International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 02, 2020
ISSN: 1475-7192

A Comparative Study on the Probability of Diabetes and Psychosocial Deficiency of Badminton Players Youth Category

[1]Dr. Mostafa. S. Hosen [2], Dr. Abeer Dakhill Hatem Al-Selmi

Abstract

Many people believe that diabetes appears after a psychological crisis, which is a misconception but it could be in them before having a crisis ore the crisis. But emotion increases the appearance of symptoms, and athletes are at risk of developing diabetes. Hypoglycemia is not unusual for athletes, and during physical activity the sugar level changes in the blood. Therefore, it is important to conduct tests for the measurement of sugar before and immediately after the activity, for the purpose of detecting the sharp drop in the sugar level and treating it, and the early detection is necessary to avoid the possibility of diabetes, the concept of psychological immunity in psychology is considered a positive concepts that maintain the balance of the athlete and the non-athlete between him and his materialistic environment and his social environment ,The research problem: A comparative study of the possibility of diabetes and psychological immunity for male and female players of badminton in the youth category, and there are several questions branching out of it: To determine the degree of probability of diabetes in male and female players of badminton in the youth category. Conducting a comparison between the two sex categories in the possibility of diabetes and mental health. To identify the relationship between the possibility of diabetes and psychological immunity for male and female players of .The purpose of the research.

Is to identify the degree of probability of developing diabetes and the psychological immunity of male and female players of badminton in the youth category, and to identify the differences between the male and the female badminton players in the probability of diabetes and psychological immunity. The research methodology: The researchers used the descriptive approach on a sample of male and female badminton players (2), and a measurement was applied to determine the probability of diabetes probability prepared by Dr. Nermin Zakaria 0 family medicine specialist) and Dr. Khalid Al-Zayed, head of Al Adn Health Center in the Ministry of Health (Adan Health Center) Kuwait, The test consists of (7) paragraphs, and the measurement of psychological immunity prepared by Kamel Abboud Hussein and Osama Abdul Qader, 2016, the measurement consists of (39) positions which are displayed to be answered by the male and female players, ***the researchers concluded:*** *the members of the male sample of players have a degree Of the psychological immunity while the female players do not have a degree of psychological immunity.* ***The researchers recommend:*** *the need to apply other psychological standards on the same sample.*

Keywords*: Athletes, Nutrition, Mental Health.*

Introduction and the significance of the research

[1] *University of Misan, College of Physical Education and Sport Sciences, Iraq.*
Slamalsltan1980@gmail.com
[2]*University of Baghdad\ College of Physical Education and Sport Sciences for Women, Iraq.*
abeer@copew.uobaghdad.edu.iq

In light of the remarkable events that are happening in our world, many studies have been conducted to research sports and causing factors to treat the problems in this sector in the developed countries. Recently, it has been seen that some preventative studies are being conducted as treatment studies. And that athletes are under constant and repetitive stress without the ability to face these challenges and difficulties, which leads to difficulty controlling their actions and behaviors. So, if they fail to deal with the stress, they will suffer from imbalance in their personal, physical, psychological and sociological lives. Which leads to possible psychiatric and physical diseases.

Diabetes mellitus is a medical condition caused by excessive blood glucose in the body. This is due to the inability of blood glucose to enter the cell as an energy source. Diabetes mellitus can be divided into two types. Type 1 diabetes is the inability of the body to produce adequate insulin, because the immune system destroys pancreatic beta cells called autoimmune. Meanwhile, type 2 diabetes is a condition where the body is unable to produce or use insulin properly or where insulin resistance occurs (American Diabetes Association,2018).

Many believe that diabetes occurs when they suffer from psychological trauma (which is wrong). But they might have been at risk of having diabetes before the trauma. However, the violent reactions might aggravate the symptoms. And that athletes are a risk group for diabetes, since low blood sugar in an athlete's blood is not uncommon. And that sugar levels may change during physical activity. Therefore, it is important to measure blood sugar levels before and after the activity, to detect any severe drops in sugar levels and treat them. Early discovery is important to avoid risk of diabetes.

Nowadays, diabetes mellitus has received more attention because of its drastically increasing prevalence. In 2013, there were 382 million people with diabetes mellitus, and 90% of the cases were type 2 diabetes. This is equal to 8.3% of the world's adult population. Also, in 2012 and 2013, diabetes mellitus killed 1.5 to 5.1 million people per year, which made diabetes mellitus the 8th cause of death in the world (Tao, Shi, & TRISNA RAHAYU, DWI APRILAWATI, JAMALUDDIN MAHMUD, BAMBANG PURWANTO, LILIK HERAWATI -www.efsupit.ro 803 Zhao, 2015). Hyperglycemia for a long period, such that of diabetes, can cause deadly diseases. One of the diabetic preventions is doing physical activities (Routen, 2010; Yuliya & Sergey, 2018).

Psychoimmunology is a positive concept that keeps the athlete and non-athlete balance between them and their social and material environments. From here, the two researchers started looking into the possibility of diabetes and the psychoimmunology, which is a full, multi-dimensional unit for character resources connected to (cognitive and motivational and behavioral) aspects that offer the individual a shield that helps them deal with stress and support the psychological health.Research goals: the research aims at:Determining the degree of risk of diabetes among young male and female badminton players.Determining the differences between young male and female badminton players for risk of diabetes and psychoimmunology. Determining the relation between young male and female badminton players for risk of diabetes and psychoimmunology.Determining the terminology:Diabetes: a syndrome characterized by metabolic disorder and an abnormal rise in blood sugar concentration caused by insulin deficiency, insulin sensitivity or both(Kamel Aboud Hussain and Osama Abdul Qader,2016)

Psychoimmunology: A system found to interact is based on the use of the ability to distinguish between what is harmful and what is useful, a metaphor for planning and the ability to plan, in order to give the ability to perceive and protect from danger, as well as to realize what enhances life, and to formulate plans of action, for prevention and reinforcement and a sense of identity and self (Kagan. H., (2006).

Research methodology:

the two researchers used the Comparative Descriptive method due to its suitability with the research premise.

Research sample:

The research total included 20 male and female badminton players from Al-Athuri Club. The sample was randomly selected from (10) players, (5) males and (5) females from the youth category, as shown in table (1)

Table (1)

The homogeneity of the sample of the research sample shows the difference coefficient for the variables of weight, height, biological age and training age

Processors / Variables	Unit	Arithmetic mean	Medium	Standard deviation	Torsion Coefficient

Weight	kg	62,40	59,95	4,94	1,00
Height	cm	1,80	1,78	0,10	0,82
Biological age	year	17,06	17,00	0,44	0,39
Training age	year	2,43	2,00	0,96	0,45

The results showed homogeneity because of the low coefficient of (1±). This is a good indicator as the sample is homogeneous.

Research tools:

- Sources and references.
- A test to determine the risk of diabetes.
- Psychoimmunology scale.
- Height measurement.
- Weight measurement.

Field research procedures:

A test to determine the risk of diabetes (1): A test was used to determine the risk of developing diabetes by Dr. Nermin Zakaria (family medicine specialist) and Dr. Khalid Al-Zayed, head of Al Adn Health Center in the Ministry of Health (Adan Health Center), Kuwait. The test consists of (7) paragraphs and includes a number of points(L M Tierney, et al (2002).

Psychoimmunology scale (2): Using a psychoimmunologyscale prepared by Kamel Abboud Hussein and Osama Abdelkader, 2016, the scale consists of (39) situationsproposed to male and female players and they answer the paragraphs accordingly (Weinstein N., Brown, K., & Ryan, R., (2009).

Reconnaissance experiment: The experiment was carried out to ensure the clarity of the instructions of the measures and the clarity of their paragraphs for the sample members, as well as to identify the time taken for their answers, and to identify the conditions of the application of the two measures. The two measurements were applied on a sample of 2 randomly selected players on 6/2/2019. It was clear from this experiment that the instructions and the paragraphs of the measurements are clear and that the average time taken to answer a test of probability of diabetes was (7) minutes, while the measure of psychoimmunology was (18) minutes.

Main experiment: The two measurements were applied to the research sample of 10 male and female players by giving them questionnaires after clarifying what is required of them and answering their questions on 13/2/2019. After collecting the forms, they were corrected according to their grading scales and then processed statistically to extract the results.

Arithmetic mean, standard deviation, torsion coefficient, one-sample tertiary test, tectonic test of two independent samples, and Pearson correlation coefficient.

Displaying the results and analyzing and discussing them:

This section includes presenting, analyzing and discussing the results obtained in light of the theoretical framework in order to achieve the hypotheses of the research and to reach conclusions and recommendations on the research.

Presentation and analysis of the results of psychoimmunology and probability of diabetes in the sample of male and female badminton players:

Table (2)

Shows the arithmetic mean, standard deviations, mean value, calculated and tabular T value of male and female badminton players on the search variables

Group	Variable	A	S	Mean value	Calculated T	Tabular T
Male players	psychoimmunology	132.25	11.87	111	3.99	2.77
	Risk of diabetes	1.5	1.29	3.5	-3.50	2.77
Female	psychoimmunology	106	13.49	111	2.04	2.77

players	**Risk of diabetes**	**2.25**	**0.5**	**3.5**	**-5.85**	**2.77**

Where degree of freedom is 4 and significance level is 0.05

Table (2) shows that the results of the median scores of the male and female players and their standard deviations of the PSI, as shown in Table (2), and using the T-test for one sample to test the differences between the two medians (mean of the sample and mean of the measures) (3.99) for the male players, which is greater than the table T value of 2.77 at the freedom level of 4 and the significance level of 0.05, and for the female players, the value T (-3.50) is smaller than the tabular T value of (2.77) the significance level is 0.05, which means that the research sample members ;The male players have a degree of psychological immunity, while the sample of the female players do not have a degree of psychological immunity, as for the probability of diabetes, Table (2) shows that the results of the averages of the scores of the players and players and their standard deviation of the future probability of diabetes, as well as the Mean value as shown In Table (2), using the T-test for one sample to test the differences between the medians (mean of the sample and mean of the measures), it was found that the T value of (-3.50) for the males and (-5.85) for the females respectively, both are smaller than the tabular T of (2.77) at freedom level of 4 and significance of 0.05, which means that the research sample of male and female players do not have the possibility of developing diabetes in the future.

Presenting and analyzing the difference results between male and female badminton players over the research variables:

In order to identify the significance of the difference between the average male and female badmintonin psychoimmunology, the T-test was used for two separate samples. There were statistically significant differences between them. The calculated T value (2.92) was greater than the T value (2.30) at freedom level of (8) and the level of significance (0,05) for the female players and as shown in table (3).

Table (3)
Shows the significance of differences in psychoimmunology according to gender

Variable	Gender	Number	Mean value	Deviation standard	T value		Statistical significance
					Calculated	Tabular	
Psychoimmunology	Males	5	132.25	11.87	2.92	2.30	significant
	Females	5	106	13.49			
Probability of future diabetes	Males	5	1.5	1.29	-1.08	2.30	Non-significant
	Females	5	2.25	0.5			

Where degree of freedom is 8 and significance level is 0.05

And in order to determine the significance of the difference between the average male and female badminton players in the probability of future diabetes, the T-test was used for two independent samples. There were no statistically significant differences between them. The calculated T value was (-1.08), which is smaller than the tabular T (2.30) At freedom level of (8) and the level of significance (0,05) as shown in Table (3).

3.3presenting the results of the relationship between psychoimmunology and probability of future diabetes:

In order to identify the relationship between psychoimmunology and probability of future diabetes, Pearson correlation coefficient was used between psychoimmunology and probability of future diabetes. The results showed that there was a statistically significant correlation between psychoimmunology and probability of future diabetes. The calculated T value was (8.585), which is greater than thetabular T value of (2.30). As shown in table (4).

Table (4)
Shows the correlation significance between psychoimmunology and probability of future diabetes

Statistical milestones / Variable	Number	Coefficient of correlation	T value		Statistical significance
			Calculated	Tabular	
psychoimmunology× probability of future diabetes		0.340	8.545	2.30	significant

Where degree of freedom is 8 and significance level is 0.05

Discussing the results:the previous tables show that the research sample of male players have a degree of psycho immunology, whereas female players do not have a degree of psychoimmunology. The male research sample of female and male players do not have a probability of future diabetes, in addition, there is a significant correlation between the probability of developing diabetes and the psychoimmunology of male and female badminton players in the youth category. The researchers attributed the reasons for this to the individual having an internal mechanism that shares the immune system to maintain its survival and to measure what is happening to the organism, which enables it to move inside and outside. The movement is controlled from within and this mechanism is the gateway to understanding the extreme negative emotions and adjusting the responses towards stability by facing the vicissitudes of life. "psych oimmunology depends on reducing a number of biases and cognitive mechanisms that protects the subject from feeling the suffering of extreme negative feelings through ignoring -deflecting- building information to make the current situation more probable, where it operates outside our cognition and consciousness as well as immune system. The two researchers explain that the most important properties of the immunology are focused in positive self-awareness and accepting traumatizing events as new cognitive experiences to help adapt with the context and enhances the individual's behaviors with his attributes that affirms his self, and helps him to generate emotional responses that are consistent with the perceived event and open new opportunities to induce positive changes that would support his decision making in an effective manner". Weinstein N., Brown, K., & Ryan, R., (2009).

The researchers also explain the positive relationship in the possibility of diabetes, since the members of the research sample of athletes who continue sports training and found through the paragraphs of the questionnaire to not have family members with diabetes, while "the psychoimmunology system acts as a filter for the emotional means carried by activities, relations, events, and confrontations through emotional messages and emotions that the individual recognizes and interacts with, and feelings that are not recognized but which produce reactions, such as an emotional brain operation that showsfeelings of fear, anxiety and psychological agitation the impact of a risk or threat. The individual does not recognize the danger until he is alerted to feelings of love, for example jumping out of the place when you hear a loud noise while busy thinking about something else as a reflex reaction "(Developed by Nermin Zakaria The Likelihood of Diabetes,2018) . The study agrees with Winston et al. (2012) that an individual who is fully consistent between behaviors, attitudes and traits (the mask he wears in his daily life is homogeneous and integrated with their actual characteristics and effectively expresses them), would support the effectiveness of the psychoimmunology system in its secondary subsystem with adaptive confrontation strategies (Barbanell, L., 2009).
Therefore, blood glucose levels were still within the normal range. Several articles reveal that physical activities or exercises with submaximal intensity will lead to an increase in blood glucose levels and a decrease after ~30 minutes (Adams, 2013).

Conclusions, recommendations and suggestions

Conclusions:

1. That male research sample male players have a degree of psychoimmunology, whereas female players do not have a degree of psychoimmunology.
2. That the research sample of male and female players do not have a probability of future diabetes.
3. There is a significant correlation between the risk of diabetes and psychoimmunology for male and female badminton players in the youth category.

Conflicts of interest - There is not potential conflict of interest.

References:

- American Diabetes Association. (2018). Standards of Medical Care in Diabetes-2018. The Journal of Cinical and Applied Research and Education, 41(1)**.**

- Adams, O. P. (2013). The Impact of Brief High-Intensity Exercise on Blood Glucose Levels. Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, 6, 6–113.

- Kamel Aboud Hussain and Osama Abdul Qader,2016, Standardization of Psychological Immunology for Advanced Athletes, Journal of Mathematical Sciences, University of Diyala, ,p43.
- Kagan. H., (2006). The psychological immune system, A new look at protection and survival–Herman. Library of Congress Control Number: 2005908995. U.S.A
- L M Tierney, S J McPhee ،M A Papadakis (2002). Current medical diagnosis & treatment. International edition. New York: Lange Medical Books/McGraw-Hill. P.p1215-1230. ISBN 0-07-137688-7
- Weinstein N., Brown, K., & Ryan, R., (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. Journal of Research in.
- Developed by Nermin Zakaria The Likelihood of Diabetes,2018, (Family Medicine Specialist) and Dr. Khalid Al-Zayed, Head of Adnan Health Center, Ministry of Health (Adan Health Center), Kuwait, .
- Barbanell, L., (2009). Breaking the Addiction to Please Goodbye Guilt.Published by Jason Aronson. An imprint of Roman & Littlefield Publishers, Inc.p.p320.
- Tao, Z., Shi, A., & Zhao, J. (2015). Epidemiological Perspectives of Diabetes. Cell Biochemistry and Biophysics, 73(1), 181–185.
- Routen, A. C. (2010). The Role of Physical Activity in the Primary Prevention of Type 2 Diabetes via The Amelioration of Insulin Resistance. Journal of Physical Education and Sport, 28(3), 3–10.
- Weinstein N., Brown, K., & Ryan, R., (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. Journal of Research in Personality, 43, 374–385.
- Khoroshukha Mykhailo, Putrov Sergiy, Sushchenko Lyudmyla, Bazylchuk Oleg, Kabashnyuk Vitaliy (2018). Influence of blood types serologic markers on development of concentration function of young 13–16 year old athletes. Journal of Physical Education and Sport, 18 (Supplement issue 4), Art 278, 1890–1895.
- Yuliya, K., & Sergey, K. (2018). Physical Exercise Application for The Correction of Carbohydrate Metabolism in Diabetes Mellitus. Journal of Physical Education and Sport, 18(2), 641–647.

(Psychoimmunology scale)

1.	I love exploring and love doing new and creative things during training
2.	I am a graceful loser and a humble winner
3.	I become more persistent when I fail to do a task during practice or competition
4.	I find myself isolated from my team and my practices
5.	I see that my life has meaning and is worth living
6.	I feel frustrated when I fail to do my duty during practice or competition
7.	When I encounter some problems during competitions, I can't confront them
8.	I participate with my teammates in sport and non-sport activities
9.	I am very happy with myself and what I have accomplished in the competitions I played in
10.	I do my best against my opponents even if they are stronger than me
11.	When I make reckless decisions during competitions, I regret them later
12.	I think my sports career will be full of failures
13.	I have the ability to control my temper even when I fail in competitions
14.	I can adapt to the changes that happen to the practice or competition
15.	I believe that everything that happens in competitions is reliant on me
16.	When I encounter new situations during competitions, I do my best to deal with them
17.	When I lose an important competition, I don't feel frustrated
18.	My ability to handle the problems I face during competitions is limited
19.	I am not impulsive with reckless actions during competitions
20.	I feel worried when I think about the competitions that I lost
21.	When I make a mistake during competitions, I become angry very quickly
22.	I can find proper solutions for any problems that face me

23. I find it difficult to change my personality the way I want to be through interacting with my team.
24. I am convinced of myself when I find myself in a difficult position in training and competition
25. I continue to compete to the end even if it is difficult and I have a problem
26. I continue my team training even if I do not get my chance as a key player
27. I feel unable to continue training when I think of failure
28. I am very sensitive to the criticism of my coaches or colleagues and I quickly lose my temper
29. I resort to using more than one way to overcome the difficulty of competition and win
30. It is difficult for me to understand what is going on around me, both in training and competition
31. My lack of competence is responsible for my failure to complete my duties in training or competition
32. I am worried about the problems that face me in training, even if they are small
33. I have the ability to turn failures into successes in competitions
34. I carry a lot of training and competition burdens even when I lose my temper
35. I easily lose my motivation and stop training if the competition does not go as planned
36. I look stressed when I participate in an important competition
37. I understand what I have to do in important competitions but I cannot do it
38. I try to accept any decision the coach makes
39. When the opponent tries to insult me, I try to take revenge on them