The excellence Journal in Sciences Techniques Of Physical Activity And Sports
Volume: -07 N°02 -2022 P: 671-690
ISSN: 2507-7201 EISSN: 2602-6899 NDL: 787-2016
ASJP: https://www.asjp.cerist.dz/en/PresentationRevue/208

Levels of nutritional culture and physical performance as one of the causes of sports injury during the application of weight loss training programs in a sample of amateur practitioners.

***Malki amar[1]**

[1] a.malki@cu-elbayadh.dz

Received: 30/06/*2022* ***Accepted***: 30/10 */2022* ***Published***: 15/11 */2022*

Abstract: The study aims to know the levels of nutritional education and physical performance as one of the causes of sports injury during the application of nutritional training programs to lose weight among a sample of amateur practitioners affiliated with the Bears gym at the level of the city of eggs, and the descriptive approach was used to suit the nature of the study on a sample of (17) affiliated who had suffered a sports injury, they were selected on purpose, and to collect data, a questionnaire form was used to determine the level of nutritional education and physical tests to measure the level of physical performance, Based on the analysis of the results, this study concluded that the level of nutritional education of the research sample is average, and it determines the reasons for their exposure to sports injury, and that there are statistically significant differences in the physical performance of withstanding the dynamic force and force characterized by speed, and that there are no statistically significant differences in the endurance of antenna velocity. And anaerobic, and that the level of physical performance in all physical tests was poor, and this is a reflection of the occurrence of sports injuries among practitioners**.**

key words: Food culture - Physical performance - Sports injury - Nutritional training programs - Weight loss**.**

الملخص: تهدف الدراسة إلى معرفة مستويات الثقافة الغذائية والأداء البدني كأحد مسببات الإصابة الرياضية أثناء تطبيق البرامج التدريبية الغذائية لإنقاص الوزن لدى عينة الممارسين الهواة المنتسبين لقاعة التدريب (Bears gym) على مستوى مدينة البيض، وتم استخدم المنهج الوصفي لملائمته طبيعة الدراسة على عينة قوامها (17) منتسب تعرضوا لإصابة رياضية، تم اختيارهم بطريقة عمدية، ولجمع البيانات تم استعمال استمارة استبيانية لتحديد مستوى الثقافة الغذائية واختبارات بدنية لقياس مستوى الأداء البدني، وبناء على تحليل النتائج توصلت هذه الدراسة إلى أن مستوى الثقافة الغذائية لدى عينة البحث متوسط وهي

* *Corresponding author.*

أحدد أسباب تعرضهم للإصابة الرياضية، وأن هناك فروق ذات دلالة إحصائية في الأداء البدني لتحمل القوة الديناميكي والقوة المميزة بالسرعة، وأنه لا توجد فروق ذات دلالة إحصائية في تحمل السرعة الهوائي واللاهوائي، وأن مستوى الأداء البدني في كل الاختبارات البدنية كان ضعيف، وهذا كانعكاس لحدوث الإصابات الرياضية لدى الممارسين.

الكلمات المفتاحية: الثقافة الغذائية –الأداء البدني–الإصابة الرياضية – البرامج التدريبية الغذائية – إنقاص الوزن.

1- Introduction and the problematic of the research

Algeria's cities have witnessed a marked increase in the spread of obesity due to a lack of energy as life style is characterized by a lack of movement and activity, consequently fats accumulate and are kept more in the body than in carbohydrates. In comparison with the increase in obesity rates, which is accompanied by an increase in the amount of energy used from fats and a decrease in the amount of energy from carbohydrates and sugary, the obesity phenomenon is one of the most widespread malnutrition disorders...

Obesity is the accumulation of fatty substances, beyond the limit, after which the risk increases as a result of their storage in tissue(ABDELALI ADEL,2010, page 19).

Obesity in many societies, especially in Algeria, is due to the existence of many causes of obesity related to the environment, lifestyle and physiological factors. The lack of eating of fresh fruits and vegetables and the high use of fats directly or indirectly.

Many people believe that medical treatment is the only way to treat obesity, in addition to surgical operations, but many sources pointed out that exercise should be used to prevent obesity if it is used regularly in conjunction with a diet program as it plays a critical role to contribute to

improving many Diseases such as obesity, heart disease, arteriosclerosis, diabetes and others, in nowadays, there has been increasing interest in sports training, and methods in many modern medical fields.

Sports achievement and healthy nutrition are related to each other, as exercise alone is not enough to achieve the desired results, nutrition alone is not enough to achieve the required achievement, wrong nutrition is often one of the reasons for sports failure, there are many talented athletes with a precious skills, but their performance is disappointing, due to their bad nutrition, This means that an athlete must pay special attention to his health and nutrition so that he can achieve the best achievements, hence, this can only be done if he has the convenient information about healthy nutrition.

Unfortunately, such beliefs are widespread among a large number of athletes, trainers and sports program officials, as there are no Arabic language sources in the issue of sports nutrition, questions arise about the possibility of correcting these beliefs and practices
(Mosaiker Abdel Rahman, 1989, page 10, 11).

Overeating and the inability to control appetite are among the main causes of obesity. Besides depriving oneself from healthy and complete food byobserving harsh diets, may induce to adverse reactions in health effects, in addition it can lead to fail in reaching the important goals of weight loss(ABDELAL Adel, 2010, page, 10,11).

According to Kamel ABDELHAMID, AND Abou El alaa ABDELFETTAH, (Food culture drives the individual to follow healthy eating habits to promote proper nutritional awareness, as unhealthy eating habits and traditions play a

major role in the deterioration of health(Kamel ABDELHAMID, AND Abou El alaa ABDELFETTAH, 1991, page 10).

Food has a special place for athletes in light of what has been proven by several scientific experiments, in terms of close correlation between, nutrition and each of general health, physical fitness components, *physical efficiency*, and performing motor skills, which led athletes to focus on the impact of their *dietary intake*on the efficiency of sports performance.

Most athletic training scientists have agreed that general fitness is the basic component on which the rest of the components needed to reach the so-calledsports body. Some practitioners consider physical fitness in sports activities similar to the base of the house, which is the main pillar of the house, on which all the house's building blocks arebuilt, solid cohesive to all erosion factors, but if the foundation is fragile and weak, the whole house is liable to collapse, and so is the physical fitness of the sport activity. The backbone and the broad base whose importance is not subject to derogation, because its importance has become a basic tenet in physical and sports education. (Kamel ABDELHAMID, HASSANINE Mohamed SOBHI; 1997, page 30).

Despite scientific progress in various medical sciences, the adoption of modern methods of treatment, and the availability of equipment and specialists in the preventive and curative fields, injuries are still increasing and endangering the performance of athletes in various games and activities, sports injuries occur often during competitions and trainings, it ariseswith the intensity of

sports competition, the more intense sports competition are, the more injuries are likely contractedespecially injuries to the motor system, due to the stress placed during the effort on the joints, ligaments, muscles, their tendons and vertebrates, which may cause severe or chronic injury. It is worth to mention that such injuries may also occur in entertainment sports, school sports programs and sports for the disabled.(Samiaa Mohamed KHALIL, 2008, page 07).

The body needs a balancein the functioning of all its different organs - the neurological,*musculoskeletal*, respiratory*system,* and other organs that need movement and integrated activity, *given their detrimental impact*on the activity of the body andits protection from injury and diseases, which can occur in case of imbalance. The science that studies injuries contracted in the sports field, their causes, treatment, and ways of preventing them is called the science of sports injuries.(Samiaa Mohamed KHALIL, 2008, page 11).

The increase in the rates of athlete victims of injuries, playgrounds injuries and the complications resulting from them, despite the tremendous developments that covered most aspects of life, especially in the field of natural treatments and others, have become a phenomenon that requires the attention of all athletes and those interested in the field of sports. The study of cases in amateur practitioners, especially during the implementation of training programs and weight-loss diets, is of great importance as it helps to avoid injuries and totreat the injured part, proceeding with first aid at the beginning. Sudden stress and overstress are the main causes of the injury, usually due to an application error, an unexpected accident, or may be the result of a minor, repeated injury to the same part.

In light of the above and through the interest of the two researchers in this field, their familiarity with many scientific references and previous studies related to the subject of research, as well as the interview with some practitioners suffering from excessive weight and obesity,about their level in nutritional culture and the knowledge of the components of food (both quality and quantity), the obesity they cause, its effect on burning and compensating the energy required for the physical activity in all its disciplines.The researchers found that some non-athletic practitioners lack the necessary information about healthy food and nutrition, that they lack awareness of the components of food and its impact on weight gain and obesity, and on the exercise of physical activity, which leads us to ask the following question: What the relation between the nutritional culture and physical performance that cause sports injury during weight loss training in a sample of amateur practitioners?

2- To answer this question, the following hypothesis was raised:

- There is a negative effect on the level of nutritional culture and declining physical performance in the occurrence of sports injuries during the application of nutritional training programs for weight loss in a sample of amateur practitioners.

3-General objective of the study:

- To recognize the relationship between the nutritional culture and the level of physical performance of those who practice weight loss programs and the reflection of this relationship on sports injury.
- To determine the level of nutritional culture among practitioners before and after practicing training programs to reduce weight.

- To know the differences between the level of nutritional culture of practitioners of weight loss training programs depending on sex.

5- The methodological procedures used in the study:

5-1 Approach of study: the descriptive approach has been chosen to deal with the problematic of the research.

5-2Sample of the research: the community of study consists of 53overweighted members of the training room (Bears gym), city of ELBAYAD, divided over several groups.

The sample of the research included practitioners of weight loss programs (male), who were chosen in a deliberate way based on the practitioners who were exposed to injury with different degrees during the application of training programs and diet for weight loss, (17) practitioners who suffered an injury according to the administration and practitioners.

5-3-Fields of study:

5-3-2Spatial field: the study has been conducted at the hall gym (Bears gym) of ELBAYAD.

5-3-3 Timeframe field: Physical tests were conducted; questionnaires were distributed and sample of the research was selected on March 2021.

5-4- Procedural adjustment of search variables:

5-4-1- Independent Variable: Nutritional Culture - Physical Performance.

5-4-2- dependent Variable: sports injuries.

5-5- Tools of the study:

To resemble information and data on the identification of food culture in the research sample, the questionnaire was used. Physical tests were usedin order to determine the level of physical performance.

5-5-1- Steps to prepare and build search tools:

1- Questionnaire of nutritional food:

It consists of 22 phrases to measure the level of nutritional culture in the practitioners of weight loss programs for males and females, where it consists of three degrees for the answer (I agree three degrees, I don't have two degrees of information, I don't agree with one degree). This questionnaire was set from several books, including: "nutrition of athlete, nutrition to achieve the best sporting achievement", Abdel Rahman Mosaiker, 300 questions about food and nutrition, Ghassane Faicel Mohcen.

Measuring degrees of response according to the Relative Impor

Table N°1 indicates the approximative balance of Relative Importance Index according to Lycert

General direction	Relative Importance Index	Lycert triple
Low	0<RII≤0.33	I agree
Medium	0.34≤RII≤0.66	**I do not have information**
High	0.67≤RII≤1	I do not agree

Quintuple Scale: tance Index scale

2 – Physical tests used in the study:

1/- Tests of pressure (Quinn,2020)

Pressure exercises are a great way to build upper body strength and endurance, which is a good way to test and withstand the strength of upper body muscles.

Pressure exercises are a great way to build upper body strength and endurance, such a great way to test and withstand the strength of upper body muscles.

Test objective: Measure the dynamic strength endurance of upper limbs.

Required equipment: do not exist.

Procedures:

- Short warm-up before any test.
- Startingwith push up position with hands and feet, with spacing between hands and shoulders and fully extending elbows.
-With a straight line from toes to hips and shoulders, lower the upper body so the elbow is 90 degrees.
- Pushing up to starting position.
- Continue this model and complete as many iterations as possible without breaking the model.
- Registration: After completing the test, the results are compared with criteria, and provide recommendationsrelated to age and gender.

2/- Seating test from the stasisto maximum degree of repetition within one minute. (Sit- up Tes,2020).

The sit-down test provides a good estimate of torso and abdomen strength.

Test objective: Measure the dynamic force endurance of the torso and abdomen.

Tools of the test: Mekati

Actions: Lying on the floor, with bending legs, and putting feet flat on the floor, tightening abdominal muscles and sitting slowly, hand should touch the top of the knees, lying on the starting position and beginning exercise,then calculating the number of repetitions within one minute with calculation of correct repetitions.

Recording results: Calculate the highest number of iterations within one minute, and compare them with the standard table.

3/ - Test 300 meters (Wood, 2020):

The 300 metre race is a long running competition test, and anaerobic capability test, an important feature of fitness to perform short rounds of intense effort.

Objective: measuring and anaerobic capability.

Required equipment: track or floor running, Mikati, cones marked around the track.

Preliminary test: explanation of testing procedures for the examinee.

Conduct a checkfor health risks and obtain prior consent.

Prepare models and record basic information such as age, height, body weight, sex and test conditions, examine the floor.

Procedures: the aim of this test is to complete 300 meters as quickly as possible.

Make sure you make a good warm-up before the effective test performance.

All participants line up behind the starting line, when it comes "go," the clock will start, and it will be operational.

Registration: The total time taken to make 300 meters for the nearest part of the second.

4 /- Cooper Running Test 2.4km/1.5 miles (Robert wood, 2020).

The Cooper Running Test is 2.4km/1.5 miles, simple running test for aerobic fitness, only requires a timing clock and a running track, this test is an alternative to the Cooper 12 s test.

Target: This test measures aerobic fitness.

Required equipment: 2.4km flat running track, stopwatch, registration papers.

First step: Explain the test procedures to the examinee.

Conduct a health risk check and obtain prior consent.

Prepare models and record basic information such as age, height, body weight, sex and test conditions, examine the floor.

Procedures: the aim of this test is to complete 2.4 km track as quickly as possible.

At the beginning: all participants line up behind the starting line.

When it comes off, the clock is turned on and they start running at the speed that suits them, thoughwalking is permissible, but it is not highly recommended.. Upon completion of the test perform light walking cycles.

Registration: The total time to complete the course is recorded.

5-8- Statistical methods: The obtained results were processed by the (SPSS) program according to the appropriate statistical equations.

6. Presentation, analysis and discussion of the results of the research hypothesis:

There is a negative impact on the level of nutritional culture and poor physical performance in the occurrence of sports injuries during the application of weight loss training programs in a sample of amateur practitioners.

Presentation and analysis of the food culture questionnaire.

Table 02 shows the level of nutritional culture in the research sample.

		Arithmetic Average	Relative importance index	Generale direction
01	Fish oil is one of the most important iodine-rich sources	1.37	0.45	Average
02	An adult should drinkfrom 2-3 a liter of water daily.	1.50	0.49	Average
03	An adult should eat legumes from 3 to 5 times daily.	1.28	0.42	Average
04	Calcium and phosphorus are components for building bone and teeth.	1.43	0.47	Average
05	Proteins are an essential source of muscular construction.	1.21	0.39	Average
06	Proteins are an essential source of muscular construction.	1.56	0.51	Average
07	Lack of calcium ingredient causes osteoporosis.	1.46	0.43	Average
08	Providing regularly with carbohydrate is essential for maximum athletic performance.	1.31	0.43	Average
09	Not eating breakfast can have bad consequences for nutritional behavior.	1.00	0.33	Average
10	Vitamins are organic substances the body needs to grow and reproduce.	1.53	0.50	Average
11	One of the basic functions of food is to satisfy hunger.	1.46	0.48	Average
12	The low percentage of fiber in food leads to colon disease	1.46	0.43	Average
13	Laziness, fatigue, lethargy and pale face are the most important symptoms of iron deficiency	1.15	0.37	Average
14	Food sources of meat phosphorus of all kinds	1.21	0.39	Average
15	Exposing food to protects it from decay.	1.96	0.64	Average
16	Vitamin K is an anti-bleeding vitamin or vitamin important for blood clots.	1.09	0.35	Average
17	Grain and its products are good sources of iron.	1.09	0.35	Average

18	Body does not need energy at rest and work stoppage.	1.03	0.35	Average
19	Frequent water intake leads to fluid retention	1.18	0.38	Average
20	Overeating salt leads to weight gain.	1.06	0.34	Average
21	Eating breakfast gives the body one-third of its daily needs.	1.31	0.43	Average
22	Leafy vegetables are a rich source of vitamin K.	1.21	0.39	Average

Through the above table and through the responses of the sample research practitioners of weight loss programs, during a training and nutritional program, who have suffered sports injuries at various levels, they are characterized by an average cultural nutritional level when the relative importance index values are between (0.33) as the lowest value and (0.64) as the highest overall value for the medium term.

2-Determine the levels of physical test results applied to the basic research sample.

To ascertain this, the student researcher calculated the difference between the *arithmeticaverage* and the hypothetical average of the physical tests under study by conducting a single sample test (v). The results were as follows:

Physical variables	Applied tests	***arithmetic average***	***Standard deviation***	Hypothetical average	Value "T" calculated	(Sig)	***statistical significance***	Level
Dynamic Force Endurance	Test Of pressure	19.99	8.46	33	5.45	0.00	Significant	LOW
velocity strength	Seating Test from lying at maximum iteration for 1M	27.66	8.19	33	2.25	0.04	Significant	LOW
Anaerobic Endurance	300 meters test	66.26	8.15	62.5	1.60	0.13	Insignificant	LOW
Aerobic Endurance	2400meters	13.93	2.99	12.72	1.40	0.18	Insignifi	L

	test						cant	O W
Physical performance		Degree of freedom= 11			Level of significance =0.05			

From the table above showing the results of the physical tests for measuring performance on the research sample, in the pressure test, *arithmeticaverage*was estimated at 19.99 with a standard deviation of 8.46, while hypothetical averagewas 33,applying (T) test on one sample in terms of number, the Value "T" calculated,was at: 5.45 with a significant probability value of 0.000, which is lessthan the significance level of 0.05, these results confirm that the difference is significant and statistically significant at the degree of freedom estimated at: 11 and the significance level of 0.05, which means that the research sample's dynamic strength endurance level is weak.

The results on sitting from lying test, for the maximum iteration in one minute,indicate that *arithmeticaverage*was estimated at: 27.66 with a standard deviation of 8.19, while hypothetical averagewas 33 applying (T) test on one sample in terms of number, the Value "T" calculated,was at: 2.25 with a significant probability value of 0.04, which is lessthan the significance level of 0.05, these results confirm that the difference is significant and statistically significant at the degree of freedom estimated at: 11 and the significance level of 0.05, which means that the velocity strength in the research sample is weak.

The results from 300 meters test, indicate that *arithmeticaverage*was estimated at: 66.26 with a standard deviation of 8.15, while hypothetical averagewas 62.5 applying (T) test one sample in terms of number, the Value "T" calculated,was at: 1.60 with a significant probability value of 0.13, which is greaterthan the significance level of 0.05, these results confirm that the difference is insignificant and statistically insignificant, at the degree of freedom estimated at: 11, and the significance level of 0.05, which means that the Anaerobic Endurance in the research sample is weak.

The results from 2400 meters test, indicate that *arithmeticaverage*was estimated at: 13.93 with a standard deviation of 299, while hypothetical averagewas 12.72, applying (T) test one sample in terms of number, the Value "T" calculated,was at: 1.40 with a significant probability value of 0.18, which is greaterthan the significance level of 0.05, these results confirm that the difference is

insignificant and statistically insignificant, at the degree of freedom estimated at: 11 and the significance level of 0.05, which means that the AerobicEndurance in the research sample is weak.

Thus, it can be said that there are statistically significant differences in the physical performance of Dynamic ForceEnduranceand velocity strength, that there are no statistically significant differences in aerobic and anaerobic speed endurance, and that the level of physical performance in all physical tests wasweak.

Based on the hypothesis, which presumes that there is a negative effect, on the level of nutritional culture and the weakness of physical performance, in the occurrence of sports injuries during the application of food training programs, tolose weight, in a sample of amateur practitioners, and based on the analysis and presentation of the results, the two researchers concluded:

- The level of nutritional culture in the research sample is average, and it reveals the reasons for their exposure to sports injuries.
- There are statistically significant differences in physical performance to withstand Dynamic Force Enduranceand velocity strength, there are no statistically significant differences in aerobic and anaerobic speed endurance, and the level of physical performance in all physical tests was weak, as a reflection of the occurrence of sports injuries in practitioners.

The conclusion reached through the tables reveals that the level of nutritional culture in the research sample is characterized by a moderate degree, that there are statistically significant differences in physical performance to withstand Dynamic Force Enduranceand velocity strength, and that there are no statistically significant differences in aerobic and anaerobic speed endurance. The level of physical performance in all physical tests was weak.

Among other things, the practitioners of weight loss programs of the Bears gym in the city of Elbayad are characterized by weak physical performance. This is reflected in the diets applied to the majority of the research sample. Obesity degrees, excess weight and training programs are highly unrationed and have an adverse impact on physical performance, thus exposing them to injury and the possibility of future occurrence.

This result is consistent with the findings of a study (CHRARA, 2019) which aims to determine the ideal weight of the athlete for good performance and the specifications of healthy and balanced food for

the athletes of the national team of male Judo (22-19 years) and analysis the effect of appropriate nutritional need to adjust the weight loss process in the study sample for fifteen days. As a result of the research, the weight loss process by reducing the calorie intake leads to lose body weight, lean mass, body water and body mass index and does not affect fat mass. It also adversely affects the performance of judo in male judo national team athletes. (22-19 years) and that the stability of 15 days' weight loss is not the appropriate strategy for improving performance.

The study (Amar Muthanna Jameel, 2010), which aims to lose weight for over weighted athlete in an approved and intended manner,to make the player ready to participate in the tournament with his body free of excess fat, using various methods and the impact on some anthropometric, physiological and achievement variables, and his motivation in the youth team of the province of Diwaniyah to body building, one of the most important results is the use of a compound. Fat burner has a major role in weight loss and lowering the body's lipid layer for body builders, and the need not to use the (diet) program quickly and abruptly.

From the foregoing, the two researchers believe that human health is highly correlated with human food, so food health has been crucial for those working in this field, because unhealthy food (corrupt) has a negative response to human health, and affects him with many serious and deadly diseases. Therefore, all factors affecting the food, including not only hygiene, but also all factors associated with it, must be taken into account in order to reach the consumer clean and free of diseases and injuries, palatable and retained in its dietary health (ELHAOUI ELSAYED Yahia Ismail, 2002, p. 61).

Based on the foregoing, food culture has an important role to play in determining the individual's access to nutrition. and in choosing the type and quantity of food according to the daily needs of the body, In determining how much food needs according to many variables, the most important of which is the stage of growth old age, health condition, nature of work, or activity performed by an individual, morbidity, climatic conditions and nutritional education and culture play an important role in providing the individual with important information on the functions of food according to its components and on ways of preventing diseases, as well as in providing him with types of knowledge associated with methods of preparing, cooking and

preserving food, these methods may increase or decrease the nutritional value of this majority (Al Hamahmi Mohammed Mohammed, 2000, p. 23).

Based the foregoing of the study of Sanaa Pugh (2005), aiming to reveal the relationship between the level of nutritional health awareness and the dietary practices of university student athletes, and to know the level of knowledge of nutrition and its association with nutritional practices, among the most important findings, there is a strong correlation between the level of food awareness and the level of nutritional practices,women's nutritional practices are better than males and the same applies to the level of awareness.

Elrokban 2009 says that the availability of food is undoubtedly important, but food awareness is equally important, and knowledge of food varieties, benefits, harms and healthy food behaviour is a way to do so. and healthy nutritional behaviour is one of the most important pillars of building healthy body, healthy food is a safe path to ensure health, unhealthy nutritional behaviour has a significant impact on present and future health. So, it was necessary for those interested in the health of the society to be alert and aware of it. and the restoration of common sense by society, the call to fight obesity and the establishment of the principle of balance between the charged energy and the consumed energy, rejection of the binge in eating foods, it was said "stomach house of disease, diet head of every medicine (ELROKBANE Mohammed bin Osman, 2009, p. 12).

According to Mahmoud, 2016, the results of scientific studies on the topic of nutrition in sport confirm that such nutrition must be the same as that planned for modern human. (non-athlete) taking into account that it is complementary to the additional burden required by the nature of his physical activity, to provide the energy necessary to meet his needs for the various nutrients necessary for him and for both training periods and competitions, taking into account a difference in the amount of energy and daily needs of such nutrients or their established ratios by age, gender, type and intensity of activity or physical effort by athletes. (Mahmoud, 2016, p. 170)

Healthy food is one of the most important factors of any training and physical program, and the individual's needs for food are determined by his or her rate of development, health condition, body size and amount of physical activity.

Violent physical activity depends heavily on working muscles and providing them with their needed food, some studies on nutrition and training have revealed that the presence of carbohydrates stored in the form of glycogen in insufficient quantity leads to reduction in the energy required for physical activity, in the case of activity that requires severe muscle work such as body building, an increase in the amount of protein with food will help to accelerate muscle volume increase and prevent anemia. (Mansoure, 2016, p. 136)

Sports achievement and healthy nutrition are interrelated. Exercise alone is insufficient to achieve the desired results, and nutrition alone is insufficient to achieve the desired achievement (Mosaiker Abdel Rahman, 1989, p 05).

Training is the overall process of meaningful improvement of sports performance achieved through a planned program of preparation and competitions, an organized practice process characterized by dynamism and continuous change. Sports training also deals with a human being with biological, psychological, physical and social characteristics. It is therefore based on various scientific principles and theories in the development of physical construction and the development of motor characteristics. It is linked to social sciences, medical sciences, movement sciences and educational sciences. We should also know that sports training is not isolated, but influenced by social and sporting construction and systems that operate within it to a large or small degree. (Abdelrahmane CHIHA, Chafik, et Elnajar, 2011, page 13).

When the training process is carried out, individual differences must be taken into account because the players differ between themselves, whether in physical, functional or skilled abilities as well as psychological aspects, taking into account these aspects of training is an important factor in the success of the trainer, this allows him to

carry out training to without a complaint from the players, thus enabling each player to develop his or her general and private capabilities, and reach a better level in the technical aspects of the activity. (Elhaoui,2002, page 18).

In order to be a successful athlete, he must learn to read the signs given by his body. If the injured organ is in pain during rest, the exercise must be halted. Once the pain from the injured part is stopped during rest, athlete can resume the exercise at the lower rate, slowly and once the exercise continues without pain, he can increase the performance in the exercise, If the pain returns again, he should slow down again. At the same time, an injured person must exercise some activity without provoking the the limb, which is very important for maintaining a level of fitness, especially so-called cardio fitness, for example if the injury is in the soles of the foot and causes harm when running, a bike can be used, If the injury is in the shoulder, athlete can run,but if the injury is in the leg, he tugs the rowing machine out, can. Things to be kept in mind,the athlete benefits more from activity and exercise than from sitting in a warm bathroom or rest in bed.

Suggestions:

5-3-3 - **This study suggests:**

- Effective handling of injuries occurring during the implementation of training and nutritional programs, through awareness-raising, and proper application of dietary regime.
- Outreaching practitioners of training programs for weight loss about the relationship between food culture, physical activity, health and obesity through modern communication channels and in a way that suits the culture of the society under study.
- Stressing on the need to develop strategies aimed at improving nutrition education, especially with regard to nutrition and health resources.
- Paying attention to food culture topic, and linking it to training programs and the exercise of the basic fitness in the future of researches.

- Encouraging scientific studies and researches to link sports medicine with the application of food training programs to achieve the best results and avoid the occurrence of sports injuries.
- Highlighting the need for training personnel to identify the correct principles and bases for using different food systems to support the training process.
- The need to prepare and set the exercises according to the degree of obesity and nutrition cycles followed in a way that suits the effective practice needs.

Refferences:

Books:

ABDELHAMID Kamel, MOHAMED SOBHI Hassanine, 1997 ED3, *Fitness and its components theoretical foundations physical preparation, methods of measurement*, Qairo, Dar Elfikr Elarabi.

ABDELHAMID Kamel, ABDELFETTAH A, E, 1991, ED1, *nutrition for athletes*, Qairo, ELKITAB center Distribution.

ADEL Abdelal, 2010 ED1, *Slimming and nutritional advice for health problems*, Egypt, Fajr Elislam.

A, Mahmoud, 2016, *Sports Injuries Types - Treatment and Rehabilitation*, Amman, home from the Elmouhit to Elkhalij for pulication and distribution.

ELHAOUI ELSAYED Yahia Ismail2002 , ED2, *between the traditional and the modern style*, Egypt, Arab center for distribution.

ELHAOUI I, Y, 2002, *arab trainer between the traditional style and the modern style in the field of training*, Egypt,arab center for distribution.

ELHAMAHMI Mohamed Mohamed, 2000, *nutrition for life and for sport*,Qairo, printers of Amoune (www.hollanduniversity.org).

ELROKBANE Mohamed Ben Othmane, 2009, *obesity, ailment and remedy*, Riyad, city of Abdelaziz of sciences and techniques.

CHRARA Elalia, 2019, *Weight Loss Effect by Reducing Calories Taken on Some physical measurements, and performance of the judo* (PHD thesis), institute of physical education and sport, Mostaghanem, university of Abdelhamid IBN BADIS.

MOHAMED KHALIL Samia, 2008, *injuries of Athletes, treatment and rehabilitation*, Iraq, Iraqui sport academy.

N, A, Abdelrahmane, CHIHA, S, A, M,M,Chafik, ELNADJAR,Y, H, 2001 ED1, *Trainer, training profession and application*, Qairo, Dar Elfikr Elarabi.

Mosaiker Abdel Rahman, 1989, ED1, *Nutrition of athlete, healthy nutrition for achieving the best sporting achievement*, Bahrain, Arab Company for Printing and Publication.

J, Mensoure, 2016, *Training in body building*, Amman, Arab Society for Publication and Distribution.

Websites :

Amar Muthanna Jameel, 2010, *Various methods of weight loss and their impact on some anthropometric and physiological variables and achievement and its motivation in the youth team of Diwaniyah governorate for body construction (doctoral thesis). Faculty of Physical Education and Sports Sciences, Iraq: Qadisiyah University,* retrieved on 18,06,2020,from http://qu.edu.iq/spo/?page_id=510.

Quinn, E. (2020, 02 19). *Test Your Upper Body Fitness with The Push Up Test.*viewed on2610, 2020, sur verywiil fit: https://www.verywellfit.com/*push-up-test-for-upper-body-strength-and-endurance*-3120272.

Robert wood. (2020, 03 09). 2.4 / 1.5-*mile cooper run test*. retrieved on topend sports website: https://www.topendsports.com/testing/tests/2-4-km-run.htm.

Sit-up Test. (2020). viewed on 10 16, 2020, *testsforsports*: https://testsforsports.com/strength/sit-up-test.

Wood, R. (2020, 06 17). *300 meter Run Anaerobic Test*. retrieved on topendsports: https://www.topendsports.com/testing/tests/300m-run.htm.