the post test became the arithmetic mean value (20.2) and standard deviation (4.26)

and value (T) was (1.28) which is greater than the tabular value of (2.10).The level of significance equal to (0.05). This indicates that there is no real difference between pretest and posttest. Previous results show the existence of the real difference in the search for the two variables (experimental and control) and in favor of the control group, through the development of players at the level of performance of the motor response and defense skills in volleyball, which demonstrates the success of anaerobic exercise that applied to the experimental sample.

Table 2: Shows the arithmetic mean, standard deviation and the value of (T) in the tests before and after the experimental group

S	Statistical Variables	Unit Measurement	Pretest		Posttest		Value (T)	Signify
			SMA	SD	SMA	SD		
1	**Motor response**	**U/L**	31.74	2,51	35.14	0.85	5.64	**Significant**
2	**Bulwark**	**U/L**	8,35	0,99	9,79	0.54	7.18	**Significant**
3	**Diving Anterior**	Points	19,7	4,83	23.3	2.86	7.26	**Significant**
4	**Rolling Side**	Points	17,9	0,99	22.1	2.80	10.60	**Significant**

Table 3: Shows the arithmetic mean, standard deviation and the value of (T) in the pretest and prottest in the Control group

S	Statistical Variables	Unit Measurement	Pretest		Posttest		Value (T)	Signify
			SMA	SD	SMA	SD		
1	**Motor response**	**U/L**	31.51	2.19	32.27	1.53	3.14	**Significant**
2	**Bulwark**	**U/L**	7.83	0.82	9.13	0.62	12.28	**Significant**
3	**Diving Anterior**	Points	18.8	4.34	18.0	4.98	0.95	**Not significant**
4	**Rolling Side**	Points	17.7	3.62	20.2	4.26	1.28	**Not significant**

Tabular value (2.10) and the significance level (0.05)

View and analyze differentials posteriori tests, between the two groups (Experimental and Control)

Table 4 shows the difference in the posttest tests of the two groups, experimental and control, Test bulwark skill in Volleyball the experimental group, it turned out that the arithmetic of the mean value was (35.14) and the standard deviation was (0.85). In the control group the value of the arithmetic mean (32.37) and standard deviation (1.53) and value (T) is equal to (4.75), which is greater than the tabular value of (2.10) and Significance level (0.05). This is indicates the existence of a real difference in the results of the tests between the two groups for the benefit of the experimental.

Tests defense skills (Diving front) of the experimental group, it turned out that the value of the arithmetic mean was (23.3) and standard deviation (2.86) either the control group the value of the arithmetic mean (18.0) and standard deviation (4.98) and value (T) is equal to (2.91), which is greater than the tabular value of (2.10) and Significance level (0.05). This is indicates the existence of a real difference in the results of the tests between the two groups for the benefit of the experimental group.

Tests defense skills in volleyball (rolling side) of the experimental group, it turned out that the value of the arithmetic mean was (22.1) and standard deviation (2.80) either the control group the value of the arithmetic mean (20.2) and standard deviation (4.26) and value (T) is equal to (2.91), which is greater than the tabular value of (2.10) and Significance level (0.05). This is indicates the existence of a real difference in the results of the tests between the two groups for the benefit of the experimental

Table 4: shows the difference in the post tests between the Experimental group and the Control

S	statistical Variables	Unit Measurement	Experimental		Control		Value (T)	Signify
			SMA	SD	SMA	SD		
1	**Motor response**	**U/L**	35.14	0.85	32.37	1.53	4.75	**Significant**
2	**Bulwark**	**U/L**	9.79	0.54	9.13	0.62	2.40	**Significant**
3	**Diving Anterior**	Points	23.3	2.86	18.0	4.98	2.91	**Significant**
4	**Rolling Side**	Points	22.1	2.80	20.9	4.26	2.17	**Significant**

4. DISCUSSION

Through the Table (2) above, in the experimental group and when you display and analyze the results of tests before and after the bulwark skill in Volleyball, there appeared a real difference between the tests and for the post test. The reason for this difference

is due to the use of anaerobic exercise according to the style of scientific training, and it was of great significance in the development of Jump that do have a role in the basis of the speed of the motor response, in order to raise the level of performance of rapid movements in volleyball. Games with high intensity and short time you need to edit the energy quickly in the muscle of the body, (Bahaa:2008,278). And is the direct source of energy that is used in muscle contractility (Mohammed:1984,353). And appears in the high activity of the enzyme in the blood (Vassilis: 2006,295).

It also appeared a real difference between the test (tribal and post-test) in defense skills and bulwark skill of volleyball in the interest of post-test. The reason for this difference is to use skills exercises with anaerobic energy ball that was used, and the performance of the exercises also lead while playing in the games, such as starting, jumping, rolling side and diving. The researcher believes that the proposed anaerobic exercise was comprehensive and has a role to adapt and develop capacity in the performance of the players defense skills.

In the control group, and when you view and analyze the results of tests of enzymes, appeared that there was a slight difference between the tests (tribal and a posteriori) and for

the post-test, and the lack of a real difference to the defense skills tests.

Through Table (4) appeared a real difference in the results of the post tests between the two groups (experimental and control) and in the interest of the experimental group (Brain: 1999,33). This is due to the success of anaerobic exercises that developed by the researcher, and that lead to raising the level of defense skills in volleyball.

5. CONCLUSIONS

1. Recurring training is working to raise the capacity of the player to continue the effort and fatigue resistance.
2. Training according to the anaerobic energy system works in the muscles adapt to the activity of enzymes.
3. According to training the Recurring is working to develop the skill to defend the pitch in volleyball.
4. Anaerobic exercise work to increase the speed of muscle contraction and motor performance during game play.

6. RECOMMENDATIONS

1. Approach can be applied to train the user to different age groups or other games.
2. Trainers and experts on attention training programs within the anaerobic energy.
3. Possibility of using other energy systems in regular training.

7. REFERENCES

- Scott, K, P., Edward, T. h., 2001 Exercise Physiology. 4ed. Mc Grow hill.
- Abul-Ela., Nasreddin, R., 1993. Physiology of fitness, p1, Arab Thought House.
- Bahaa Eddin, I, S., 2008. Biochemical characteristics of sports physiology, c1, Cairo, Arab Thought House.
- Brain, M., 1999. Sport coach–Ply metric, disclaimer. BBC Education, Web guide Sports.
- Juma M., Khalil I., 2011. building and legalizing tests skill to defend the deep. research publication, the Journal of Physical Science and Sports, College of Physical Education, University of Anbar.
- Khawla A. A., 1986. Entrance to the biochemistry, and the Ministry of Higher Education, University of Mosul.
- Mohammed, H, A., 1984. Abou El Ela Abdel Fattah; physiology of sports training, Cairo Arab Thought House.
- Mohammad, H, A., Osama, K, R., 1999. scientific research, physical education and sports psychology, the Arab Thought House, Cairo.
- Nuri, A., Rafe, Q., 2004. Guide researchers to write research in Physical Education: Baghdad.
- Talal, N., 1987. Bbiochemistry Book House for printing and publishing, the University of Mosul.
- Vassilis M., 2006. Exercise Biochemistry. 1st Ed : USA,library of congress cataloging.
- Wadih, Y., Hassan M., 1999. Statistical applications and uses of Computer Research in Physical Education: Mosul, Library of Printing and Publishing.

THE EFFECT OF VIDEO-BASED PERCEPTUAL TRAINING ON THE OBSERVATION CONDITIONS AND THE NUMBER OF FOOTBALL COACH FEEDBACKS

Hamza Baati [a], Mohamed Jarraya[b], Liwa Masmoudi[c], Saber Nouira[d]

[a, c, d] Research Unit (EM2S), High Institute of Sport and Physical Education Sfax-Tunisia;

[b] Research Laboratory "Sports Performance Optimization" National Center of Medicine and Science in Sports (CNMSS) Tunis, Tunisia

Email : baatihamza@yahoo.fr

Abstract

During the training sessions, the football coach is supposed to ensure optimal conditions of observation for players so as to improve and/or correct their performance. He gives his feedbacks that represent information about the difference between the state of an objective and its performance (Schmidt, 1992).

The objective of our work was to analyze the effect of the perceptive training based on video on the conditions of observation on the one hand, and the number of feedbacks given by the football coaches during a mini game on the other hand.

We concluded that the perceptual training based on video would have a beneficial effect on the conditions of observation either for moving (In movement vs. Fixed) or for the adopted point of view (front of the action vs. of profile vs. Back) Our findings also showed that the video-based perceptual training leads to a reduction in the number of feedbacks given by football coaches in a mini game

KEYWORDS: Video-based perceptual training. Conditions of observation. Number of feedbacks

1. INTRODUCTION & PROBLEM OF THE STUDY

Referring to the history of education, namely physical and sport education, we identified a flagrant duality of perception that goes alongside the observé and the environment. In other words, the observer and the environment are closely linked. They create an interactive and cohesive dual necessary to obtain the relevant information about the athlete in order to act well and manage his permanent environment. Gibson (1979) emphasizes the indivisible nature of the relationship Observer-environment, and the link between perceive and act. The famous quote from Gibson (1979):"We must perceive to act, but we must also act to perceive" explains this interdependence between the observer and the environment.

Perception is a dynamic element. It is a very important tool to make progress and to reach perfection in sports. However, the perceptual stagnation before the sports development (timeliness sporting gestures) creates gaps and problems.

In this perspective, the transfer of the improved visual performance systematically generates the enhancement of the sport's performance (Quevedo, Sole, Palmi, Planas, & Saona, 1999). The visual perception is an integral part of the conditions of observation through which coaches can evaluate and judge properly and in a relevant way the sports activities of their players.

In fact, few studies have examined the conditions of observation. They have focused mostly on the individual (Jarraya & Amorim, 2004; Jarraya, Amorim, & Bardy, 2005), rather than the team sports.

Similarly, the activities in the perceptual field give importance to the players, insofar as they improve access and desirable performance, as well as to the coaches despite the importance of perception in general, and the visual in particular in its function.

The conditions of observation are multiple such as. They include placement, displacement, view angle, spatial orientation...

In football, the coach must ensure good conditions of observation during the training session to better correct the players by giving the appropriate feedbacks, which establishes a hinge between the coach and the player.

Without taking into account the conditions of observation, some football coaches tend to give quasi-anticipated feedbacks. It is necessary to find a perfect cohesion between the conditions of observation and the feedbacks to ensure an effective "corrective action" for the players.

In fact, several studies have demonstrated the effectiveness of perceptual video-based training in making decisions (Devos et al. 2009; Helsen, & Starkes, 1999) the trajectory calculation (Jin et al. 2011), the increase of the quiet eyes time (Causer, Holmes, & Williams, 2011).

Recently, Milazzo & Fournier (2015) demonstrated à significant improvement in decision-making performance of karatékas after nine sessions of perceptual video-based training resulting in the decrease in their reaction time and the increase of the relevance of

their decisions. The interest and importance of this work lie in the focus on the field of the observation conditions of the coaches in a team sport with a new perspective and a methodology that is based primarily on perceptual training based on video while using the technique of the visual occlusion that represents the most classical method for studying perceptual processes in sport (Abernethy, 1986).

2. METHODOLOGY

PARTICIPANTS

10 male football coachent (35.5 ± 8.9 years) belonging to Tunisian professional and semi-professional teams, participated in this study. They were divided into two groups of 5 coaches: Experienced coaches with a professional career in the training domain exceeding 10 years (16.2 ± 3.9 years) and less experienced ones with less than 5 years in the training domain (3.2± 1.1 years).

Experimental Procedure:

Every coach carried out two experimental sessions, with and without perceptual training. During the first session, there were coaches in a standardized situation without perceptual training. During the second session we observed coaches after a perceptual training. The perceptual training consists of a viewing session (45 ± 10 min) of the proposed situation. This session consists of two steps:

First step: it consists of raining the awareness of the coaches about the different conditions of observation: observe and discuss the positioning mistakes (face to the action vs. sideways vs. behind) and displacement of the coach (moving vs. stationary).

Second step: it is a perceptual training of a «visual occlusion» type showing footage to our participants. After that, we put the sequence at the pause mode at a well determined action. The coaches are asked to plan the placements and displacements in relation to this action.

Proposed situation: Each coach must make a situation which consists of three variants in a space of 400 square meters with the participation of 12 players

First variant:

4 players against 4 with 4 recoverors who put back (2 per team) placed on the four sides of the square. Each team tries to keep the ball using recoverors to ensure the superiority in terms of number. Duration: 6 minutes.

Second variant:

Again, 4 players against 4 with 2 recoverors for each team placed on both sides of the square. Each team tries to keep the ball in order to put it on the bottom line of the opposing team (stop ball). Duration: 6 minutes

Third variant:

The same situation (4 players against 4 with 2 recoverors for each team) is instructed to work front of the goal. Each team tries to keep the ball to score a goal, by using the recovrers placed on the side lines of the square which can make a cross or pass the ball either back or forth. Duration: 6 minutes

The observation:

The observation of the situation has been effected by two cameras simultaneously. The first (type "Sony HD 800 X") was attached to a tripe at a height of roughly 10 meters in order to take off a wide shot.

The second camera was movable type "Sony DCR-SR42 HDD-" devoted essentially to the recording of the coaches' voice.

Video editing:

We used the pinnacle 12 software to synchronize footage of both fixed and mobile cameras.

STATISTICAL ANALYSIS

Statistical analyses were done using STATISTICA Software (StatSoft, France).The choice of appropriate statistical tests (parametric or non-parametric tests) was done after checking the normality of distributions through the Shapiro-Wilk test. The effect of perceptual training (before vs. after) and displacement (stationary vs. moving) was measured by the t- student. All statistics are considered significant for a probability level less than 5% ($p < 0.05$).

3. RESULTS

Our findings showed that the time of the condition «in movement» is significantly superior to that of the "fixed" condition ($p < 0.01$) after the perceptive training. On the other hand, there was no significant difference between both conditions before the perceptive training.

The findings showed that the time of the condition in front of the action is significantly superior to those of "profile" and «behind the action» ($p < 0.01$) before the perceptive training. Besides, the time of the "back" condition after the perceptive training is significantly lower than that before the training ($p < 0.01$).

Our findings showed that the number of feedbacks given by the trainers in the "fixed" condition is significantly different than issued in the same condition after the perceptive training ($p< 0.01$). However, no difference was observed «in movement "condition. The findings showed that:
The number of feedbacks given by the trainers decreased in both conditions "fixed" ($\Delta\% = 87.3$) and «in movement » ($\Delta\% 12.1$).
Meanwhile, the decrease of the number of feedback given in the " fixed " condition is significantly more important than that " in movement "conditions (87.3 vs.- 12.1 for the " fixed " conditions and in "movement" respectively ; $p< 0.01$).
The number of given feedbacks in the condition “in front of the action” are significantly greater than those given in the conditions "of profile" and "back" before the perceptive training ($p<0.01$).
the number of the given feedbacks in the conditions " in front of the action " and "back" after the perceptive training is significantly lower than that before the perceptive training ($p<0.01$).
The number of feedback given or issued by the trainers decreases in three conditions «in front of the action », « profile» and « back» respectively of 39.3 %, 38 % and 96.9%. Still more, it was noticed that the decrease of the number of feedbacks given in the "back" condition is significantly more important than that in the conditions «of profile» (-96.9 vs. -38; $p<0.5$) and in front of the action (-96.9 vs. - 39.3; $p<0.01$).

4. DISCUSSION

Perception and judgment represent two essential activities in the sports field allowing the trainer to act and to adapt himself in his interactions with its participants.
Indeed, the perceptive training took its sense in the fact that the perception is coming before the action and optimizes the performance.
In this research work we examined, in a first hypothesis the effect of the perceptive training based on video on the observation conditions of the football trainers during a mini game, then we tested it on the number of feedbacks given by the trainers according to their locations, their points of view and their movements.
This test enabled us to demonstrate that the perceptive training based on video has a positive effect on the trainers’ behavior (after watching the video), more exactly the time of the «in movement» condition was significantly upper than "fixed" after the perceptive training.
The findings confirm the works showing the positive effects of the perceptive training with video.
In fact, Causer et al. (2011) showed that the rifle shooters at the international level increased the period of QE (the quiet eye) through a perceptive training with video which influenced positively their precision in shooting.
The findings also confirm those of Catteeuw, Gilis, Jaspers, Wagemans, and Helsen, (2010) who showed the positive effect of the perceptive training with video on the decision-making of offside (better perceive the position of the forwards compared with defenders) for assistant referees of the football talent association.
It was also found that the perceptive training with video had a positive effect on the alteration of the football trainers’ perceptions.
Indeed, the choice of the angle of view was successful because the trainers were facing the action in most times and this behavior was after a perceptive training. Furthermore, the time which was dedicated for the other angles of view (of profile; back) was decreased in a remarkable way after the training.
These observations come to support those demonstrated by the study of Jin et al. (2010) that the perceptive training with video improves the visual perception and the decision-making of badminton players. Other results reported by Catteew et al. (2010) showed the role of the perceptive training in the reduction of the error number in the decision-making of offside at high-profile assistant referees. Recently, Milazzo and Fournier (2015) demonstrated a significant improvement in the decision-making performances of the karatekas following nine sessions of perceptive training with video, translating by the decrease of their response times and the increase of the relevance of their decisions.
It would be safe to conclude that the first hypothesis is empirically verified. In other words, the perceptive training with video has a positive effect on the football trainers’ observation conditions in a mini game.
We also tested in the second hypothesis the effect of the perceptive training with video on the number of feedbacks given by the football trainers according to their movement (fixed vs. in movement) and their points of view (in front of the action vs profile vs. behind the action).
As regards the movement factor, the results showed that the number of feedbacks decreased in both conditions "fixed" and «in movement at all the trainers after the perceptive training with video.
It is interesting to indicate that the decrease of feedbacks’ number in the condition "fixed" is significantly more important than the condition “in movement». Indeed, the decrease of the number of feedbacks is due to the mobility of the trainers after the perceptive training. In other words, the trainers’ feedbacks became more rigorous and more precise thanks to the richness of the information engendered by the clarity of the play actions after the perceptive training. These observations confirm the findings of Gibson (1979) who showed that the perception and the taking of the relevant information (which are contained in the spatio-temporal structure of the brilliant energy) are caused by the observer movement.
The precision of the interventions of the trainers becomes a reality. There is a decrease of the frequency of feedbacks per minute in all the conditions and more particularly in the conditions «in movement» and "fixed" after the perceptive training.
Concerning the condition «in movement », the frequency was reached (3.77) before the perceptive training vs. (3.31) feedbacks per minute after the perceptive training, in spite of the increase of the time of this condition.

As regards the "fixed" condition the decrease of the frequency was more marked because the time of this was also decreased. We recorded averages of (2.67) before the training, against (0.33) feedbacks per minute after the training.
However, our observations support those found by Pièron and Demelle (1981), which showed that the teachers can reach four interventions by minutes. These frequencies can seem higher when the latter practice their preferences' specialty.
Concerning the point of view's factor, our results showed that the number of feedback was decreased in three conditions (in front of the action vs. profile vs. behind the action).
Indeed, the decrease of the number of feedbacks can be explained by the improvement of the observation conditions particularly the condition in front of the action. In fact, the trainers were in front of the action most of the playtime after the perceptive training.
The improvement of this condition allowed the trainers to see suitably the actions and consequently they became more precise on their interventions in term of feedback.
Our observation finds support in that of Rieser (1989), Young (1989), May and Wartenberg (1995) who showed that the change of point of view facilitates the update of the spatial information.
Other findings reported by Jarraya et al. (2005) showed that the change of point of view affects the memorization and the perception of a complex biological movement.
This leads us to confirm the effect of the change of point of view on the perception of sports judgment generally and on the number of feedback issued by the football trainers in particular.
On the other hand, our findings showed that the improvement of the point of view causes a decrease of the number of feedbacks given by the trainers of soccer. This is approved by the decrease of the frequency of feedback per minute in all the conditions and more particularly in the condition in front of the action (5.31 before the perceptive training vs. 3.22 feedbacks per minute after the perceptive training).
Once more, our findings confirm those found by Fishman and Tobey (1978); Pièron and Demelle (1981, 1983); Brunelle, Spallanzani, Lord, Petiot (1983), who showed that the interventions in feedback vary from one intervention per minute to four or even five. So, we can confirm our second hypothesis: the beneficial effect of the perceptive training with video on the reduction of the feedback number given by the football trainers in a mini game.

5. CONCLUSIONS

In this research work we studied the effect of the perceptive training with video on the conditions of observation and the number of feedbacks given by the football trainers in a mini game.
We were able to conclude that the perceptive training with video could have a beneficial effect on the conditions of observation whatsoever for (movement) (in movement vs. fixed) or for the point of view (in front of the action vs. of profile vs. behind). In fact, the trainers were more dynamic after the perceptive training and it has proved by the increase of the condition's time " in movement " and the decrease of the "fixed" condition's time.
The findings also showed that the choice of the angle of view improved after the perceptive training, because the time of the condition «in front of the action» was further more increased.
On the other hand we recorded a remarkable decrease in the time of the other conditions «of profile and behind the action».
Also we noticed that the number of feedbacks given by the trainers was decreased in all the conditions after the perceptive training. This decrease was more interesting in the conditions «in movement» concerning the movement factor and «in front of the action » concerning the angle of view factor, in spite of their improvements in terms of time.

6. REFERENCES

1. Abernethy, B. (1986). Anticipation in sport: A review. Physical education review, 10 (1), 5-16.
2. Brunelle, J., Spallanzani, C., Lord, M., & Petiot, B. (1983). Analyse du climat pédagogique par le biais des réactions des éducateurs physiques en situation d'enseignement. Revue de l'ACSEPR, 15-18.
3. Catteeuw, P., Gilis, B., Jaspers, A., Wagemans, J., & Helsen, W. (2010). Training of Perceptual-Cognitive Skills in Offside Decision Making. Journal of Sport and Exercise Psychology, 32 (6), 845.
4. Causer, J., Holmes, P.S., & Williams, A.M. (2011). Quiet Eye Training in a Visuomotor Control Task. Medcine and Science in and Sports Exercise, 43 (6), 1042–1049
5. Devos, H., Akinwuntan, A.E., Nieuwboer, A., Tant M., Truijen, S., De Wit, L., & Weerdt, W. (2009). Comparison of the effect of two driving retraining programmes on on-road performance after stroke. Neurorehabilitation and Neural Repair, 23 (7), 699–705
6. Fishman, S., & Tobey C. (1978). Augmented feed-back. In: W. Anderson et G. Barrette (Comps), What's going on in gym: Descriptive Studies of Physical Education Classes. Motor Skills: Theory into Practice, Monograph 1 (1), 25-38
7. Gibson, J. J. (2013). The ecological approach to visual perception. Psychology Press.
8. Helsen, W.F., Starkes, J.L. (1999). A multidimensional approach to skilled perception and performance in sport. Applied Cognitive Psychology, 13 (1), 1-27.
9. Jarraya M, Amorim MA. Perception of causality in the boxing arena. Fechner Day 2004, In Actes du XXth Annual Meeting of the International Society for Psychophysics, Coimbra, 2004.
10. Jarraya, M., Amorim, M.A., & Bardy, B.G. (2005). Optical flow and viewpoint change modulate the perception and memorization of biological motion. Perception & psychophysics, 67 (6), 951-961.

11. Jin, H., XU, G., Zhang, J.X., Gao, H., Ye, Z., Wang, P., & Lin, C.D. (2011). Event-related potential effects of superior action anticipation in professional badminton players. Neuroscience letters, 492 (3), 139-144.
12. May, M. & Wartenberg, F. (1995). Rotationen und Translationen in Umräumen: Modelle und Experimente. *Kognitions-wissenschaft*, 4. 142-153.
13. Milazzo, N., & Fournier, J. (2015). Effect of individual implicit video-based perceptual training program on high-skilled karatekas' decision making. Movement & Sport Sciences-Science & Motricité, (88), 13-19.
14. Piéron M, & Piron J. (1981). Recherche de critères d'efficacité de l'enseignement d'habiletés motrices. Sport, 24,144-161.
15. Piéron, M., & Delmelle, R. (1983). Le retour d'information dans l'enseignement des activités physiques. Feedback in the teaching of physical activities. Motricité humaine, 1 (1), 12-17.
16. Quevedo, L.L., Sole, J., Palmi, J., Planas, T., & Saona, C. (1999). Experimental study of visual training effects in shooting iniciation. Clinical and Experimental Optometry, Vol. 82 (1) 23-28.
17. Rieser, J.J. (1989). Access to Knowledge of Spatial Structure at Novel Points of Observation. Journal of Experimental Psychology: Learning, Memory, and Cognition, 15 (6), 1157.
18. Schmidt, R. (1992) Awareness and second language acquisition. Annual review of applied linguistics, 13, 206-226.
19. Young, M. F. (1989). Cognitive repositioning: A constraint on access to spatial knowledge.

Table 1: Mean ± SD, absolute differences (Δ), relative differences (Δ %) and extreme values of displacement time and number of feedback, before and after perceptual training according to the observation conditions (Fixed *vs*. In mouvement)

Parameters	displacement	Before	After	Δ (Δ%)
Time (s)	Fixed	367 ± 244	43 ± 38**	-323 (-88.2%)
	In movement	713 ± 244	1037 ± 38**	323 (45.3%) ##
Number of feedback	Fixed	48 ± 29	6 ± 7**	-42 (-87.3%)
	In movement	68 ± 34	60 ± 19	-8 (-12.1%) ##

**: Significantly different from before training de at p < 0. 01

##: Significantly different from fixed position at p < 0.01

Table 2: Mean ± SD, absolute differences (Δ), relative differences (Δ %) and extreme values of placement time and number of feedback, before and after perceptual training according to the observation conditions (front of the action *vs*. of profile *vs*. back)

Parameters	angle of view	Before	After	Δ (Δ%)
Time (s)	front of the action	970 ± 83	1019 ± 40	49 (5.1%)
	of profile	92 ± 82 ##	61 ± 39	-32 (-34.2%) ##
	back	18 ± 11### ++	0 ± 1**	-18 (-98.9%) ## ++
Number of feedback	front of the action	96 ± 34	58 ± 16**	-38 (-39.3%)
	of profile	16 ± 12	10 ± 8	-6 (-38%)
	back	3 ± 1	0 ± 0	-3 (-96.9%)

**: Significantly different from before training de at p < 0.01

##: Significantly different from de front of the action at p < 0.01; ###: p < 0.001

++: Significantly different from back at p < 0. 01

THE IMPACT OF MOTOR EXPECTANCE EXERCISES IN DEVELOPING THE SPEED OF MOTOR RESPONSE AND THE ACCURACY OF THE PERFORMANCE OF COURT DEFENSE SKILL IN VOLLEYBALL FOR JUNIORS

Thaer Rasheed Hassan
Diyala University\ College of physical education and sports sciences
Email: thaermutar@yahoo.com

Abstract

Nowadays the world continuously witnesses a great development that can not to be included by the learning systems and method which might need the existence of strategies that enable mastering the skills of sports games.

The importance of this study is to draw the attention of the people who are responsible for training planning, to the significance motor expectance and to know its impact on developing the speed of motor response and the accuracy of the performance of court defense skill in volleyball for the juniors in a scientific attempt to link the academic study of the motor expectance domain with the specialized applied domain.

The researcher used the experimental method of two equal group's design, which are the controlling and the experimental groups. The sample included (20) players representing the training center of the branch federation of volleyball aging from (15 to 17) years old for the year 2014. Through the statistical treatments the researcher concluded the following:

1- The exercises of motor expectance have great impact on the speed of motor response and on the court defense in volleyball for juniors of the experimental group.
2- The exercises of motor expectance have great impact on the acceptance and stimulus of the players in the training sessions.
3- The priority of the experimental group, in developing the accuracy of the current searched skills in volleyball, over the controlling group.
4- The accuracy of court defense was not in a good level because of not varying the l exercises

KEYWORDS: Exercises of motor expectance. Developing. Response speed. Accuracy. Juniors.

1. INTRODUCTION & PROBLEM OF THE STUDY

The scientific development characterizes all aspects of life in this era, thus many countries to offer all their capacities for the scientific research, experiment and assessment in order to catch up with the great development.

Sports activities are considered of the most important domains because they contribute in developing the societies and improving if the sportsmen are well prepared and improved in the level of their technical performance.

Volleyball is one of the sport games which depend on the speed performance for its special rhythms and for the variety of its skills, plans and its link with the various methods of playing thus this cannot be done only if the skills are mastered very well with attention to applying the law items and the game requirements during learning and training on the skills and plans, which should be done in high level of accuracy, high response speed and correct expectance.

Motor expectance is one of the most important of the success requirements in practicing sport activities .its significance increases in the group sport games, while performing the complex movements, especially in implementing the defensive and attacking plans. Right expectance of the movement is to be considered one of the most important factors which enables the player to treat with the movement and knowing its direction and its motor way, in addition to the form of the body and the situation of the competitor , because the response is built on what the player expect of the movements and his ability to assess ,guess, the sudden change of the speed, distance , high , time or direction ; in addition to the experience , skill and confidence of the player in performing his movements . The player cannot move towards the ball in the absence of speed movement. Correct expectance cannot be done in the absence of speed performance. The good speed means good expectance.

Thus, the importance of the study is to draw the attention of those who are responsible for training, the process of planning the training, to the importance of motor expectance and recognizing its impact on performing the skill of court defense for the juniors in volleyball in a scientific attempt to link the academic study of the motor expectance domain with the specialized applied domain.

Through the work of the researcher, as academic teacher and coach of volleyball, he finds obvious weakness in the correct skillful performance of court defense skill of the players, while directly treating with the competitor and the motor situation requires

receiving or defending the ball by the player. In addition to the weakness in correct skillful performance during the sudden change in the playing situations.

The researcher assumes that this study is a scientific attempt to treat this weakness in the training programs in volleyball through setting exercises in the motor expectance and knowing their impact on accuracy of the performance of court defense skill for juniors in volleyball.

The study aims at:

1- Setting motor expectance exercises to develop the speed of motor response and the accuracy of the performance of court defense skill in volleyball for juniors.

2- Knowing the impact of motor expectance exercises in developing the speed of motor response and the accuracy of the performance of court defense skill in volleyball for juniors.

2. METHODOLOGY

The researcher used the experimental method of two groups design, which are the controlling and the experimental groups with pretests and posttests; for its suitability to the nature of the problem that needs to be resolved

The community and the sample of the study:

The community of the study is represented by the volleyball juniors in Diyala Governorate , aging from (15) to (17) years for the sport year 2014 , and they were (130) players . While the sample of the study was (24) players , deliberately chosen from the players of the training center of the branch federation of volleyball. Four players of the sample were dismissed to the pilot experiment, then the basic sample of the study (20) players representing (15.38) of the community of the study to represent it validly and reliably.

The sample is divided randomly into two groups , controlling and experimental , (10) players for each group according to the tie . The experimental group trained on the exercises of motor expectance and the controlling group trained on the classically followed program.

Table 1: Explains the community and sample of the study

Total sample	Main Sample	The excluded from the sample	Sample after exclusion		The reliability and pilot experiment sample
			Experimental	Controlling	
(24)	(20)	(4)	(10)	(10)	(24)
			(20)		
The Total of sample and the pilot experiment			(24)		

To know the nature of the spread of the sample around its arithmetic mean and the concordance among its individual , the researcher counted the convolution coefficient for the variables of (length, weigh and age) this is also to be certain that the sample of the study spreads naturally, as shown in table (2).

Table 2: Arithmetic means , standard deviations , standard error, convolution coefficient of the sample in the variables of the study

Statistics / Variables		Measure's Tool	Mean	Std. Dev.	Std. Wrong	Conv. Coefficient
Physical	Tall	Cm	174.666	5.753	1.174	0.271
	Weigh	Mass	65.625	6.737	1.375	0.397
Age		Year	15.833	0.761	0.155	0.298

Table (2) shows that all the convolution coefficients are from (0.271) to (0.397) and they are included between(±1) " if they are included between (±3) this means that they are spread normally, while the increase or decrease this means that there is weakness in choosing the sample's test" .

(Mohammed Hassan Alawi and Mohammed Nasreldeen Radhwan,151,2000) .

This assures that the individuals in the sample are well naturally distributed because all the results are below that number in the variables of (length, weigh and age)

Tools, apparatus and means of collecting data :

Tools of the study:

1- Standard volleyball court.

2- Fifteen Micasa volleyballs

3- leather measuring thread .

4- Ten plastic cones .

Apparatus used in the study :

1-Two Japanese Sunny Exilim video camera with camera stand .

2- Calculator .

3- Timer .

Means of collecting data:

1- Arabic and foreign references and resources .

2- Observation and experiment.

3- Tests and measures.

4- Collecting data form.

Tests

The multi direction motor response speed test (Mohammed Ibrahim and Mohammed Jabir Breiqa' , 198, 1995)

The court defense accuracy test. (Thaer Rasheed Hassan , 98, 2014) .

Pilot experiments:

The pilot experiment is done to know the most important obstacles that may face the researcher while implementing exercises and tests and that was at three o'clock pm on the 3rd of March 2014 on four randomly chosen players from the players of the training center.

Scientific bases for the tests :

After reviewing many resources and references ,it became clear to the researcher that the tests typically fit the Iraqi environment and have been used in many studies besides the samples of those studies were also similar to the sample of the current study. Moreover, the tests are clear , understood and it cannot be misinterpreted . the tests are far away from the subjective evaluation , accordingly , the researcher finds it is not necessary to state or search for the scientific bases for the tests , because the latter have the scientific standard conditions. (validity , reliability and objectivity).

Pretests : The pretests of the current variables have been done at three o' clock pm on Wednesday the 5th. Of March 2014 . The pretests have been done to both controlling and experimental groups, the pretests took two days, one day for each group, as shown:

1- The experimental group on Wednesday the 5th. Of March 2014.

2- The controlling group on Thursday the 6th. Of March 2014.

Sample parity : The researcher made the process of parity between the two groups of the study on the pretests variables , (T-test) has been used for the independent sample (controlling and experimental) .The results showed that there are no significant differences between the two groups which assures the parity between them as shown in (table 3)

Table 3: Shows the parity between the two groups of the study in the pretests of the speed of motor response and the accuracy of court defense and the values of counted and table (T) and their statistical reference

No.	Statistics / Tests	The two groups						Counted (T)	Statistical significance reference
		Controlling			Experimental				
		No.	Mean	Std. Dev.	No.	Mean	Std. Dev.		
1	speed of motor response with multi direction	10	1.93	0.05	10	1.93	0.04	0.14	Not incorporeal
2	the accuracy of court defense		1s0	3.766		9	2.663	0.751	Not incorporeal
The value of table (T) with reference level below (0.05) and freedom level of (18) =2.10									

Table (3) shows the type of significance for the variables, it is not significant because the counted (T) is less than the table (T).

Implementing the motor expectance exercises:

1- The aim of the exercises is to develop the speed of motor response and the accuracy of the performance of court defense skill in volleyball.

2- The exercises were implemented in the indoor sport games court of the directorate of the youth and sport of Diyala - Baquba.

3- The exercises were implemented in the period from 8\3\2014 to 16\4\2014.

4- Giving equal chances to participate in the exercises.

5- The exercises were implemented in (18) training sessions for each group by the same coach and supervised by the researcher, in (6) weeks, (3) sessions a week for each group and (120) minutes a session.

6- The work of the researcher is concentrated in the applied aspect principally within (65) minutes for each training session.

7- The experimental group used the exercises of motor expectance .See appendix (1).

8- The controlling group used the exercises set in the academic curriculum.

Posttests:

Finishing with implementing the training -teaching program on the experimental group, which started from 8\3\2014 and ended on 16\4\2014.

The posttests were implemented on the controlling and experimental groups, for two days, one day for each group and according to the following dates:

1- The experimental group on Thursday 17\4\2014.

2- The controlling group on Friday 18\4\2014.

Statistical means: The researcher used the SPSS to get the results of the study.

3. RESULTS AND DISCUSSION

Displaying, analyzing and discussing the results of the pretests and posttests for the controlling and experimental groups in testing the variables of the current study:

The researcher displayed, analyzed and discussed the results which resulted from the two aims and the assumptions of the study in knowing the impact of the exercises of the motor expectance on the speed of motor response and the accuracy of the performance of court defense skill in volleyball

Table 4:shows the arithmetic means , standard deviations, accounted and table (T) and their statistical significance references for the tests of speed of motor response and the accuracy of the of court defense skill in pretests and posttests for the controlling and experimental groups

No.	Groups	Statistics / Tests	Pretests			Posttests		Counted (T)	Statistical significance reference
			Measure	Mean	Std. Dev.	Mean	Std. Dev.		
1	Controlling	speed of motor response with multi direction	Second	1.93	0.05	1.90	0.04	4.48	Incorporeal
	Experimental			1.93	0.04	1.79	0.05	16.60	Incorporeal
2	Controlling	the accuracy of court defense	Mark	10	3.766	15.916	5.583	7.291	Incorporeal
	Experimental			9	2.663	18.250	4.634	9.105	Incorporeal
The value of table (T) with reference level below (0.05) and freedom level of (9) =2.26									

The results shown in table (4) indicate that there are differences in the arithmetic means, the standard deviations between the pretest and the posttests for the controlling and experimental groups in the tests of speed of motor response and the accuracy of the of court defense skill, these differences indicate the improvement in the posttests through comparing the accounted and table (T) which (2.26) in the significance level (5%) and freedom degree of (9).

The researcher accounts these statistical significant differences to the advancement and development in the players abilities in motor response and accuracy in directing the balls to the assigned place after hearing the verbal motif .The experimental group is better and more developing than the controlling group and this is what table(4)asserts.

The reason behind that , the researchers says , is the impact of followed exercises which developed the players abilities speed of motor response and accuracy in court defense through the various exercises and transmitting from the easy to the difficult gradually and within the playing variable conditions , specifying different place for the accuracy and using speech and non-speech motives .(Mazin Hadi Gzar ,2002,87-88) states that " using motives and sudden situations help the player to imagine the place of performance accuracy and in a high speed response with continuous observation and awareness in addition to the speed of making

decision that is suitable for performance , which needs early preparation through training on expecting the motor response and its accuracy . This helps the player to overcome the sudden situations and unexpected difficulties that often appear in real playing conditions"

The significant difference are also due to the recognition of the volleyball players is being developed through repetition and practice , the more the player practices the movements or skill, the more developed recognition he has over such a skill.

Understanding the similar movements and the capacity of differentiating among them is a characteristic of recognition, the researcher says.

"Al-Sayid Abdelmaqsood ,1985" states that the speed of conducting in the changing playing conditions and the speed of recognition and understanding for the performance results are to be considered as indicators of expectance 's success.

Before any activity , the individual recognizes many factors that are related to the activity and its accompanying conditions , accordingly , the motor direction and its result are being specified in advance.

This depends on the experience that the the player has and its reflected in the action of the individual and his way dealing .(Al-Sayid Abdelmaqsood,1985,11).

There is an important factor in court defense that is the good team work among the players of the block and court defense players in the back . This cooperation may result in successful work against the strikes or tricks of the competing team .

There is much burden on defense players when the competing team quick playing complexes , in the way that would not allow forming the block. The speed of recognition has its own impact on the performance of the volleyball players and on specifying the positions of the colleagues and the competitors in the court, and it affects in the speed and it also affects , in the accuracy of implementing many of the skills strategically and technically. It is also noted that the exercises that were set , which are similar to the match conditions , through repetition and practicing during the training sessions , contribute in developing The abilities in the speed of decisions making and changing in the motor responses for the skill of court defense and choosing the best and the most suitable possibilities , that fit the nature of the situation to be implemented .

Making the suitable stand position for court defense , getting ready , predicting the attacking situation of the competitors through receiving the information and the speed of transmitting to the brain and interpreting them , watching the competitors and the colleagues on the net and in the back line, and coordinating among them in the training developed the players capacities in motor expectance to defend the court and it became easy for players to move in order to perform the skill in the proper time and high accuracy .

Displaying, analyzing and discussing the results of the posttests for the controlling and experimental groups in testing the variables of the current study:

Table5:Shows the arithmetic means , standard deviations, accounted and table (T) and their statistical significance for the tests of speed of motor response and the accuracy of the of court defense in posttests for the controlling and experimental groups

No.	Tests / Statistics	The two groups						Counted (T)	Statistical significance reference
		Controlling			Experimental				
		No.	Mean	Std. Dev	No.	Mean	Std. Dev		
1	speed of motor response with multi direction	10	1.90	0.04	10	1.79	0.05	6.11	Incorporeal
2	the accuracy of court defense		15.916	5.583		18.250	4.634	1.114	Not incorporeal
The value of table (T) with reference level below (0.05) and freedom level of (18) =2.10									

Table (5) shows that there are differences in the arithmetic means and the standard deviations in the posttests between the controlling and experimental groups in the tests of speed of motor response and there is no significant difference in the accuracy of the of court defense test .Reviewing the results shows that the priority is to the experimental group .T- test is used to verify such apparent differences reflect real differences.

The results in table (5) indicate that accounting (T) is (6.11) and is bigger than the table (T) and then dication level(0.05) and freedom degree (18)which is (2.10) , concerning the test of accuracy of the court defense, it is shown that the accounted (T) is (1.734) the researcher accounts the differences , that are statically significant , for the achievement of the students to better marks in the posttests for the two groups, experimental and controlling , in general and for the experimental group in a special way and also to effectiveness of the various exercises and the continuous repetitions for more than one form of performance and varying the stimulus coming from forward and backward and from the two sides and using types of attack on the net to develop the players capacities on expecting the balls and their falling place , this help in quick response and make decision earlier to move and save balls at the time striking the ball from the attacking player the variables of one exercise from far and near place to the net from the colleague and also depends on the concordance between the player and his colleague which plays an important role in establishing the players capacities and develop them.

(Talha Husameldeen et al , 1997, 117)

Motor expectance is linked to the movements of the opponents and it is also linked to the match conditions , in that the response is built on what the player expect depending on what the opponent shows of motor procedures .

Motor expectance has many forms starting from the simplest form of expectance , which eliminates the introductory stage or repeating it to more complicated forms of complex motor positions .The highest levels of motor expectance , depends on the player's ability to estimate the sudden change in speed , distance , height , time and direction.

The researcher accounts for the statistically insignificant differences to the hastiness of some players of the controlling group in the performance despite the correct readiness stand taken , which is the basic base upon whose effect skillful success, of the desired movement , can be achieved . This hastiness led to weakness in timing with the ball and the attempt to reach the it to defend. Despite the ability to do the skill in a correctly, to prevent the ball from falling inside the court, whatever might be , and direct it to the setter. "The base of any success for the speed of movement is to control and concord the speed in order to help the movements " .

(Wajeeh Mahjoob ,1989 , 112) the relative development in the abilities of speed of motor response and the accuracy of court defense did not reach the ideal level in implementing the court defense and this is so because there is no use for the exercises and various and continuous repetitions and the variables that surrounds the skull which may contribute in developing the response accompanying the right decision-making which is in accordance with coming stimulus. The researcher says.

(Zaki Mohammed Hassan , 1998,479) states that " If the defensive player could predict or imagine the ways of playing of the competing team, he would not need to be confused in his defensive work" this use various skillful exercise and for different stimuli that help in the technical field of the type of skill to develop the mental , motor , physical and skillful capacities of the players.

Moreover , what simplifies developing the player's movement and improve his ability and his skillful capacities help is the accurate sensations and the states of speed control . This is so because sensations play an important role in the sport activity , i.e. the more the player's sensations are practically efficient is the higher level of motor efficiency the player will be ; this is according to the nature of the activity practiced .(Majed Mostafa Ahmed , 1993,19) agrees with the researcher (Mohammed Hassan Alawi , 1993,165) in the necessity of considering the link between the speed of motor response and the accuracy , because wrong quick responses do not let to positive results.

(Hussien Sabhan Sikhi , 2006,16) emphasizing that giving sudden stimuli helps the players in improving their abilities in the speed of processing the information , the speed of decision –making , the quick tand accurate response , implementing the skills with high accuracy and then building motor program to the trained skill in the brain that could be quickly recalled in the emergence of a specific and sudden stimuli thus the defensive player would not confuse with his defensive work and then do the proper response that fits the event or the apparent stimuli.

The researcher says that the volleyball player need many physical , motor, and mental abilities to perform the game accurately like : the speed of reaction , special power with speed, fitness, flexibility , motor response , expectance, smooth , awareness , concentration , sensation and recognition. etc.

This is so , in order to reach the best performance integration .Since the game depends on the speed of performance which is shown by its rhythms i.e. the quicker the player is the better expectance his expectance and this agrees with what (Riyad Khaleel , et al 2012,78) and (Nahida Abid Zaid, 2011,135) state; in that they say that skill of court defense is one of the very difficult skills for its accurate requirements that should be found in the players , which are motor expectance , the speed of reaction , quick motor response , sensation , recognition, awareness concentration and the power which is characterized by fitness , flexibility , self-confidence , courage, and boldness in diving to the far balls using different types of defense .

While performing the defensive skill The researcher says that the defensive player should be concentrating on the ball's direction , the movement of the attacking players , the type of the attack used , the movement of the colleague players on the net in the block and the place of the setter of the team through controlling the movements accurately which enable the quick and accurate motor response of the court defense skills .

(Aqeel Alkatib , and Amir Jabbar Al-Saadi, 2002, 140) states that " The defensive player should monitor the competitor's attack very well and to what direction he will strike the ball in addition to take the stand that fits the team plan that is agreed on "

4. CONCLUSIONS

1- The exercises of motor expectance have great impact on the speed of motor response and of the court defense in volleyball for junior players of the experimental group .

2- The exercises of motor expectance have great impact on the acceptance and rush of the players in the training sessions.

3- The priority of the experimental group in developing the accuracy of the currently searched skills in volleyball over the controlling group.

4- The accuracy of court defense of the controlling group is under the desired level because of not varying the exercises.

5- Following the correct styles in teaching and training the skill of court defense has its great impact in developing the mentioned skill.

6- Developing the speed of motor response leads developing the skill of court defense.

5. RECOMMENDATIONS

1- The necessity of adopting the exercises of motor expectance that are set by the researcher to develop the speed of motor response and of the court defense in volleyball for junior players and the necessity of spreading them among the working coaches to make use of the results of the current study.

2- Motivating the coaches to pay attention to the exercises of motor expectance because they have positive impact in developing speed of motor response and the accuracy of the court defense.

3- Developing the mental activities of the players and using the verbal and non-verbal stimuli especially in the motor expectance and the motor response.

4- The necessity of making periodical and regular tests by the coaches to their the physical, motor and skillful abilities and their teaching and training curricula.

5- Making similar studies on other age stages , skills and other team sport games.

6. REFERENCES

- Al-Sayid Abdelmaqsood , The motion of human and it bases : (Alexandria, Al-Finiya printinghouse,1985).
- Thaer Rasheed Hassan , The effect of skillful exercises, using ball shooter , on growing the motor expectance and learning the defensive skills in volleyball for juniors: (unpublished doctoral thesis , University of Diyala \ College of basic education , 2014).
- Hussien Sabhan Sikhi , the impact of suggested training program to develop the speed and the accuracy of motor expectance and motor expectance in the accuracy of some basic skills in volleyball for young players: (unpublished master thesis ,University of Baghdad \ College of physical education , 2006).
- Riyad Khaleel Khamas et al , The volleyball : history – skills- plans – match management and coaching: 1st ed. (Baghdad, Al-Kalimah Al-Tayibah printinghouse,2012)
- Zaki Mohammed Hassan , Volleyball : building the planning and technical skills: (Alexandria, Al-Maa'rif printinghouse,1998).
- Talha Husameldeen, The principles of biomechanics and the applied kinesiology: (Cairo , center of book for publishing 1997).
- Aqeel Alkatib , and Amir Jabbar Al-Saadi, Volley : the technique and the modern individual tactic: (University of Baghdad \ ministry of higher education and scientific research, 2002).
- Majed Mostafa Ahmed , A study on the practicality of components of sensory perception of the football players: (unpublished doctoral thesis , University of Hilwan \ College of physical education for boys, 1993)
- Mazin Hadi Gzar , The impact of mental , physical and skillful training on the speed of motor expectance for the badminton players: (unpublished master thesis ,University of Baghdad \ College of physical education , 2002).
- Mohammed Ibrahim and Mohammed Jabir Breiqa', Guide to physical measurements and tests of motor performance: (Alexandria, Al-Maa'rif printinghouse,1995).
- Mohammed Hassan ALawy, The Science of sport coaching: 3rd.ed: (Alexandria, Al-Maa'rif printinghouse,1993).
- Mohammed Hassan Alawi and Mohammed Nasreldeen Radhwan, Assessment and evaluation in sport educationand sport psychology: (Cairo, ALfikr Al-Arabi printing house, 2000)
- Nahida Abid Zaid Al-Duleimy , Volleyball : A book for the second stage studentsin the departments of and colleges of of physical education: 1st ed. (AL-Najaf AL-Ashraf , Al-Dhiyaa for printing and designing,2011).
- Wajeeh Mahjoob , Knowledge of motor learning movement: (Mosul, National Library for printing and publishing, 1989).

USING BALLISTIC TRAINING IN DEVELOPING EXPLOSIVE STRENGTH & POWER AND ITS EFFECT ON SHOOTING ACCURACY IN JUNIORS' HANDBALL

Nabeel Kahdem Hrebid [a] Sarab Shaker [b]

[a] Faculty of Arts – Babylon University- Email: nabeelaljabory@yahoo.com

[b] Faculty of Education for Girls – Baghdad University- Email: sarab_shaker@yahoo.com

Abstract

The development of fitness elements of the foundation stone in the development of skills the ability to handball players and one of the main requirements that help enable the player and governed by the inhabitants and play, especially that skill correction depends primarily on muscle power through the correction from several directions and distances and different angles and Ptoukitat variety and places multiple, and you need to provide kinetic momentum is connected to the transfer of power in the player of the two men's body to the arms of the timing correction of the ball by a good consistency, lies the problem of searching through researchers experience being the practitioners and trainers of the game handball noted that some coaches are turning in their training on the implementation of multiple means and methods in the development of power in general and non-specialist through physical exercises explosive speed and distinctive capacity or speed motor exercises and transitional and perhaps some exercises and weightlifting this reason inadequate training march to the requirements of the modern play,. So the researchers felt the use of plastic exercises to develop explosive power and distinct capacity as quickly and its impact on the accuracy of the correction forms to hand reel Nacian.uhedv search:

1-way set up a training program for the development of plastic explosive distinctive ability and the ability of the players as quickly reel Hand junior.

2-see the effect of developing explosive power and distinctive ability to perform fast forms of correction hand reel junior accuracy.

The researchers used the experimental approach to design Almtkavitan groups with pre and post tests.

And it identifies the research community Billabong aspiring hand reel in the denominator Sports Club totaling 28 players were selected the same random way and simple's 20-man squad, and is then divided into two groups the first trial and the rate of (10) players, and the second officer and the rate of (10) players The researchers also .ostkhaddm Ihamalosail statistical treatment of their data, namely, (Alusk arithmetic mean and standard deviation and t-test for independent samples and asymmetric) The most important findings are:

1. Showed significant differences between pretest and posttest results of the control and experimental groups in explosive power and speed and distinctive forms of correction for young players hand reel Development

2. The training curriculum ballistic prepared by the researcher (experimental group) had the effect of improving the explosive speed and the ability and distinctive forms of correction for young players hand reel by the results that have been reached development.

KEYWORDS: Ballistic. Explosive. Strength. Shooting. Handball.

1. INTRODUCTION & PROBLEM OF THE STUDY

Athletic training based on scientific principles is among the most important factors that enable us to reach the highest athletic levels in various games. The developed countries attributed great attention to players' preparation to reach top achievements and ranks in international champions as it reflects the extent of advanced sciences in these countries. Athletic distinction is the outcome of training based on knowledge and practice to make the athletes reach levels which qualify them to take part in championships and competitions. This is done through comprehensive preparation which includes different and overlapping aspects of training such as physical, skilled, psychological functional aspects and other aspects in preparing athletes. There are multiple preparation methods for junior athletes in various games. Each method has its attributes in terms of game type, physiological, physical, skilled, planning, and legal variables. Handball is one of the team games that require various training characteristics to reach achievement. Joining athletic training requires sufficient knowledge about training ways, methods and stages and consistent consideration of integration of training plans structures in terms of physical, skilled, planning, physical and cognitive preparation to achieve the best level in sports and specialized sports. This was asserted by (Mofti Ibrahim, 1998, 213) by saying that: "planning is a consistent and future process by nature tending towards integrated preparation to reach target results and achievements". Explosive strength and power are among the basic physical elements that should be found in the athletes in particular. Ballistic exercises are an effective mean in this field as they are used to overcome lack of velocity. Their performance includes anti-resistant explosive movements in the least possible time as they join weight lifting with intensity ranges from 30% to 50%. This is asserted by (Ahmed Al Farouk, 2003, 255)

as: "it is the ability of muscles to perform movements with the maximum possible against weak and average resistance ranging between 50% and 30%". Ballistic exercises are the same polymeric exercises but the difference is in intensity. They are movements performed by muscles and depend on the movement of upper or lower limbs. (Amerallah Al Basety, 2009, 33) asserts that: "the intensity of polymeric exercises is 50-70%". Due to the development in handball and its spread worldwide in most countries of the world, researchers continued searching for solutions of problems related to the skilled performance and achievement to be diagnosed and solved. A lot of field studies tackled properties and special physical abilities related to handball that have a direct effect on developing the physical aspect to raise skilled and technical aspects as well. This is done through approved educational or training curricula that improve basic and important physical characteristics and abilities of shooting skill in handball. The significance of the study lies in setting a training program using ballistic training in developing Explosive strength and power and their effect on accuracy of shooting forms in juniors' handball to be an expressive means from which trainers benefit to achieve good results.

Problem of the Study:

Developing fitness elements is the cornerstone of developing skilled ability for handball players and one of its basic requirements that enable players to control the course of the game. This is because shooting depends mainly on muscular strength through shooting from many directions and from different distances, angles, times and places. It also needs to provide related movement momentum to transfer strength in the player's body from legs to arms and then to the timing of shooting with good consistency. The problem of the study came from the experience of both researchers as they are handball practitioners and trainers. They noticed that some trainers implement variable means and methods in developing strength in general and other unspecialized methods through physical exercise of Explosive strength and power or exercises of movement and transitional velocity and even some weight lifting exercises. This is the reason for insufficiency of training courses towards requirements of modern playing. Therefore, both researchers proposed the use of ballistic exercises to develop Explosive strength and power and their effect on shooting accuracy in juniors' handball.

Objectives of the Study:

1. Preparing a ballistic training program to develop Explosive strength and power for junior handball players.
2. Determining the effect of developing Explosive strength and power and on shooting accuracy in juniors' handball.

Hypotheses of the Study:

1- The ballistic training program has a positive effect on developing explosive and velocity abilities for junior handball players.
2- Developing explosive and velocity abilities has a positive effect on shooting accuracy in juniors' handball.

2. METHODOLOGY

Both researchers used the empirical method by designing two equal groups with pre and post tests.

Population & Sample of the Study:

Population of the study is shown in junior handball players at Al Kassem Sporting Club (players). The sample was chosen randomly (20 players) and then they were divided into two groups: empirical group (10 players) and control group (10 players too.

Determining Validity of Explosive Strength and Power Tests and Shooting Forms for Junior Handball Players:

In order to determine tests of Explosive strength, power and shooting forms for junior handball players, the researchers reviewed sources and references, determined tests and included them in a questionnaire form that was presented to (9) experts and specialists. After data collection, test validity was determined by the Chi^2 test as shown in table (1):

Table 1: Validity of Explosive strength, power & shooting forms for junior handball players

Serial	Tests	Valid	Invalid	Chi^2	Significance
1	Vertical jump for Sergeant (legs)	9	0	9	Significant
2	Long jump from stationary (legs)	2	7	2.77	Insignificant
3	Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	8	1	5.44	Significant
4	Throwing a medical ball (2 kg) from a standing position by hands (for arms)	5	4	0.11	Insignificant
5	Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	9	0	9	Significant
6	Consecutive jumps in place in 15 s to find ability indication (legs)	2	7	2.77	Insignificant
7	Arm bend and extension from an inclined sprawling position (10 s for arms).	8	1	5.44	Significant
8	Pulling upwards (suspension) with maximum count in 20 s.	2	7	2.77	Insignificant
9	Shooting with jumping and at head level on shooting accuracy squares.	9	0	9	Significant
10	Shooting from a stationary and head level on shooting accuracy squares.	2	7	2.77	Insignificant
11	Shooting from jumping upwards on shooting accuracy squares.	9	0	9	Significant
12	Shooting from jumping upwards on a square divided into 5 circles.	4	5	0.11	Insignificant
13	Shooting from forward falling on shooting accuracy squares.	9	0	9	Significant

14	Shooting from forward falling on overlapped squares measured by degrees.	8	1	5.44	Insignificant

*** The tabular value of Chi^2 at freedom degree of (1) and significance level (0.05) is 3.84**

Scientific Principles of Tests:

Validity:

Test validity is defined by (Mohamed Samy, 2000, 273) as measuring the test for what was accurately measured and not measuring other thing. The researchers used content validity through applying tests on a group of experts and specialists.

Reliability:

Test reliability is defined by (Mohamed Jassem Al Yasseri & Marwan Abdelmegid, 2003, 78) as: "the extent of test accuracy in measurement and consistency of its results when applied multiple times on the same individuals". For the purpose of extracting reliability coefficient, the researchers used testing and retesting methods and then extracted values of correlation coefficient between results of the first and second tests after seven days. This procedure was made during the exploratory trial as shown in table (2).

Objectivity:

It is defined as "identical opinions of more than one judge when they evaluate a test" (Marwan Abdelmegid, 1999, 155). In order to determine objectivity of the test, the researchers used marks of judges of test results during retesting. Correlation coefficient was counted between degrees of the first and second arbitrators and found that all tests have great objectivity as in table (2):

Table 2: Scientific Principles (Validity & Objectivity Coefficients) for the used tests in the study:

Serial	Tests	Reliability coefficient	Counted R value	Subjectivity coefficient	T counted value
1	Vertical jump for Sergeant (legs)	0.85	3.95	0.92	5.75
2	Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	0.87	4.32	0.93	6.20
3	Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	0.87	4.32	0.89	4.48
4	Arm bend and extension from an inclined sprawling position (10 s for arms).	0.84	3.79	0.85	3.95
5	Shooting with jumping and at head level on shooting accuracy squares.	0.84	3.79	0.91	5.38
6	Shooting from jumping upwards on shooting accuracy squares.	0.80	3.27	0.89	4.48
7	Shooting from forward falling on shooting accuracy squares.	0.84	3.79	0.87	4.32

Pre-Tests

The researchers conducted pre-tests at 3 pm in the closed hall in Shabab Al Kassem Club on 01/02/2015 on sample members (20 players).

Sample Consistency and Groups Equality:

To achieve this purpose, the researchers conducted many procedures to adjust variables although the selected sample is from close age class as well as preventing effects that may affect results of the trial in terms of individual differences for the respondents, so the researchers used statistical methods such as means, standard deviations, mode and skewness coefficient for all related variables, length, weight, time age and training age to determine the reality of consistency as in table (3):

Table 3: shows values of skewness coefficient for the studied variables, length, weight and age less than (±1) which shows consistency among sample members at all variables.

Serial	Variables	Mean	S.D	Mode	Skewness
1	Length	170.71	6.74	166	0.69
2	Weight	64.03	7.69	62	0.216
3	Time age	14.7	1.45	14	0.51
4	Training age	3.25	1.37	3	0.18
5	Vertical jump for Sergeant (legs)	540.20	31.75	510.40	0.93
6	Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	9.20	2.65	7	0.83
7	Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	43.26	2.17	40	0.69

8	Arm bend and extension from an inclined sprawling position (10 s for arms).	13.07	3.11	11	0.66
9	Shooting with jumping and at head level on shooting accuracy squares.	3.44	1.70	2	0.84
10	Shooting from jumping upwards on shooting accuracy squares.	3.10	1.45	2	0.75
11	Shooting from forward falling on shooting accuracy squares.	2.24	0.84	2	0.28

Equivalency of the Study Groups:

One of the important things that should be followed by the researchers is relating differences to the empirical factor upon which both study groups (empirical and control groups) should be equivalent in terms of variables of the study. Before starting the educational method, the researchers sought to achieve this equivalency between both groups. Van Dallen, 1985, 47 referred that each researcher should form equal groups at least in terms of related study variables. The researchers used the following statistical methods: (mean, standard deviation, T test for independent samples) between control and empirical groups as shown in table (4):

Table 4: Equivalency of the sample of the study for pre-tests of the study

Serial	Variables	Control Group		Empirical Group		T Counted Value	Significance
		Mean	S.D	Mean	S.D		
1	Vertical jump for Sergeant (legs)	514.34	19.18	509.96	17.43	0.53	Random
2	Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	8.45	0.57	8.32	0.67	0.46	Random
3	Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	45.45	1.52	45.80	1.42	0.52	Random
4	Arm bend and extension from an inclined sprawling position (10 s for arms).	12.10	1.37	11.70	1.41	0.64	Random
5	Shooting with jumping and at head level on shooting accuracy squares.	2.90	0.73	2.60	0.51	1.05	Random
6	Shooting from jumping upwards on shooting accuracy squares.	2.70	0.82	2.50	0.70	0.58	Random
7	Shooting from forward falling on shooting accuracy squares.	2.40	0.69	2.10	0.31	1.23	Random

Table (4) shows that the T counted values and the study tests are less than their tabulated value (2.10) at significance level (0.05) and freedom degree (18) which achieves equivalency in the studied tests.

Training Method:

After reviewing a lot of studies, researches, theses and proposals in training methods in the field of athletic training science for the purpose of evaluation of contents and the training curriculum with the empirical sample of the study, the researchers set the empirical method with ballistic training to develop explosive strength and power for legs and arms for junior handball players in a period of application from 03/02/2015 to 17/04/2015.

1. This training lasted for 10 weeks.
2. Number of training units is 3 units weekly.
3. Total 30 training units.
4. Training days are Saturday, Monday and Wednesday.
5. The empirical variable in the duration of the single training unit is 35 – 40 in case of horizontal training (horizontal jumping in the presence of barriers) or due to heights to jump from after determining the maximum vertical height in relation to box heights or determining maximum repitition with a fixed time to extract suitable intensity.
6. Break time was given due to the ration of work to rest.
7. The control group was left to train according to its usual daily method.
8. The researchers took into account gradation (gradual training from the easy to the more difficult in increasing training loads to progress and adapt to explosive strength and power for legs and arms. This principle of gradual increase in training loads one of the important principles in contemporary athletic training because it is characterized with gradual increase in components of training load. Enhancing achievement level for any athlete is the direct result for increasing the size and intensity of effort exerted in training (Mohamed Reda Ibrahim, 2008, 67).
9. The researchers determined the used training intensity for the empirical group of the study by determining the maximum ability for players and for each exercise used in the training course. By percentages, intensity was defined for the rest of levels when implementing the training program. The researcher depended on repitition changes, break times and the required intensity.
10. The researchers determined the level of intensity through which explosive strength and power can be developed: (maximum intensity, sub-maximum intensity and medium intensity) as shown in table (5).
11. The researchers asserted the performance of warming-up, muscle extension and joint flexibility exercises at the beginning of each training unit.

12. Intensity was reduced in the last week of the training courses to the level of (medium intensity) to regain recovery and take good rest before conducting post-tests.

Table 5: Intensity Level & Repitition

Serial	Intensity level	Repitition
1	Maximum Intensity (90 – 100%)	4 – 2
2	Sub-Maximum Intensity (80 – 90%)	6 – 4
3	Medium Intensity (70 – 80%)	8 – 6

Post-Tests:

Post-tests were performed for both empirical and control groups after ending the training program on 18/04/2015. The researchers considered providing the same conditions (or closer) and places of pre-tests to meet variables of conditions in post-tests for the samples of the study.

3. RESULTS AND DISCUSSION

Results of tests of explosive strength, power and shooting forms in handball in pre and post tests:

Table 6: Arithmetic means, standard deviations, counted and tabular T values between pre and post tests for tests of the control group

Statistics / Tests	Measuring unit	Pre-test		Post-test		T counted value	Significance
		Mean	S.D	Mean	S.D		
Vertical jump for Sergeant (legs)	Watt	514.34	19.18	530.27	18.41	2.18	Significant
Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	cm	8.45	0.57	8.93	0.12	2.40	Significant
Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	Second	45.45	1.52	43.41	1.37	2.78	Significant
Arm bend and extension from an inclined sprawling position (10 s for arms).	Number	12.10	1.37	13.20	1.03	2.18	Significant
Shooting with jumping and at head level on shooting accuracy squares.	degree	2.90	0.73	3.40	0.69	2.86	Significant
Shooting from jumping upwards on shooting accuracy squares.	Degree	2.70	0.82	3.30	0.85	2.30	Significant
Shooting from forward falling on shooting accuracy squares.	Degree	2.40	0.69	2.80	0.78	2.80	Significant

The tabulated value is (1.83) at significance level (0.05) and freedom degree (9)

Results of tests of explosive strength, power and shooting forms in handball in pre and post tests for the empirical group:

Table 7: Arithmetic means, standard deviations, counted and tabular T values between pre and post tests for tests of the empirical group

Statistics / Tests	Measuring unit	Pre-test		Post-test		T counted value	Significance
		Mean	S.D	Mean	S.D		
Vertical jump for Sergeant (legs)	Watt	509.96	17.43	554.32	13.96	8.84	Significant
Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	cm	8.32	0.67	10.30	0.94	4.59	Significant
Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	Second	45.80	1.42	41.18	1.35	7.82	Significant
Arm bend and extension from an inclined sprawling position (10 s for arms).	Number	11.70	1.41	14.60	1.07	6.32	Significant
Shooting with jumping and at head level on shooting accuracy squares.	degree	2.60	0.51	4.40	0.52	6.19	Significant
Shooting from jumping upwards on shooting accuracy squares.	Degree	2.50	0.70	4.50	0.52	6.70	Significant
Shooting from forward falling on shooting accuracy squares.	Degree	2.10	0.31	3.70	0.48	9.79	Significant

The tabulated value is (1.83) at significance level (0.05) and freedom degree (9)

Results of tests of explosive strength, power and shooting forms in handball for the control and empirical groups:

Table 9: Arithmetic means, standard deviations, counted and tabular T values between pre and post tests for the control and empirical groups

Statistics / Tests	Measuring unit	Pre-test		Post-test		T counted value	Significance
		Mean	S.D	Mean	S.D		
Vertical jump for Sergeant (legs)	Watt	530.27	18.41	554.32	13.96	8.84	Significant
Throwing a medical ball (2 kg) by hands over head from a sitting on chair position (arms)	cm	8.93	0.12	10.30	0.94	4.59	Significant
Hopping (36 m), going (18 m) on right foot and returning on left foot (legs)	Second	43.41	1.37	41.18	1.35	7.82	Significant
Arm bend and extension from an inclined sprawling position (10 s for arms).	Number	13.20	1.03	14.60	1.07	6.32	Significant
Shooting with jumping and at head level on shooting accuracy squares.	degree	3.40	0.69	4.40	0.52	6.19	Significant
Shooting from jumping upwards on shooting accuracy squares.	Degree	3.30	0.85	4.50	0.52	6.70	Significant
Shooting from forward falling on shooting accuracy squares.	Degree	2.80	0.78	3.70	0.48	9.79	Significant

The tabulated value is (210) at significance level (0.05) and freedom degree (18)

4. DISCUSSION

Throughout the previous illustration and analysis of tables, it is clear that there are developments in the studied variables of the empirical and control groups. The researchers attribute the reasons for developing the control group is due to the effect of the ordinary method set by trainers in addition to players' consistency and continuity of training which played a clear role in developing explosive strength, power and shooting forms for junior handball players. (Saad Mohsen, 1996, 98) asserts that: "expert – whatever their scientific and practical cultural origins are – think that training programs inevitably lead to achievement development if based on a scientific basis in organizing, programming training, using suitable intensity, gradual intensity, noticing individual differences, using frequencies and effective break times under the supervision of specialist trainers in good training conditions in terms of time, place and used tools. In addition, regular and continuous players in training units and repitition of the main skills played clear role in this development. Moreover, (Hanafy Mahmoud, 1994, 54) asserted that continuity plays an important role in reaching players high levels in terms of skill's technical performance, accuracy, integrity and high technical performance mechanism. Results also showed that there are significant differences in favor of the empirical group in developing explosive strength, power and shooting forms for junior handball players. The researchers attribute the reason for this development due to the effect of ballistic exercises prepared by the researchers as they contributed to developing junior handball players. Exercises were performed regularly in an effective training intensity with enough break times and they also were characterized by variability to be close to the nature of motor abilities asserted by (Kassem Hassan, 1998, 280) when he said that: "exercises include one or more elements of effectiveness similar in movement or close to movement or its strength". The researchers attribute the reason for this development due to correct legalization of the ballistic training load, choice of good exercises and grading in difficulty degree and training loads. We can notice that the ballistic exercises affected the results of the study. However, the researchers found a difficulty in implementing skills of the training course for this sample due to the existence of certain weights lifted by players during training performance. Therefore, the researchers were concerned with performing exercises correctly to achieve their goals and avoid injuries and errors. In addition, the reason for the development is also due to the used exercises in this group's training course and legalizing training loads in terms of intensity and size due to correct and good scientific principles. This was asserted by (Walid Yehia Mohamed, 2002, 67) as he said: "the use of well designed and implemented programs leads to the development of physical performance and one of the reasons for sport distinction". Using repetition in strength training performance has a positive effect which was reflected on high speed used with the sample. Suring performance of explosive strength training, individual differences between players should be taken into consideration through maximum training strength for each player and each exercise which is asserted by (Mohamed Reda Ibrahim, 2008, 632) as: "the test of maximum strength for athletes should be in one attempt for each exercise or performing the maximum repetition number in a certain exercise to determine maximum strength for operating muscles for each exercise representing percentage for each exercise (100%)". This development is also due to the set of vertical jumping exercises with weight in the ballistic training course as we notice that jumping exercises affected results of the test whish was asserted by (Mohamed Hassan Allawi & Abu El Ela Ahmed, 1984, 139) as: "muscular ability of stretching contributes to increase velocity of motor training performance" and also the use of exercises that develop explosive strength with the highest speed and power which stimulate the neural system for quick performance. Abu El Ela Mohamed, 1992, 78 states that strength training requires high speed in order to get better motor performance in competitions. The researchers assert the effectiveness of ballistic exercises selected in training on neural system and help pulse speed and reach good training condition and then positive development in explosive strength. They also found that the use if added weights to the body and quick ballistic training were useful in developing legs' muscular groups

and increasing muscular contraction activity through repetitions in training performance. As a result, muscular and neural consistency and muscular contraction developed which led to easy performance. This agrees with Mofti Ibrahim: 2001, 180 as the higher the consistency in muscles of motor performance and other reverse muscles on the other hand, the more production of muscular strength will be.

5. CONCLUSIONS

1. There are significant differences between results of pre and post tests for the control and empirical groups in developing explosive strength, power and shooting forms for junior handball players.
2. There was an effect of the ballistic training method prepared by the researcher (for the empirical group) on developing explosive strength, power and shooting forms for junior handball players through results found in the study.
3. There is a positive effect of explosive strength and power on developing the skill of shooting forms for junior handball players.

6. RECOMMENDATIONS

1. Using the ballistic training method in developing explosive strength, power and shooting forms for junior handball players.
2. Trainers should be concerned with developing explosive strength and power for their main role in enhancing physical and skilled performance of junior handball players.
3. It is recommended to conduct similar studies to this study and for various age categories and study some functional variables.

7. REFERENCES

- Abo El Ela, A. A. (1992): "Strength Plateau and How to Overcome it", Cairo, Regional Development Center, Journal of Athletics.
- Al basety, A. (1998): "Basics, Rules & Applications of Athletics Training", Alexandria, Monshaat Al Maaref, Egypt.
- Mahmoud, H. "Football Trainers", 1st Ed., Cairo, Dar Al Fikr Al Arabi.
- Khalaf, A. A. (2003): "The Effect of the Ballistic Program on some Physical and Skilled Variables for Basketball Players", Scientific Journal of Physical Education, Helwan University, Issue. 40.
- Ismail, S. M. (1996): "The Effect of Training Methods to Improve Explosive Strength of legs and Arms in Far Shooting Accuracy by Jumping in Handball", PhD Thesis, Baghdad.
- Abd Awn, A. K. (2009): "An Introduction in Statistics & SPSS Applications"
- Van Dalin. (1985): "Rssearch Methodologies in Education & Psychology", translated by Mohamed Nabil et al, 4th Ed., Cairo, The Anglo-Egyptian Library Press.
- Husein, K. H. (1998): "The Science of Athletic Training in Various Ages", Egypt, Dar Al Fikr Al Arabi.
- Allawi, M. H. & Abdelfattah, A. A. (1984): "Physiology of Athletic Training", Dar Al Fikr Al Arabi, Cairo,
- Ibrahim, M. R. (2008): "Filed Application of Athletic Training Theories & Methods", Baghdad, Dar Al Kotob Wal Watha'iq.
- Melhem, M. S. (2000): "Measurement & Evaluation in Education & Psychology", 1st Ed., Amman, Dar Al Mais Press.
- Al Yassery, M. J. & Abdelmegid, M. (2003): "Measurement & Evaluation in Physical & Sport Education", 1st Ed., Amman, Al Warak Institution Press.
- Abdelmegid, M. (1999): "Scientific &Statistical Principles of Tests & Measurements in Physical Education", 1st Ed., Amman, Dar Al Fikr Al Arabi.
- Hammad, M.I. (1998): "Modern Athletic Training: Planning, Application & Leadership", 1st Ed., Cairo, Dar Al Fikr Al Arabi Press.
- Mohamed, W. Y. (2002): "A Proposed Training Program to develop Physical Requirements for Badminton Players", Unpublished Master Thesis, Faculty of Physical Education for Boys, Helwan University, Cairo.