

# **Food disorders and their relationship to anorexia nervosa in athletes of high-levels of sports.**

**PROF. DR / Elham Esmail Mohamed Shalby  
Faculty of Physical Education - Helwan University**

**PROF. DR / Hanan Ali Hassanein  
Faculty of Physical Education - Helwan University**

**PROF. DR / Maha Abdo Sweilem  
Faculty of Physical Education - Helwan University**

**Researcher / :Heba tallah rashid mukhtar 'abu  
alyzyd alnajar**

**Faculty of Physical Education - Helwan University**

## **Introduction and research problem:**

Eating disorders represent the relationship between the individual's psychological state and the urgent desire to eat or refrain from eating, and this relationship is not new, as it has been known for a long time. Food and desire were also considered a means of expressing the individual's tension, disorder, or both. Psychosomatic disorders(5:8)

As Sowell (2000) drew a profile of the predictors of anorexia nervosa and neural insufficiency in adolescents, the results of the study revealed that females are more exposed to eating disorders than males, and eating disorders have been linked to a number of predisposing factors for the emergence of these disorders, including

a low estimate Self, dissatisfaction with body image, depression, and Egyptian environment disorder(12:459-453)

"Ghazali Abdel-Qader Muhammad" (2009) states that the body image stems from emotional and subconscious sources and represents an essential component of the concept of the self. And the positive or negative feelings and directions that accompany it from that mental image of the body. (4: 202)

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\* Professor Emeritus and former head of the Department of Vital Health Sciences, Faculty of Physical Education for Girls - Helwan University .

\*\*Professor and Head of the Department of Health Education, Department of Vital Health Sciences, Faculty of Physical Education for Girls - Helwan University .

\*\*\* Professor of Sports Psychology, Department of Sports Psychology, Faculty of Physical Education for Girls - Helwan Universit

The research problem lies in the fact that there is a large percentage of players with high levels (university students) in the twenties and frequencies on the health club that the researcher works with resort to satisfactory ways of losing weight, especially

when competition approaches in the types of sports that require specific weights and this nutritional phenomenon has spread

Psychology

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"Pathological" pathology among female players in serious and individual and group games, and female players resorting to unhealthy behaviors to lose and adjust their weight or increase it, and he may not be fully aware of the name of these diseases as a "disease of losing" their "nervous appetite"

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(Anorexia nervosa) or neurodegenerative disease "(polemia nervosa) There is a large percentage of young girls (university students) and even married young women in their twenties and thirties who are married and unmarried and who are reluctant to the health club are not satisfied with the image and shape of their bodies at all, whether they suffer From obesity or with thinness, or even those with reasonable weights commensurate with their height and age, everyone is not satisfied with the image or the shape of their bodies

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They want to change this image, which affects their lives from a psychological, physical and organic point of view through exercising or resorting to unhealthy rapid weight-loss methods, which is the search for close proximity among all the frequencies on the health club, especially young girls who imitate some famous art in the body image And try to enjoy the external beauty look like them even if they follow unhealthy methods and mechanisms in this.

### **Terminology used**

#### **Eating Disorders:**

You know her Dr. / Elham Ismail Mohamed Shalaby (2000) as: "a set of unhealthy behaviors when eating a certain type of food and resorting to pathological" pathological "methods to get rid of weight and related to the mechanisms of output and lose body weight" and is divided into several types, the most important of which is "anorexia nervosa" And nervous insensitivity. (2:10)

#### **Anorexia Nervosa** •

" Cartier and colleagues know(2009)

:Anorexia Nervosa ( 2009 ) Carter J.C. M c Farlance et al

"Serious psychological disorder, as the individual who has anorexia continues to lose weight to a maximum degree, as weight loss in this disorder results from severe and selective food restrictions, and it can also be associated with severe exercise in sports, the use of laxatives and diuretics, and the exclusion of foods that you realize are obese They are excluded from the diet. (7: 202)

### **Purpose of the study**

1. The relationship of nutritional disorders and the measure of anorexia nervosa among women with higher sports levels.

Study assumption:

1- There is a statistically significant relationship between nutritional disorders and the measure of anorexia nervosa among women with higher athletic levels.

### **Search procedures**

**Research Methodology** : The researcher used the descriptive method (by survey method).

### The research sample:

The sample of the research was chosen by the (intentional-random) method of some female players, some individual and group games at the university level, the average age of them (23:19) years who suffer from eating disorders "food disorders, and the number of 60 players (30) of players for individual activities, ( 30) For team games, the following table shows that.

**Table (1)**

**The number and percentage of the research sample in the variable for the athletes of the higher mathematical levels**

( 60= ن)

<b>%</b>	<b>the number</b>	<b>the games</b>
.33	8	<b>Karate</b>
20	12	<b>The basket</b>
20	12	<b>Volleyball</b>
10	6	<b>swimming</b>
10	6	<b>handball</b>
10	6	<b>Judo</b>

10	6	Gymnastics
6.67	4	Athletics
100	60	Total

Table (1) shows the number of posts for each sport and the percentage.

**Table (2)**

**Statistical characterization of the research sample in the variables under investigation**

(60= n)

Randomizatio		Normality		$\alpha_3$	S	X	measruin g unit	Variable s
P- (value)	Z	P- (value)	Z					
0.36	-0.92*	0.0	1.14	1.0	1.16	20.33	Year	AGE
0.05	-2.01*	0.0	1.37	0.4	13.5	64.38	Kg	weight
0.11	-1.06*	0.5	0.80	-0.20	11.3	174.1	Centimeter	Length

(0.05)  $\leq$  (p) Significance when a value\*

Table (2) shows the arithmetic mean, the standard deviation and the torsional coefficient of the research sample in the variables (age - weight - length), and the data indicate that the torsional coefficient values for the research sample are between (+3), which indicates that the sample data does not contain positive or negative torsions. As well as the presence of statistically significant differences in the values of random and natural tests in the variables (age - weight -

height), which indicates their normal and random distribution, which confirms the parity of the sample members.

### **Tools and devices used in the research:**

1- The researcher used the eating disorders questionnaire, "nutritional disorders" in the fourth diagnostic and statistical guide for mental and mental disorders prepared by the American Medical Association, which was statistically treated and scientific transactions were carried out and applied in previous research on the Egyptian environment.

2- The researcher used the Arab scale for anorexia nervosa, which was prepared by Ahmed Abdel-Khaleq and Maysa Ahmed El-Nayal, which consists of (15) paragraphs and a five-year scale (no, rarely, sometimes, always a lot) and an analysis of the fifteen items of the scale globally and extracted four factors or components that absorbed (55.6% of the combined variance and these factors (anxiety, hate food, symptoms of anorexia, intentional weight loss).

3- Opinion polls experts in the questionnaire forms.

4- Analyzing Arab and foreign scientific references and previous studies, especially with regard to questionnaires that dealt with nutritional disorders, intelligence to avoid body image, scale of nervous appetite, and multiple self-relationships.

### **Survey study:**

The researcher presented the expressions of the questionnaire to a practical sample of (20) first-class female players from the Zamalek Club and the Olympic Center in Maadi from different ages in the activities of swimming, athletics, volleyball and handball, in the period from 1/9/2019 to 7/9/ 2019 This study aimed to identify the following:

1- Determine the time period for the research sample to complete the form.

-2The degree of clarity of the questionnaire expressions, their suitability, the nature of the research and the ease of understanding their terms.

3- How to obtain and interview the sample.

**References of the results of the survey study to:**

1- The time of application of the questionnaire ranges between (10-15) minutes

2- Clarity of questionnaire phrases and ease of understanding their vocabulary and the way to fill it out.

3- The research sample must be interviewed and identified before completing the form with the nature of the study.

**Scientific transactions of the questionnaire:**

First: Honesty: The researcher used the validity of internal consistency by applying the questionnaire to a sample of (20) players from the same research community and finding correlation coefficients between the degree of each individual and the total of the axis, as well as between the axes and the overall degree of the measures, to indicate their sincerity. The following table shows that

Table (3)

Correlation coefficient between each phrase and the q questionnaire as a whole to calculate the validity of the internal consistency of the questionnaire "nutritional disorders"

(20 =n)

P-(Value)	r	م															
0.00	<b>0.82*</b>	٥١	0.00	<b>0.75*</b>	٤١	0.00	<b>0.66*</b>	٣١	0.00	<b>0.83*</b>	٢١	0.00	<b>0.65*</b>	١١	0.00	<b>0.72*</b>	١
0.00	<b>0.70*</b>	٥٢	0.00	<b>0.70*</b>	٤٢	0.00	<b>0.75*</b>	٣٢	0.00	<b>0.70*</b>	٢٢	0.00	<b>0.70*</b>	١٢	0.00	<b>0.75*</b>	٢
0.00	<b>0.83*</b>	٥٣	0.00	<b>0.81*</b>	٤٣	0.00	<b>0.73*</b>	٣٣	0.00	<b>0.75*</b>	٢٣	0.00	<b>0.70*</b>	١٣	0.00	<b>0.82*</b>	٣
0.00	<b>0.70*</b>	٥٤	0.00	<b>0.69*</b>	٤٤	0.00	<b>0.82*</b>	٣٤	0.00	<b>0.70*</b>	٢٤	0.00	<b>0.79*</b>	١٤	0.00	<b>0.70*</b>	٤
0.00	<b>0.75*</b>	٥٥	0.00	<b>0.75*</b>	٤٥	0.00	<b>0.68*</b>	٣٥	0.00	<b>0.81*</b>	٢٥	0.00	<b>0.66*</b>	١٥	0.00	<b>0.83*</b>	٥
0.00	<b>0.75*</b>	٥٦	0.00	<b>0.70*</b>	٤٦	0.00	<b>0.70*</b>	٣٦	0.00	<b>0.69*</b>	٢٦	0.00	<b>0.75*</b>	١٦	0.00	<b>0.70*</b>	٦
0.00	<b>0.70*</b>	٥٧	0.00	<b>0.81*</b>	٤٧	0.00	<b>0.66*</b>	٣٧	0.00	<b>0.65*</b>	٢٧	0.00	<b>0.75*</b>	١٧	0.00	<b>0.75*</b>	٧
0.00	<b>0.81*</b>	٥٨	0.00	<b>0.69*</b>	٤٨	0.00	<b>0.75*</b>	٣٨	0.00	<b>0.70*</b>	٢٨	0.00	<b>0.66*</b>	١٨	0.00	<b>0.70*</b>	٨
0.00	<b>0.69*</b>	٥٩	0.00	<b>0.75*</b>	٤٩	0.00	<b>0.73*</b>	٣٩	0.00	<b>0.70*</b>	٢٩	0.00	<b>0.75*</b>	١٩	0.00	<b>0.81*</b>	٩
			0.00	<b>0.70*</b>	٥٠	0.00	<b>0.82*</b>	٤٠	0.00	<b>0.83*</b>	٣٠	0.00	<b>0.73*</b>	٢٠	0.00	<b>0.69*</b>	١٠

(0.05)  $\geq$  (P-(Value)) Significance when a value\*

The results of Table (3) indicate the presence of statistically significant correlation coefficients between each phrase and the total of the questionnaire as a whole, which indicates the validity of the questionnaire form.

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**Table (4)**

**Correlation coefficient between each phrase and the dimension belonging to it, and between each dimension and the axis belonging to it to calculate the validity of internal consistency Neurological Anorexia (20 =n)**

<b>P-(Value)</b>	<b>r</b>	<b>μ</b>
<b>0.00</b>	<b>0.83*</b>	١
<b>0.00</b>	<b>0.77*</b>	٢
<b>0.00</b>	<b>0.90*</b>	٣
<b>0.00</b>	<b>0.76*</b>	٤
<b>0.00</b>	<b>0.78*</b>	٥
<b>0.00</b>	<b>0.73*</b>	٦
<b>0.00</b>	<b>0.82*</b>	٧
<b>0.00</b>	<b>0.79*</b>	٨
<b>0.00</b>	<b>0.81*</b>	٩
<b>0.00</b>	<b>0.77*</b>	١٠
<b>0.00</b>	<b>0.95*</b>	١١
<b>0.00</b>	<b>0.78*</b>	١٢
<b>0.00</b>	<b>0.94*</b>	١٣
<b>0.00</b>	<b>0.86*</b>	١٤

**(0.05) ≥ (P-(Value)) Significance when a value\***

The results of Table (4) indicate the presence of statistically significant correlation coefficients between each phrase and the total of the questionnaire as a whole, which indicates the validity of the questionnaire form.

**Second: stability**

The researcher used the persistence calculation of the alpha-krone squirt factor

And on the reconnaissance sample, which consists of (20) women, the following table shows that: -

**Table (5)**

**Alpha Crohn's coefficient of squirt to calculate consistency for the questionnaires questionnaire form in the final image**

(20=n)

<b>Alpha Krone coefficient</b>	<b>Number of phrases</b>	<b>Nutritional disorders</b>
0.90	59	The questionnaire as a whole

The results of Table (5) indicate the value of the alpha-krone coefficient of the questionnaire, which is more than (60%), which indicates the consistency of the questionnaire form.

**Table (6)**

**Alpha Crohn's coefficient of squirt to calculate the persistence of the "nervous anorexia" in the final image**

(20=n)

Alpha Krone coefficient quart	Number of phrases	Intelligence to avoid body image
0.97	18	The questionnaire as a whole

The results of Table (6) indicate the value of the alpha-krone coefficient of the questionnaire, which is more than (60%), which indicates the consistency of the questionnaire form.

### Steps to conduct a search

The research was applied to a sample of (60) female karate players, basketball, volleyball, swimming, hand and judo, as well as gymnastics and athletics, during the period from 9/22/2019 to 29/9/2019.

Statistical treatments used:

The researcher used SPSS to calculate the following statistical treatments: -

Arithmetic averages( $\bar{X}$ )

standard deviation(s)

Kolmogorov-Smirnov ( Z)

Runs Test ( Z)

Alpha Crohn's Squirt Labs

Correlation coefficient(r)

**First: Present the results****Table (7)**

**The relationship between trophic disorders and anorexia The players have higher sports levels**

(60 =n)

<b>P-(Value)</b>	<b>R</b>	<b>S</b>	<b><math>\bar{X}</math></b>	<b>Variables</b>
0.00	0.90*	15.84	135.62	Nutritional disorders
		11.10	41.30	A measure of anorexia nervosa

**(0.05)  $\geq$  (P-(Value)) Significance when a value \***

From Table (7), it is clear that there are statistically significant correlation coefficients between dietary disorders and the level of nervous appetite loss among women with higher athletic levels.

**Second: Discussing the results**

Through the aim of the research, which is to identify the relationship of nutritional disorders and the measure of anorexia nervosa among players in higher sports levels.

Table (7) shows that the arithmetic mean of the scale of anorexia nervosa (41.30), standard deviation (11.15) and the correlation coefficient between eating disorders in general and anorexia nervosa (anorexia) (0.90 \*) and that the relationship is statistically significant between dietary disorders and the scale of anorexia nervosa as Nutritional disorders are a group of unhealthy behaviors by eating a certain type of food and resorting to pathological methods to lose weight by two types of them anorexia nervosa so there is a strong correlation between nutritional disorders in general and anorexia nervosa.

Whereas, Ilham Ismail Shalaby mentioned that eating disorders in the year (2000) as a group of unhealthy behaviors when eating a certain type of food and resorting to pathological methods to get rid of weight and related to the mechanisms of output and lose body weight and are divided into important types, the most important of which is anorexia nervosa and nervous bulimia (1: 51)

As for nervous appetite loss, it is a type of nutritional disorder. (Barbara French) 1997 states that it is a type of nutritional disorder that causes an imbalance in nutrition characterized by cases of anorexia. It continues to lose weight to a maximum degree, as losing weight in this disorder results from restrictions

Extensive and selective food intake can also be associated with intense exercise and laxatives and diuretics. (6: 56)

The researcher believes that the prevalence of nutritional disorders is often among the high-level players, as the athlete spends most of his life practicing his favorite sport and it reflects his hobby and his performance is part of his hobby and may be the only part that gives himself a degree of respect so the threat of his athletic status is part of pressure, Ron Sampson and Robert Sharmina 1996 confirm this in that neurosexual female players believe that they must do well to obtain satisfaction and acceptance, which drives him to compete heavily and continuous exercise despite the feeling of tiredness, disease and injury, despite the good feelings that they get a little and pass quickly, however, the satisfaction of others (the trainer - the parents - the friends) is paid

To more mastery to improve their athletic performance and achieve achievements to the advantage of excellence, although this success is their reaction to them is not joy or feeling satisfied, but adding more pressure on them and feelings of fear and persistence to achieve more high levels, i.e. that the athletic performance for the player who suffers from nervous anorexia is what is except a competition that he cannot win, either his performance decreases or she continues to feel the pressures of maintaining performance at a high level until she reaches a certain point after which she cannot continue (severe malnutrition) and the serious negative effects on the different physiological apparatus in his body and thus the collapse of athletic performance completely. (9: 60)

(Ron Sampson) 2008 confirms this by saying that the player who suffers from neuropathic anorexia when her performance declines instead of seeing that her problems in the low amount you eat are from calories and work on a diet high in calories, we find that she believes that it should be lighter To regain her previous competitive level based on her previous experience, or what her coach, or teammates told her about the team, or what she read that the slender and more agile player performs the best and denies admitting her injury and uses her advanced level mathematically to prove that she does not suffer from any disorder. The result is the aggravation of the injury and may reach Death limit (10: 86)

(Ilham Ismail Shalaby 1996) also confirms that players with neurological anorexia happen to them with natural changes that make it impossible for the player to return to the normal eating system, slowing down the body in all its functions (such as slowing the heartbeat), menstruation stops in girls, fingers and toes become cold and fat percentage decreases In the body to less than 20%, since the woman's natural fat (20:28) percentage of her weight, and the most important event is the cessation of digestive enzymes and thyroid hormone and chemicals that affect the hunger process, so the player with anorexia is not hungry and finds it difficult to digest Food and its representation, and if it affects the psychological depression of the player for any reason, her body excretes the corticotropin release factor that is naturally excreted in cases of nervous tension and this factor suppresses the appetite for food.(3:85)

(Ron Samptho 2000 also affirms that the effect of neurotransmitters (anorexia nervosa) on athletic performance is that the degradation of glycogen stores in the muscles and glucose as a source of energy during sports performance with the keenness of players to avoid eating carbohydrates so that the weight does not increase and continue to perform becomes the body as a result Unable to store the necessary glycogen level and with continued training it begins at some point the effects of fatigue appear on performance. (8:34)

In addition to the loss of muscle strength, durability, speed, neuromuscular compatibility and exposure to dehydration. Ron Samptho 1993, quoting from Vivienne, 2006 states that 1% of body fluids severely decrease the level of performance, and with athletes continuing to lose more juices and fluids, their athletic performance Decreased, as both (Otto A. Vinson) 1991, "Bridgestone" and "Holman" 1972 assert that losing 5% of fluid and juices in the athlete's body weight results in a decrease in the muscular ability to work from 20% to 30% in addition to decreasing ability On the use of oxygen and the effect of the circulatory and respiratory system and the heart, as hunger affects the player with neurological anorexia and reduces the dimensions of the cardiac chambers, which results in a reduction in the ability to work and perform sports. (13: 64)

Also, female players with neurological anorexia have problems (osteoporosis / menopause), and this is confirmed by "Drank", "Tr" and "Bremen" 1990 in the presence of a relationship between the menstrual pattern, body weight and

specific gravity of the vertebrae and bone, which leads to irregularity in the cycle  
And exposure to stress fractures in some activities (running).

And as the study of chia-yentsai, sharonl.hoerr, (2000) confirms that the injury of female players with neurological anorexia is due to a physiological aspect due to the lack of zinc in food, which controls the senses of taste and smell and is low in the level of nervous individuals with low anorexia without zinc becoming Food is tasteless and the sense of taste is disturbed, so delicious food becomes tasteless for players who eat less. (11:89)

## Conclusions

Through the results of the research and in light of the sample limits, it was possible to conclude the following: -

1. 1. There is a statistically significant relationship between the occurrence of trophic disorders and the measure of anorexia nervosa among women with higher athletic levels.
2. Female players who suffer from nutritional disorders also suffer from anorexia nervosa.
3. Players who do not suffer from nutritional disorders do not suffer from anorexia nervosa.

## Recommendations-:

In light of the research objectives and results obtained within the limits of the research sample, it is possible to recommend the following: -

1- Providing trainers and players with information, nutritional concepts, and healthy methods to lose weight and introduce them to modern scientific terms by organizing food workshops and printing manuals to increase awareness of healthy culture and focus on reducing fat percentage instead of losing body weight.

2 ConcentrationDissemination of the importance of social determinants in the sports environment and incidence of nutritional disorders (the role of the trainer - colleagues - the media - the culture of society)

3- Paying attention to the psychological state of the players and their nutritional programs to avoid nutritional disorders

4- The necessity of conducting similar research on this phenomenon in most other games that were not covered by the research.

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