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The Effect of Obesity on Social Shyness among Middle School Students (A Comparative Study between Those Engaging in Physical Activity and Those Who Do Not).

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Abstract:

The study aimed to investigate the effect of obesity on social shyness among middle school students by comparing those who engage in physical activity with those who do not. The study sample was purposively selected, consisting of 80 students of both genders with two levels of obesity (low obesity and moderate obesity). To achieve this, the descriptive approach was used. The results showed no statistically significant differences between obesity levels (low obesity and moderate obesity) and physical activity (active and non-active) in their impact on social shyness.

Keywords: Obesity; Social Shyness; Physical Activity; Middle School Stage.

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1. INTRODUCTION

Contemporary Algerian society is greatly interested in the health and well-being of children and adults. The realisation that current lifestyles often work against good health, despite medical and technologic advances, has led to an increased emphasis on health promotion and disease reduction through preventative methods. One such approach is to educate children in schools about health.

Physical activity, accomplished by habitual daily activities like walking, by structured exercise, or by sport, is now known to be a very important factor in the development and maintenance of good health and disease prevention. Only a few years ago, for example, lack of physical activity was thought to be a secondary risk factor for coronary heart disease. Now it is known to be a primary risk factor of almost equal importance to smoking, high blood pressure, and high blood cholesterol.

One of the main aims of contemporary physical education curricula, therefore, has been to develop in children the right attitude and motivation to enable them to develop and maintain an active lifestyle-both as children and as adults. Although the development of physical fitness itself is also an objective, sometimes insufficient curriculum time does not allow significant fitness gains to be realised. Nevertheless, physical educators are concerned about the development of fitness for health (health-related fitness). To encourage this development, they mainly educate children to develop active lifestyles.

In this study we will discuss to determine the effect of obesity on social shyness among middle school students- A comparison between students who practice and do not practice sports physical activity-

Physical educators often complain that some school administrators, teachers and parents consider physical education as a second-rate school subject where children just stretch their legs, build their muscles, or kick. School meetings or excursions to museums usually occur in the physical education classes in many schools. Some teachers used to think that physical exertion has a negative impact on cognitive functioning. Parents punish their children by prohibiting them to attend sports groups after school and prefer to have them sitting with their books. This means they underestimate the role of physical activity in the child. Cases such as these, physical educators need to be able to advance arguments regarding the benefits of physical education. The impact of physical education upon the development of

psychological.(Cardel MI, Atkinson MA, Taveras EM, Holm JC, Kelly AS , 2020;174:609-617)

In this reseaech, the researchers will take up another perspec that examines the relationship between the practise of physical activity and social shyness. Some studies indicate that students who suffer from obesity are more vulnerable to psychological and social problems, including social shyness(Isam Abdelkhalek,1982,p.11),which is considered a psychological suffering, controls its owner.It paralyzes his thinking and abilities and makes his social behavior weak and productive. **Kaplan** (1988) believes that the individual faces new situations every day that require him to have high psychological abilities to deal with the challenges and adapt to the environmental variables that occur in his life, which act as an obstacle to achieving normal psychological harmony. (Khoj, 2002, p. 20).

Shyness has become a barrier that prevents students from participating in social situations, and may cause them many psychological crises, this negative effect of shyness is one factor which causes poor social interaction for students, as the majority of shy students live in a lack of movement, lack of interaction with others, and hesitation (Al-Tishrini, 2001, p. 93).

Obesity is a multifactorial disease characterized by the process of excessive accumulation of body fat, manifested within metabolic tissues, including adipose tissue and liver, and may be induced by the release of different cytokines and adipokines, harming both quality of life and longevity._(Martin A, Saunders DH, Shenkin SD, Sproule J. 2014;14(3):CD009728.) Moreover, this epidemic has not only affected adults, but it has also alarmingly affected children and youth worldwide

The purpose of research is to identifying and discovering the relationship between obesity and social shyness among middle school students - A comparison between students who practice and do not practice sports physical activity.(Jebeile H, Kelly AS, O'Malley G, Baur LA, 2022;10(5):351-365).

1. The problem:

2.1_General problem :

Does obesity affect social shyness among middle school students who practice and do not practice physical sports activity?

2.1 Partial questions:



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- _ Are there statistically significant differences in the level of social shyness between slightly obese and moderately obese students?
- _ Are there statistically significant differences in the level of social shyness between students who practice sports physical activity and those who do not practice it?
- _ Are there statistically significant differences between the level of obesity (slightly obese, moderately obese) and the practice of physical activity (practiced, non-practiced) in their effect on social shyness?

2. Hypotheses:

3.1 General hypothesis:

- _ Obesity affects social shyness among middle school students who practice and do not practice physical sports activity.

3.2 Partial hypotheses:

- _ There are statistically significant differences in the level of social shyness between slightly obese and moderately obese students.
- _ There are statistically significant differences in the level of social shyness between students who practice sports physical activity and those who do not practice it.
- There are statistically significant differences between the level of obesity (slightly obese, moderately obese) and the practice of physical sports activity (practiced, non-practiced) in their effect on social shyness.

3. Objectives of the study:

- The possibility of statistically significant differences in the level of social shyness between slightly obese and moderately obese students.
- _ The possibility of statistically significant differences in the level of social shyness between students who practice sports physical activity and those who do not practice it.
- _ The possibility of statistically significant differences between the level of obesity (slightly obese, moderately obese) and the practice of physical activity (practiced, non-practiced) in their effect on social shyness.

4. Importance of the study

The importance of the study:

The importance of our study lies in our attempt to find out the variables of our study, which are: “obesity and social shyness.”

And knowing the effect of obesity on social shyness among students who practice and do not practice sports activity.

_ Identifying the factors that may contribute to increasing social shyness among obese students.

_ Helping to prepare sports programs on scientific foundations that may contribute to alleviating and preventing obesity

5. The study terms :

1. Obesity:

It is an increase in body weight beyond its normal limit, as a result of the accumulation of fat in it, and this accumulation results from an imbalance between the energy resulting from eating food and the energy consumed in the body. (Sulaiman Ibrahim, 2009, p. 57)

Procedurally:

It is an increase in body weight above the normal rate, as measured by the body mass index of middle school students

2. Social shyness:

It is the tendency to avoid social interaction, to participate in social situations in an inappropriate manner,

Shyness is accompanied by several manifestations, including a feeling of anxiety and discomfort, which leads to silence and withdrawal from social interaction situations, and is accompanied by a feeling of self-sensitivity, unhappiness, and preoccupation with oneself. (Hussein Abdel Aziz, 1998, page 7)

Procedurally:

It is a psychological state characterized by fear, anxiety, loss of self-confidence, and lack of self-control, which will be measured by one of the standardized measures of shyness.



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3. Sports physical activity:

It is the physical and motor activities that students perform during the day, such as walking, climbing stairs, jogging, and other activities that consume energy and effort from us to do using our muscles, whether the movement is intentional for sports or spontaneous to perform life tasks. (Al-Muhaiza, 2019, page 593)

Procedurally:

Sports movements and activities practiced by middle school students using muscular effort.

7–Methods and Materials:

The study used the descriptive survey approach with the new measurement theory and the confirmatory factorial analysis method to achieve the study aims

7.1Statistical Analysis:

The study used different statistics method to achieve the aims. The data were analysed by using three statistical analysis programme packages for the social sciences.

They are SPSS – version 20.0 package. Rasch Model item analysis. The statistical analysis of the data variables consists of a means, standard deviation Pearson correlation coefficient, exploratory factorial analysis by principal components method and confirmatory factorial analysis. The level of Statistical significance was set at 0.05.

The study used the Questionnaire who has been prepared by the researcher, this tool of study contained 36 questions (The shyness scale of Dr. Hussein Abdul Aziz Al-Darini (1998)).

The researcher uses Likert Scale : (Yes – sometimes – no)

7.2 Participants :

The research community was the Middle school students in Djelfa (the academic year 2023 /2024) the study population contained 80 pupils .

Table (1): Distribution of study sample members according to body mass index

Frequency	body mass index	
40	34.9 _30	Moderate obesity
40	39.5 _35	Medium obesity
80	Total	

Table (2): Distribution of study sample members by educational institution

Total of students	Educational institutions
23	Mohammed el arbi bearir
19	Jekal Bayzid
18	El Khansaa
20	Ahmed Belhoudjeb
80	Total

Table (3): Distribution of the study sample members according to the variables of gender, educational level, obesity level, and sports practice.

Total	%	Total	Frequency	Class of Variables		Variables
%100	%48.8	80	39	Male	Sex	
	%51.2		41	feminine		
%100	%18.8	80	15	First year	Academic level	
	%33.8		27	Second year		
	%23.8		19	Third year		
	%23.8		19	Fourth year		
100%	%50	80	40	Slightly obese	Obesity level	
	%50		40	Moderately obese		
100%	%57.5	80	46	Practicing physical activity	Practicing physical activity	
	%42.5		34	Not practicing physical activity		

8- Results and discussion :

1. Presentation, analysis and discussion of the results of the first partial hypothesis

There are statistically significant differences in the level of social shyness between slightly obese and moderately obese students.

Table04 : The results of the test of differences in the level of social shyness between slightly obese and moderately obese students based on the outputs of the SPSS program

Result	SF	Value T	Deg ree of free dom	Stand ar Devia tion	Areth metic mean	Nu mbe r	Groups	Variable
Ns	0.360	- 0.920	78	0.232 45	2.454 2	40	Slightly obese	Social shyness scale
				0.212 48	2.500 0	40	Moderately obese	

According to the table

- The arithmetic mean of the level of social shyness for the slightly obese students was (2.4542).
- The arithmetic mean of the level of social shyness for the Moderately obese students was (0.21248).
- Standar Deviation Slightly obese : 2.4542.
- Standar Deviation Moderately obese : 2.5000.
- Value T : -0.920
- SF : 0.360. It is greater than the significance level (0.05
- There are no statistically significant differences in the level of social shyness between slightly obese and moderately obese students.

2. **Presentation, analysis and discussion of the results of the first second hypothesis.**

There are statistically significant differences in the level of social shyness between students who practice sports physical activity and those who do not practice it.

Table (5): The results of the test of differences in the level of social shyness between students who practice physical sports activity and those who do not, based on the outputs of the SPSS program.

Result	SF	Value T	Degree of freedom	Standard Deviation	Arithmetic mean	Number	Groups	Variable	
Ns	0.370	0.901	78	0.23275	2.4964	46	practicing	Social shyness scale	
				0.20833	2.4510	34	Not practicing		

According to the table (05) :

- The arithmetic mean of the level of social shyness for the practicing was (2.4964).
- The arithmetic mean of the level of social shyness for the Not practicing students was (2.4510).
- Standard Deviation practicing :0.23275 .
- Standard Deviation Not practicing : 0.20833
- Value T : 0.901
- SF : 0.370. It is greater than the significance level (0.05)
- There are no statistically significant differences in the level of social shyness between practicing and Not practicing students.

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3. Presentation, analysis and discussion of the results of the Third hypothesis.

There are statistically significant differences between the level of obesity (slightly obese, moderately obese) and the practice of physical sports activity (practiced, non-practiced) in their effect on social shyness.

Table (6): The results of the effect of each of the level of obesity and sports practice and the interaction between them on the level of social shyness among middle school students based on the outputs of the SPSS program.

Sf	Vf	Mean squares	Df	Total sum of squares	Variance
0.425	0.644	0.032	1	0.032	Obesity level
0.339	0.926	0.045	1	0.045	Sports practice
0.178	1.848	0.091	1	0.091	Interaction between obesity level and exercise
		0.094	76	3.728	Error
			80	494.785	Total

According to the table (06) :

- Effect of obesity level :

- 1- Total sum of squares 0.032, mean squares 0.032, Vf 0.644 . It is less than the critical value of F value at the significance level (0.05). The significance level (0.425) is greater than (0.05). This means that there are no statistically significant differences in the level of social shyness among students based on the level of obesity (slightly obese, moderately obese).

- Sports practice :

- 1- Total sum of squares 0.045, mean squares 0.045, Vf 0.926. It is less than the critical value of F value at the significance level (0.05). The significance level (0.339) is greater than (0.05). This means that there are no statistically significant differences in the level of social shyness among students based on the Sports practice (slightly obese, moderately obese).

- **Interaction between obesity level and exercise :**

- 1- Total sum of squares 0.091, mean squares 0.091, V_f 1.848. It is less than the critical value of F value at the significance level (0.05). The significance level (0.178) is greater than (0.05). This means that there are no statistically significant differences in the level of social shyness among students based on the -Interaction between obesity level and exercise (slightly obese, moderately obese).

7.4 Discussion :

1. **Discussion of the first hypothesis :** According to the table above (5). According to the results obtained through the arithmetic mean of the level of social shyness, which reached (2.454) for slightly obese students and (2.5000) for moderately obese students, it was found that the difference between the two means is not significant.
The calculated T value (-0.920) was negative, and the significance level (0.360) was greater than the significance level (0.05), which indicates that there are no statistically significant differences, i.e. it does not significantly affect the level of social shyness among students in our sample. From the above, we conclude that there is no effect of the obesity level variable on the level of social shyness among middle school students, from the point of view of the respondents. Therefore, we say that there are no statistically significant differences between slightly obese and moderately obese students in the level of social shyness, and therefore our hypothesis was not achieved. The results of our study are consistent with the study of Zawaq Muhammad (2012), as the results confirmed the absence of a statistically significant association between moderate obesity and levels of social shyness, and did not agree with the results of the study of Suad Abdullah (2018), which found that students who suffer from obesity have higher levels of social shyness, which confirms that obesity is not the only factor that affects this psychological aspect.
2. **Discussion of the second hypothesis :** According to the results reached through the arithmetic mean of the level of social shyness, which reached (2.4964) for students who practice physical activity and (2.4510) for students who do not practice it, it became clear that the difference between the two means is not

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significant. The calculated T value (0.901) was positive, and the significance level (0.370) was greater than the significance level (0.05), indicating that there are no statistically significant differences, i.e. it does not significantly affect the level of social shyness among students in our sample. From the above, we conclude that there is no effect of the variable of practicing sports activity on the level of social shyness among middle school students, from the point of view of the respondents. Therefore, we say that there are no statistically significant differences between students who practice and do not practice physical activity in the level of social shyness, and therefore our hypothesis was not achieved. The results of our study did not agree with both the study of Sami Hassan (2017), who found that children who were subjected to the sports program showed a significant decrease in the levels of social shyness compared to their peers who did not practice physical activity, and the study of Zawaq Muhammad (2012), who found that adolescents who practice physical sports activity regularly have a lower level of social shyness, which confirms that obesity or practicing physical sports are not the only factors that affect In this psychological aspect.

3. 2. Discussion of the third hypothesis

According to the results obtained, we find that the effect of obesity is that the sum of squares reached (0.032) and the degree of freedom (1) and the mean of squares (0.032) and the calculated F value reached (0.644) and the significance level (0.425). Since the F value is less than the critical value at the significance level (0.05), and the significance level (0.425) is greater than (0.05), this means that there are no statistically significant differences in the level of social shyness among students based on the level of obesity (slightly obese, moderately obese). In the effect of sports practice, we find that the sum of squares reached (0.045) and the degree of freedom (1) and the mean of squares (0.045) and the calculated F value reached (0.926) and the significance level (0.339). Since the F value is less than the critical value at the significance level (0.05), and the significance level (0.339) is greater than (0.05), this means that there is no There are statistically significant differences in the level of social shyness among students based on practicing sports activity (practicing, not practicing),

In the effect of the interaction between the level of obesity and sports practice, we find that the sum of squares reached (0.091) and the degree of freedom (1) and the mean of squares (0.091) and the calculated F value reached (1.848) and the significance level (0.178), and since the F value is less than the critical value at the significance level (0.05), and the significance level (0.178) is greater than (0.05), this means that there is no statistically significant interactive effect between the level of obesity and sports practice on the level of social shyness, and from the above we conclude that the level of obesity and sports practice and the interaction between them do not affect social shyness significantly among middle school students, from the point of view of the respondents, and therefore we say that there is no effect of obesity on social shyness among middle school students practicing and not practicing physical sports activity, and therefore our hypothesis was not achieved, and the results of our study are consistent with the study Zawaq Muhammad (2012) where the results confirmed the absence of a statistically significant association between moderate obesity and levels of social shyness,

The results of our study did not agree with the study of Fatima Abdul Rahman (2019) which concluded that adolescents who suffer from obesity and have low physical activity show higher levels of shyness compared to adolescents who practice physical activity regularly, as well as compared to those who do not suffer from obesity, and the study of Suad Abdullah (2018) which found that students who suffer from obesity have higher levels of social shyness, and the study of Sami Hassan (2017) which found that children who were applied to the sports program showed a significant decrease in levels of social shyness compared to their peers who did not practice physical activity.

Conclusion :



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After analyzing and applying the research tool to collect data and applying it to a sample of 80 middle school students with obesity in the city of Djelfa, and after collecting the data, presenting it, processing it statistically, discussing the results of the study, comparing it and discussing it with previous studies, we concluded that the the following conclusion:

—There are no statistically significant differences in the level of social shyness between students with low obesity and moderate obesity.

—There are no statistically significant differences in the level of social shyness between students who practice physical sports and those who do not.

—There are no statistically significant differences between the level of obesity (low obesity, moderate obesity) and practicing physical sports (practicing, not practicing) in their effect on social shyness.

—There is no effect of obesity on social shyness among middle school students who practice and do not practice physical sports

The research was easy to apply in a school environment. Health professionals can replicate and guide it to improve physical fitness conditions and reduce obesity and overweight among adolescents.

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