# Development Strength of Muscles and Bone Density Via Using Rubber Training and Its Effect on The Level of Performance for Some Basic Skills of Young Volleyball Players

Suhad Qasim Saeed and Shaymaa Jaafar Ibrahim

College of Physical Education for Women, Baghdad University, Iraq. dr\_suhad@yahoo.com

Abstract: The basis of overall promotion in sports such as volleyball is the physical preparation is concentrated using training methods and sound exercises consistent with element to be developed, whether physically or skillfully to be careful in creating the style and method appropriate to the type of sport that is trained and physical component Research objective to identify the effect of rubber training for the development of muscle strength and density of muscle for young players volleyball and research hypotheses are significant differences between the pre and post tests for the experimental and control Groups, the effect of rubber training included the research sample of young volley ball players totaling (14) players and the main experiment was performed on 05.05.2013 till 08.23.2013 and the experimental method was depended for its suitability to the nature of the research and the use of statistical treatment, the researcher has concluded: promotion the bone efficiency for the experimental group better when compared with the control group that confirmed the effectiveness the experimental group by the effect of the experimental training units and the researcher has found the need for concentration and confirmation and to pay attention to the rubber exercises because of its positive effect on the development of muscle strength and bone density.

[Suhad Qasim Saeed and Shaymaa Jaafar Ibrahim. **Development Strength of Muscles and Bone Density Via Using Rubber Training and Its Effect on The Level of Performance for Some Basic Skills of Young Volleyball Players.** *J Am Sci* 2017;13(7):28-34]. ISSN 1545-1003 (print); ISSN 2375-7264 (online). <a href="http://www.jofamericanscience.org">http://www.jofamericanscience.org</a>. 3. doi:10.7537/marsjas130717.03.

Keywords: Muscles, Bone Density, Rubber Training, Young Volleyball Players.

#### **Chapter One**

## 1 – Identification of the research

## 1.1 Introduction and the importance of research

The world countries pay attention to develop various sports and at all levels and it has become clear in what we see in the Olympics and the World Championships of improving performance and technical levels in sports, though signifying nothing, it evidence of high capacity in the mobilizing facts and scientific theories to serve the development of sports. As the basis of improving the overall in sports such as football amongst the overall physical preparation concentrated via using sound methods of training and exercises which are consistent with the item to be developed, whether physically or Skillfully as be precise in creating the style and manner appropriate to the type of sport to be trained and component physical develops.

The rubber exercises considered one of the modern training method characterized by privacy in their use in the development of athletic performance and can develop the physical abilities of the game thus contributing to the development of physical performance, especially with the youth and starters teams as it is characterized by a factor of security, safety and easiness of using anywhere allows training.

It is obvious that the volleyball players need a high level of fitness because of the game

characteristics, and the volleyball is one of the games required the player muscle strength, especially serving the continuing need for the performance of physical and skill pitch at different times and different positions, whether defensive or offensive, as well as for the training of muscle strength exercises regular and ongoing can affect positively the skeletal system in particular, and in devices the body in general, and can be observed through the accelerating growth of bones especially thickness, length and increase bone tissue and bone density and prevent deformity. Thus research problem lies via studying muscle strength and bone density exercises using rubber and their effect on the level of performance of some basic skills for young volleyball players.

### 1-2The research problem

The volleyball game has special requirements, similar to other games, and after developing the physical abilities of most important being the basis for the development of all aspects, including the muscle ability via the researcher's follow-up and observing the game of volleyball, especially for young players and starters found them not bearing stress training during, especially high loads, the researcher views lack of muscle strength or lack of training resulted in lack of muscle strength and this may put them at a lack of intensity bone so that the lack of physical fitness and bone density and the subsequent decline in the level of

performance which impedes the progress of the training process, the researcher shed light on the study of this problem and searching and trying to address it via the use of rubber training and its effect on the development of muscle strength and bone density level of performance of some of the fundamentals skills for young volleyball players.

## 1.3 The research Objectives

- 1 Preparation of a method for the of rubber training using rubber resistances.
- 2 Understand the effect of training for the development of rubber muscle strength and bone density.
- 3 Understand the effect of rubber on the level of training some basic skills for young volleyball players.

## 1-4 The research hypotheses

- 1 The presence of significant differences between pre and post tests at the control and experimental groups effect of rubber exercises for the development of muscle strength and bone density.
- 2 The presence of significant differences between the pre and after test effect rubber exercises on some level basic skills of the players.
- 3 The presence of significant differences between the control and experimental groups in the post tests

#### 1-5 the research domains

- 1.5.1 The human domain: the young volleyball players (school specialism).
- 1.5.2 Time domain: Duration of 05/05/2013 until 23/08/2013.
- 1.5.3 spatial domain: the indoor school specialism (Bayaa).

## Chapter two

## 2 - Theoretical and similar studies 2-1 Theoretical studies

## 2.1.1 Rubber training

Training is one elastic bungee modern trends in sports training applied in the field of sports and one of the techniques and non-traditional training methods, which aims to improve athletic performance. And using rubber resistance exercises for the development of muscle strength as the muscles are working against resistances higher to what are accustomed, and it must increase these resistances directly proportional to the increase in muscle strength and should be subject to the following:<sup>2</sup>

- 1 The principle of overload regularly work the muscles against resistance greater than their strength.
- 2 The principle of the increase in muscle strength due to the increase in the resistance applied from rubber according to the degree of severity.

We can conclude the importance of the use of rubber in the training, including the following:<sup>3</sup>

- 1 All against resistance exercises that can be performed in accordance with the principle of rubber tapes powers.
- 2 We can increase or decrease the resistance the easiest and quickest way of using weightlifting and that transfer the place of the hands work or body parts.
- 3 The player avoids using this method, the occurrence of any dangers that may occur when you use any other method. 4 Considered the fastest way to gain power factor durability without waiting for the player for his role in all of the training in use during weightlifting.
- 5 this method gathers between muscle strength in the case of motion, stability, and thereby gain a lot of muscle physiological characteristics achieved by the other way.

## 2.1.3 Bone density

All bone mineral BMD Shows concentrate minerals in the form of bone density or three density or a selected section of the bone, as indicated by all kinds of measuring bone density, the amount of the mineral content of the bone that was measured in a particular section of bone quantity of minerals that indicate the outcome of content in the bones of the body to skeletal metal content<sup>4</sup>.

The positive effect of exercise on the bones, as is physical activity influenced increasing bone mineral density, and I have observed that there are clear differences in bone density among athletes when playing sports, there is a clear difference when you training more than two hours a day at least five days a week and for exercises carried out by young people, the interest rate is (6%) in the density of metallic elements.<sup>5</sup>

#### Chapter Three

# 3 -The research Methodology and its field procedures

## 3.1 The research Methodology

The researcher used the training method – in the method of the parity sample being the most appropriate and easiest methods to achieve the objectives of the research.

#### 3.2 The research Sample

The research sample consisted of youth players volleyball (school specialism) were tested as intentional way for the sports season (2012-2013). their number (14) players distributed randomly by lot into two groups (experimental and control) of (7) for each group, carried out the experimental group method rubber exercises, while the control group carried out method demo conventional by the coach and to ensure homogeneity and equal sample between the two groups (experimental and control), the researcher performed the torsion coefficient (height, age, weight, training age) as shown in Table (1).

After that, the researcher conducting parity between the experimental and control groups using the coefficient value (T) for independent samples and variables for research it has found that the calculated value of (T) is smaller than the tabular value which indicates non-existence of significant differences between the two groups as shown in Table (2).

## 3-3 Appliances used

- 1 Medical balance.
- 2 measuring tape.
- 3 stopwatch.
- 4 Volleyball court.
- 5 Number of volleyballs (6).
- 6 Rubber tapes of width (15 cm length of 2 4.6 cm). Number 14 pieces.
- 7 A device for measuring the density of the metal system.

#### 3-4 Tests used in research

- 1 Test anesthetic Alprlis (lying on a flat bench carrying physical weight.<sup>6</sup>
- 2 Test the bending the arms from oblique and stable lying down position for  $30^7$  seconds tolerance of the arms strength.
- 3 Bending and extending test of the two legs during the 30 second tolerance for the strength of the two legs<sup>8</sup>.
- 4 Bending and extending test of the arms from oblique lying down for 10 sec, speed-strength distinguished by speed of the arms.<sup>9</sup>
- 5 Bending extending test the two legs for 10 second.  $^{10}$
- 6 measure the strength of the grip of the fist muscles. Aldainmomitr device. 11
  - 7 Test the pulling force. 12
- 8 Testing the helm of the crushing and straight beating. 13
  - 9 Test of the skill bulwark.<sup>14</sup>
  - 10-10 Test of the court defense skill. 15

## **3-5 Exploratory experiment**

The exploratory experiment Was conducted on 05/05/2013 for a sample included 3 players from the research community and the purpose of the exploratory experiment is to identify recurrence and groups and the way of conducting exercises resistance for the members of the research sample and the right place for the application of the training units as well as to detect mistakes resulting from them.

### 3-6 means of data collection

- 1 Sources and references, research and studies.
- 2 Testing and measurements.
- 3-observation.
- 4 Personal interviews.
- 1-7-3-Steps of conducting the research.

#### 3.7.1 Pre tests

Pre and post tests were conducted both experimental and control groups. On 05.05.2013 thus

the pre tests were performed for their importance to evaluate the athlete status before conducting the training schedule.

## 3.7.2 Training units

The researcher prepared a training units for the (rubber exercises) to see its effect on the actual strength and bone density and then observe the improvement of the level performance of the basic skills in volleyball, relying on the basis of the expletory test. In order to recognize the pre of exercise on these variables of the Search.

- The application of the approach has been to start from day 2/6/201 up to 08.21.2013 on the experimental group which trained exercises rubber.
- Dish method (12 weeks) and by (4) units per week. If the rubber training exercises carried out before the start of the basic method.
- Have been trained to use rubber. Which contained the exercises for the muscles of the arms and legs and hands are also included for the trunk and side assist.
- The number of exercises (15) Exercise and different situations. The intensity of the training load 3/1
- Worked researcher gradient in the exercises and the time of each exercise and the height of the difficulty of performance with varying loads of training appropriate with the level of the sample.

#### 3.7.3 post tests

Post tests was conducted on 08.23.2013 after the application of the method and within the period of time the researcher was keen to provide all the same conditions in which the pre and the remaining tests are the same.

#### 3-8 statistical methods

The mean - standard deviation - coefficient of torsion. - Test (T) of the samples correlated.

#### **Chapter four**

## 4 - Results, analysis and discussion

Table (3) shows that there are differences between the pre and post tests and in favor of the pre tests attributes the researcher to the effectiveness of the training units, which were adopted on rubber exercises that use exercises resistances which illustrated their importance in building muscle and increasing strength as it indicates (Dia Rashad)<sup>16</sup> the strength exercises have positive effect to develop strength and muscle ability.

Thus, the importance of developing muscle strength as an essential component to show many of the other elements of the physical as well as show performance skills in a good manner in addition to training units which use the rubber robes to develop the muscle strength. As the continuous training leads to the exchange and the metabolism of the material in

the working muscles and this phenomenon caused the result from the exchange and the metabolism of the material in the working muscles and this is noticeable more when performing strength exercises and thus to an increase in the mass and size of the muscles thus increasing the thickness of the bone, especially in places connect bones to muscles <sup>17</sup>. Bock and Dohm also stressed <sup>18</sup>, that physical activity and anaerobic training plays a role in the growth develop the skeletal system During exercise the muscle tension on the bones and effect the body weight is very important to maintain the integrity of the tissue and bone health.22.

Table (5) illustrated the existence of significant differences between the post tests and in favor of the two groups, we can note the differences in means for the search experimental and control groups, there are differences exceeded the experimental group and this is due to the effectiveness of the experimental

approach, containing rubber exercises David Costill 1993<sup>19</sup> indicates that the Weightlifting exercises, resistance training and rubber shock is one of the best exercises to develop muscle strength and this is due to the improvement and increase in bone density for the research sample as due researcher that the effectiveness of resistance training leads to increase bone density consistent with the study what he referred to by Ezzedine Aldbashara that bones affected by sport exercises as the continuous movement necessary to achieve the stiffness of bone integrity with lack of movement leads to bone atrophy and a decrease in bone mineral density, it is known that it increases bone density for the sports practitioners to increase the process of construction and destruction for any increase in the bone content for the organic and inorganic materials.<sup>20</sup>

Table (1). Shows the value of the mean, standard deviation and value coefficient torsion among members of the research sample for the research variables

variables	module	Mean	Standard deviation median Torsion coefficien		Torsion coefficient	Significant
Height	cm	172.11	5.32	172	0.79	Not-insignificant
Age	year	17.88	0.58	17.00	1.05	Not-significant
weight	Kg	8.69	0.83	8.40	0.43	Not-significant
Training age	year	5.23	0.829	5.150	0.142	Not-significant

Table (2). Shows a parity with (T-test) for independent samples in the research variables

Table (2). Shows a parity with (1-test) for independent samples in the research variables							
S.	variables	Experimental group		Control group		Calculated (T) value	significance
		mean		s.d		(1) value	
1-	Test of pulling strength	20.74	1.98	20.36	1.87	0.307	Not significant
2-	test the strength of the left fist	26.32	2.31	26.61	2.53	0.532	Not significant
3	test the strength of the grip right	27.47	27.98	2.47	2.381	0.652	Not significant
4	carry the force of arms	35.60	5.45	35.10	5.33	0.304	Not significant
5	withstand the force of the two legs	23.33	2.33	22.99	2.62	0.225	Not significant
6-	Maximum power	Bing Bryce	19.45	1.66	19.20	1.36	Not significant
7-	strength distinguished by speed/ for arms	21.18	2.81	27.678	2.702	5.61	Not significant
8-	speed-strength / legs	18.68	1.32	19.31	1.86	0.630	not significant
9-	bone density of the two legs BMD	1.21	0.21	1.14	0.26	0.302	not significant
10	bone density of the arms BMD	1.16	0.23	1.19	1.31	0.218	not significant
11	test accuracy beating overwhelming spine bulks	19.23	2.47	19.67	1.23	0.232	not significant
12	test bulwark	13.92	1.33	13.05	1.61	0.504	not significant
13	test of court defense	18.56	2.61	18.32	2.18	0.431	not significant

<sup>\*</sup> Value (v) the degree of freedom at error level (0.05).

Table (3) Shows mean and standard deviations for the pre and post tests for the experimental group.

S.	Variables		Experimental			Calculated	significance
				group s.d		(T) value	D
1-	Test of drawing strength		1.98	24.32	1.581	6.31	significant
2-			2.31	25.46	1.631	7.22	significant
3	test the strength of the grip right		2,381	36.132	1.215	8.65	significant
4	carry the force of arms		5.45	43.61	3.221	8.89	significant
5	withstand the force of the two legs		2.33	33.781	1.482	6.89	significant
6-	maximum power Bing Bryce /		1.66	24.47	2.702	5.61	significant
7-	strength distinguished by speed/ for arms		2.81	27.678	2.702	5.61	significant
8-	speed-strength / legs		1.32	26.13	2.21	4.11	significant
9-	bone density of the two legs BMD	1.21	0.21	1.41	0.62	2.81	significant
10	bone density of the arms BMD	1.16	0.23	1.32	0.51	2.93	significant
11	test of accuracy beating overwhelming spine bulks		2.47	28.31	2.42	7.521	significant
12	test bulwark		1.33	19.67	052	6.261	significant
13	test of court defense		2.61	26.83	1.41	7.301	significant

<sup>\*</sup> Value (v) tabular (2.45) under a degree of freedom (6) when the error level (0.05).

Table (4) Shows mean and standard deviations for the pre and post test for the control group

S.	variables	Experimental group		Control Group		Calculated (T)	significance
				S.d		value	
1-	Test of drawing strength		1.87	21.61	1.23	6.81	significant
2-	test the strength of the left fist		2.53	30.78	1.12	7.81	significant
3	test the strength of the grip right		2,47	29.36	2.16	7.63	significant
4	carry the force of arms	35.10	5.33	37.32	4.66	8.31	significant
5	withstand the force of the two legs		2.62	26.98	2.47	7.98	significant
6-	maximum power Bing Bryce /	19.20	1.36	21.13	2.72	5.72	significant
7-	strength distinguished by speed/ for arms	22.43	2.23	24.71	3.36	5.13	Significant
8-	speed-strength / legs		1.86	21.65	1.93	4.58	significant
9-	bone density of the two legs BMD	1.14	0.26	1.23	0.41	2.66	significant
10	bone density of the arms BMD	1.19	1.31	1.26	0.63	2.38	significant
11	test accuracy beating overwhelming spine bulks		1.23	23.51	2.61	7.42	significant
12	test bulwark		1.61	15.66	1.21	6.11	significant
13	test of court defense		2.18	20.62	1.96	7.81	significant

Table (5). Shows mean and standard deviations in post tests and for the two groups of the research.

S.	variables	Experimental group		Control group		Calculated (T)	significance
				S.d		value	Significance
1-	Test of drawing strength		1.581	21.61	1.23	6.33	significant
2-	test the strength of the left fist		1.631	30.78	1.12	7.21	significant
3	test the strength of the grip right		1.215	29.36	2.16	8.56	significant
4	carry the force of arms		3,221	37.32	4.66	8.91	significant
5	withstand the force of the two legs		1.461	26.98	2.47	7.63	significant
6-	maximum power Bing Bryce /		2.521	21.13	2.72	6.51	significant
7-	strength distinguished by speed/ for arms		2.702	24.71	3.36	7.11	significant
8-	speed-strength / legs		2.21	21.65	1.93	1.25	significant
9-	bone density of the two legs BMD		0.62	1.23	0.41	2.81	significant
10	bone density of the arms BMD		0.51	1.26	0.63	2.65	significant
11	test accuracy beating overwhelming spine bulks		2.42	23.51	2.61	7.15	significant
12	test bulwark		0.52	15.66	1.21	5.21	significant
13	test of court defense		1.41	20.62	1.96	6.38	significant

## Chapter five

## **Conclusions and recommendations**

#### **5.1 Conclusions**

- 1 The method has a positive effect in the development of muscle strength (traction, grip strength left, right grip strength, the strength to bear arms, the power of endurance of the two legs, the maximum power, speed-strength of the arms, the power characteristic of the two legs). 2 Increased bone density experimental group better when compared to the control group, which Aukd to the effectiveness of the experimental method, which included exercises rubber.
- 3 superiority of the experimental group in the development of the experimental group- (traction, grip strength left, right grip strength, the strength to bear arms, the power of endurance of the two legs, the maximum power, speed-strength of the arms, the power characteristic of the two legs).

#### 2-5 Recommendations

- 1 The need to focus attention on the rubber exercises because of its positive effect on the development of muscle strength and bone density.
- 2 Further studies and research on bone density and protection on the other samples.
- 3 The need to take advantage of modern training methods in the development of physical abilities and kinetic phenomenon and not to stay on the training method, traditional and key.

## Arab and foreign sources

- 1 Asmaa Hikmat Fadil, building and rationing of scientific knowledge scale and its relationship of performance skills in volleyball, doctoral thesis Faculty of Physical Education, University of Baghdad 0.2002,
- 2 Amal Al-sadiq Sukina, some components of the body and its relationship with the bone density of the wolegs's practices and other practices of sports activity after menopause. Scientific Journal of Physical Education Issue 33.2002.
- 3 Ahmed Bastawisi, test and measurement, Cairo, Dar Al-Fikir Al-rabi.1994 p 292.
- 4- Bastawisi Ahmed. basies and theories of sports training. Cairo. Dar Al-fikir Arabi.1999.
- 5- Bock Arb and Dom, healthy bones for a healthy life, translation Mabrook to the White House, USA, 1999.
- 6- Sameiaa Khalil Mohammed, principles of sport psycology. F.1, Baghdad Nas co. for printing, 2008
- 8 Dhiaa Rashad. Comparative study of bone density and some of the variables associated with the practices and practices of sports activity after menopause. Cairo. PhD thesis, 1998.

- 9 Abdul Rahman Abdul Hamid Zahir, physiological response gap jump competitions. I 1. Cairo, the center of Al-Kitab for publication, 2000.
- 10 Salum Ali Jawad al-Hakim. Tests, measurement and statistics in the field of sports. Baghdad. Al-teif for printing 2004.
- 11 Ezzedine Aldbashara, sports and medicine, the mutual relationship and the positive and negative pres, F. 2 (Jordan, Mars Publishing House, 1998).
- 12 Ali Fahmi pick, planning, sports training, Alexandria, Knowledge House university, 1996.
- 13 Qais Naji Abdul-Jabbar, Bastawisi Ahmed, tests and principles of statistics in the field of sports, the National Library of Baghdad, 1987.
- 14 Kadhim Amir Jaber, tests and physiological measurements in the field of sports, F. 1.1997.
- 15 Mohamed Sobhi Hassanein and Hamdi Abdel Moneim, scientific bases for volleyball and methods of measurement and evaluation, 2nd Floor, Cairo, the center of Al-kitab for publication, 1997.
- 16 Mohamed Nasr El Din Radwan, objective methods for measuring physical in sport, F. 1, the center of Al-kitab for publication, Cairo, 1998.
- 17 Wadih Yassin, physical preparation for the women, and the Ministry of Higher Education and Scientific Research. Mosul University, college of Physical Education, 1986.

18-www.file / / A.Bone / mineral / Density and ostponosis: bone manerial Densit osteponsis, 2002-3.

- 20-Pre of two types of power training in the vertical jump performance in volleyball players. authors: Gisele Lombardi --- Naiara da Silva Vieira -- Daniele Detanico Journal: Brazilian Journal of Biomotricity Issn: 19816324 year: 2011 Volume: 5 issue: 4 pages: 230-238 provider: Doaj publisher: Marco Machado.
- 21 dr suhad Qasem Al-Mosawi-Training In Different Atmosphere Pressure And Its Influence In Developing Some Physical Functional And Skills Abilities In Volley Ball. The Council Of Thesis Submited To College Of Physical Education For Women -university Of Baghdad.2007.
- 22-Dr. Suhad Qasim Al Mosaw. Afhraa Hussei. Using falling (deep) Jump training units to improve the explosive and characterized by speed forces for the badminton players. PARIPEX INDIAN JOURNAL OF RESEARCH. Volume: 5 | Issue: 10 | October 2016.

#### References

- 1. Ali Fahmi Al-beiq, planning of the sport training, Dar Almaarif Aljamiea, 1996, p.23.
- 2. Abdulrahman Abdulhameed Zahir, psychology of jumping contests, Rad Althaghir, floor1. Cairo, alkutib center for publishing, 2000, p.232.

- 3. Abdulrahman Abdulhameed Zahir, the same source, p. 233.
- 4. <u>www.file//A</u>. Bone/ mineral and ostponosis: bone mineral dentist osteponsis, 2002.
- 5. Amal Alsadiq S., some of the body components and their relation with the bone densities for practitioner women and non-practitioners of the sport activity after menopause, scientific magazine of physical education, issue,2002, p.15.
- 6. Wadeaa Yassein, physical preparation for women, ministry of higher education and scientific research, Musial university, college of physical education, 1986, p532.
- 7. Kadim Jabbbar Amir, tests and psychological standards in the sport field, f,1,1997, p.345.
- 8. Bastoosi Ahmedm tests and standards, Dar Alfikir Alrabi,1994, p292.
- 9. Ali Saloom J. Al- Hakeim, tests and standards also statistic in the physical field, Baghdad. Al Teif for printing 2004, p83.
- 10. Bastoosi A.,, basies and theories of physical training. Cario, Dar Al-fikir Al- Arabi.1999, p.108.
- 11. Mohammed Nasir Aldein, methods of measuring physical stress in sport, F.1, Al-kitab centre for publishing, cario, 1998, p,121.
- 12. Fahmi N. Abdul Jabbar, Bastoosi Ahmed, tests and principles in the sport field, Baghdad, National library, 1987, p.340.
- 13. Asmaa H. Fadhil, building and rationing scale of scientific knowledge and its relation with skillful

- performance in volleyball, dissertation college of physical education, Baghdad University, 2002, p.56.
- 14. Mohammed Subhi and Hamdi Abdul Almunaeim, scientific bases of volley ball and methods of measuring and evaluation, F.2, cario, Al-kitab centre for publishing, 1997, p.245.
- 15. Mohammed Subhi and hamdi Abdul Munaeim, the same previous source.
- 16. Dhiaa R., comparative study of bone density and some changes connected with some practices and the practices of sport activities after menopause, Cairo, dissertation.1998, p.123.
- 17. Sameaa khalil Mohammed, principles of sport psychology. F.1, Baghdad Nas company for printing, 2008, p.237.
- 18. Bock Arab and Dohm, sound bones for healthy life, translation of Mabrook white house, USA, 1999, P.206.
- 19. Effect of two types of power training in vertical jump performance in volleyball players Authors: Gisele Lombardi- Nairara da Silva Vienira-Daniele Detanico Jornal: Brazilian Journal of Biomotricity ISSN; 19816324 year:2011 volume:5 issue:4 pages: 230- 238 provider: publisher: marco machado.
- 20. Eaz Aldein Al-dibshari, sport and medicine the exchange relation and the positive and negative impacts, F.2(Jordin, Dar Mars for publishing, 1998), P.76.

7/3/2017