



Exploring the Impact of Obesity on Social Cohesiveness among 10th Grade Students

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Citation

Mukhtyar, M., Mukhtiyar, S., & Mukhtiyar, M.A. (2024). Exploring the impact of obesity on social cohesiveness among 10th grade students. *Open Access Public Health and Health Administration Review*, 2(2): 22-29.

WEBSITE: www.mdPIP.com

PUBLISHER: MDPIP

ISSN: Print: 2959-619X

ISSN: Online: 2959-6203

ABSTRACT:

It is very essential to address about Obesity due to its various fitness concerns, fiscal impact, and the extensive societal and public fitness challenges it shows. Stopping and handling obesity is indispensable to advance individual well-being and decrease the strain on healthcare arrangements and society as a whole. It is a descriptive study in nature and a survey technique was used to conduct this study. To measure Social cohesion a questionnaire about what is happening in this classroom (WIHIC) was developed. The weight of the students was measured by the weight machine in Kilograms and the height of the students was measured by the meter rod into meter. All the students of 10th grade from district Dera Ghazi Khan constituted the population of the study. The sample was selected randomly from the schools of Dera Ghazi Kahn. Out of four Tehsil of District Dera Ghazi Kahn, two Tehsil were randomly selected. From each selected Tehsil five schools were selected through random sampling. From each school, one section was selected adopting the cluster sampling technique. Student's cohesiveness was influenced by their level of obesity. The overweight students were socially less cohesive as compared to the normal and underweight students.

Keywords: Impact of Obesity, Social Cohesiveness, 10th Grade Students, Dera Ghazi Khan, Body Mass Index

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Introduction

Obesity is a medical term, which gives us information about the weight of the person (Kahan, Look, & Fitch, 2022). Obesity, overweight, Normal weight, underweight, and thin are different categories of weight (Pate, Tilley-Gyado, & Betz, 2022). Obesity of an individual person can be calculated by using the formula of weight divided by the square of height ratio. In medical terms, it is also known as BMI (Mohajan & Mohajan, 2023). When an individual has gained so much fat that its body mass index (BMI) value is greater than 30, they are called the obese (Mohajan & Mohajan, 2023). This term is different from the term of overweight because after normal weight. There comes a stage of being overweight. Moreover, when an object gains more weight it becomes obese. Some time, people have extra bones, muscles and liquids and because of this all they are overweight (Mohajan & Mohajan, 2023). Furthermore, sometime, kids and teenagers have greater weight and with passing time they become obese (Marcus, Danielsson, & Hagman, 2022). It is also possibility that kids who have greater mass in child hood they becomes obese in the youth age. There is chance of 25% of kids of who are obese in the child hood become severe obese in the youth age and severe obese are at the risk of death because of many diseases, which attack on the fatty individuals (Utkirzhonovna, 2022). Obesity effect many aspect of a person but the wealth is main issue because obese eat a lot and remain ill moreover his health is usually at risk. Obesity is an abnormality which causes different diseases for example high blood pressure, sugar, cardiac muscular problems old stage of cancer and many other health problems (Sobolewska-Nowak *et al.*, 2023). Social cohesiveness is the behavior of a student with his class fellows or classmates. It means, how friendly a student is in the class with his class fellows is known as social cohesiveness (Baloh, 2022). A lot of studies have been done on this topic in the world but from the Pakistani perspective, it will be a new addition because parents in Pakistan don't focus on the weight of their children they provide more food and less chance of going out in the ground for exercise and games that is why this problem is increasing day by day (Baloh, 2022). Many students become overweight or obese and they become shy and laughingstock in the class (Petrzela, 2022). The study at hand was done to check the relationship between the social cohesiveness of the students at the Secondary level in the district Dera Ghazi Khan. The study proceeded under light of following objectives.

1. To measure the obesity level of secondary level students
2. To ascertain the level of cohesiveness of secondary level students
3. To find out relationship between students' obesity and their cohesiveness

Research Questions

1. What is the obesity level of secondary level students?
2. What is the level of cohesiveness of secondary level students?
3. What is the relationship between students' obesity and their cohesiveness?

Literature Review

Actually, the "Obesity epidemic" has become a very dangerous problem throughout the world. There are different methods for the measurement of Obesity, but body mass index (BMI), is one of the old methods for the measurement of Obesity, which is not good if we consider the size of bones and muscles. Moreover, Body mass index (BMI) is a good quality meter, since it shows a relationship attractive fit by means of the quantity of body plump of a human being (Parrillo *et al.*, 2023). The formula of BMI measurement is as if the mass is taken in kilograms and height is measured in meters then, mass is divided by the square of height the result will be the Obesity of a person who is under observation (Mohajan & Mohajan, 2023). The CDC does not practice the word "Obesity" for youngsters and individuals. The word in practice is "overweight," and this is expressed as BMI. (Shawel, Baraki, Alemeshet, Abebe, & Egata, 2023).

Calculating Obesity by Means of the Body Mass Index

BMI is a procedure that computes the relation between tallness and heaviness: Measure the height in feet and inches with the help of a ruler then multiply it with the 703 to convert it into meters now the height is converted into meters,

also measure the weight of a person with the help of weight machine into kilograms or Kg (Kaplangooray, Toprak, Çiçek, & Cekici, 2023). Now divide the weight by the square of height the result will be the BMI value. Various body mass index ranges for adults are shown here.

BMI	Weight Status
Less than 15	Very severely below weight
Below 18.5	Skinny
18.5-24.9	Normal
25.0-29.9	Over weight
30.0 -35	Obese
35 -40	very obese
40 Above	very dangerous

Source: *Redefining obesity and its treatment, Australia health communication Pvt. Limited*

A number of problems are observed due to the rapid rise in Obesity or overweight. These issues include Social problems, Physical and Economic problems (Mishra, 2023). Many researchers stated that the main factor in Obesity is the inheritance, lifestyle as well as the other factors which are very important but they all are secondary because they do not affect all the persons equally (Zoh *et al.*, 2023). New research shows that obesity is spreading among people and children like a virus. In teens' age, children try to separate from their parents make friends, and adopt friendly behavior. Teenagers form groups and play cards, and computer games, enjoy parties, etc., which increase their weight. Parents does not try to control the food of their children and they do not check the movement of their offspring. This research was done on obese children who like to play and live in the obese (Kucich, 2023).

Psychosocial Problems

It is found in research that obese children are fond of eating; they have psychosocial problems of Psychosocial, low confidence, and many other health problems (Jang, Son, & Kim, 2023). It is important to know a child's environment like friends, parents, and neighbors to reduce the effect of obesity because many families give their children much care and they do not allow them to be social. Sometimes some families have very little interaction with neighbors they do not like that their children mix up with other families (Ma, Li, & Rukavina, 2023). It is described that heavy and fat offspring have low confidence and they have a top ratio of nervousness disorders, hopelessness, and other psychological problems (Keogh & Timulak, 2023).

Method

It is a descriptive study in nature and survey technique was used to conduct this study. For measure the Social Cohesiveness a questionnaire what is happening in this class room (WIHIC) was developed. Weight of the students was measured by the weight machine in Kilograms and height of the students was measured by the meter rod in to meter. All the students of 10th grade from district Dera Ghazi Khan constituted the population of the study. The sample was selected randomly from schools of Dera Ghazi Kahn. Out of four Tehsil of District Dera Ghazi Kahn two Tehsil were randomly selected. From each selected Tehsil five schools were selected through random sampling. From each school one section was selected adopting cluster sampling technique. In this way total of 763 students were selected which included male (381) and female (382). The validity and reliability of the instrument was ensured through pilot testing and expert opinion. The reliability coefficient i.e. Cronbach alpha for all 23 items of the questionnaire” computed, through SPSS was 0.79.

Results and Discussion

Table 1

Frequency and percentage distribution of participants by gender, local and status

Characteristics		Frequency	Percentage
Gender	Female	382	50.1
	Male	381	49.9
Local	Public	566	74.2
	Private	197	25.8
Status	Fail	356	46.7
	Pass	407	53.3

Table 1 shows the demographic information of students selected for the study. The sample consisted of 382 (50.1%) female students and 381 (49.9%) male students while 566 (74.2%) belong to the Public and 197(25.8%) students belong to the private sector.

Table 2

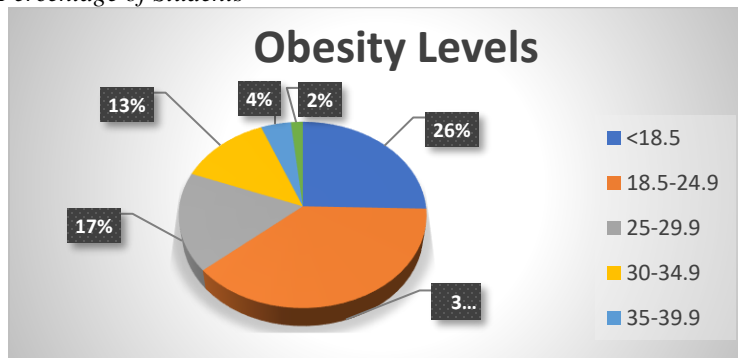
Levels of Obesity, No. of students, Percentage of students, Mean and SD of Cohesiveness and obesity level

Obesity level	No. of students	%	Cohesiveness	
			Mean	SD
<18.5	194	25.4	88.19	14.39
18.5-24.9	292	38.3	88.49	12.92
25-29.9	131	17.2	85.58	13.12
30-34.9	100	13.1	83.47	14.47
35-39.9	33	4.3	87.79	13.26
>40	13	1.7	85.00	13.97

The table 2 shows that students with an obesity level <18.5 have a mean of cohesiveness of 88.19 which shows that underweight students are low in cohesiveness. It is also clear from the table that students who have obesity levels (25-29.9, 30-34.9, 35-39.9) are relatively less cohesive when compared with normal-weight students. Table also gives information that 2% of very severely obese students are relatively more cohesive. The pie graph shows the levels of obesity and their percentage in the population. it is clear that 38% of students have an obesity level (18.5-24.9), 17% of students have an obesity level of 25-29.9,13 % of students have an obesity level of 30-34.9,26% of students have obesity level less than 18.5. Students who have an obesity level greater than 40 have only 2%, and 4.3% of students have an obesity level of 35 to 39.5.

Figure 1

Levels of Obesity with Percentage of Students



The bellows line graph gives us information that normal-weight students are more cohesive as compared to the obese, it also indicates that cohesiveness is inversely proportional to obesity.

Figure 2
Levels of Obesity

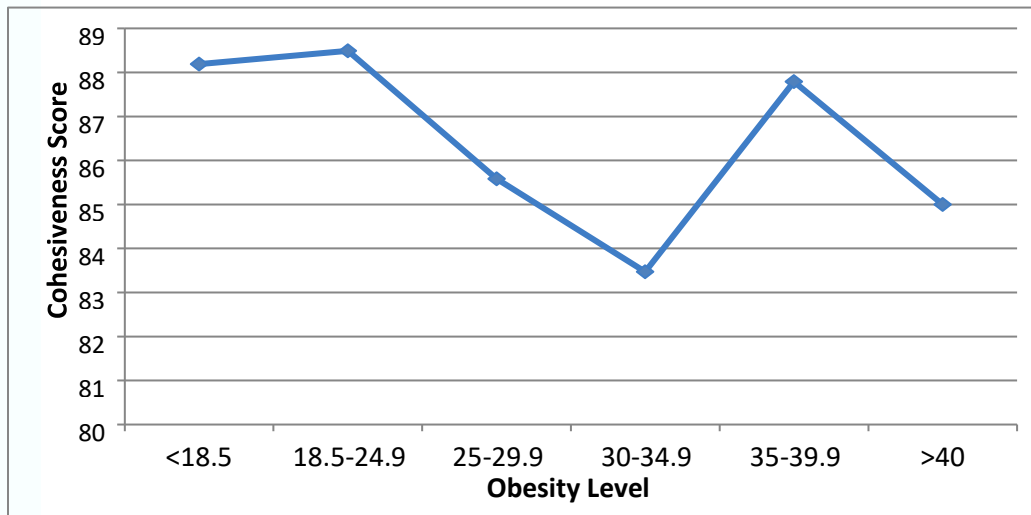
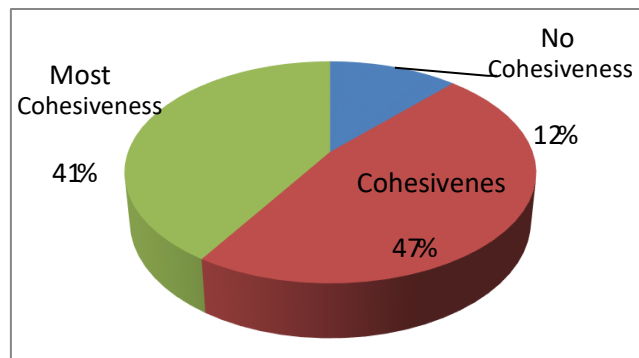


Table 3
Levels of Cohesiveness, No. of students, Percentage of students, Mean and SD of Obesity.

Levels of Cohesiveness	No. of students	%	Cohesiveness	
			Mean	SD
No cohesiveness	92	12.1	25.19	6.80
Cohesiveness	358	46.9	23.76	6.91
Most Cohesiveness	313	41.0	23.24	6.59

Table 3 shows that students have three levels of cohesiveness. The table also gives information about the relationship between social cohesiveness. It is clear from the table that 313 students are the most cohesive, the standard deviation is 6.59 mean of their cohesiveness is 326.45.

Figure 3
Levels of Obesity with Cohesiveness Score



The above pie graph shows the levels of cohesiveness and their percentage. It is clear from the graph that 41 % of students are most cohesiveness 47 % of students have cohesiveness and 12 % of students have no cohesiveness.

Figure 4
Levels of Cohesiveness with Percentage of Students

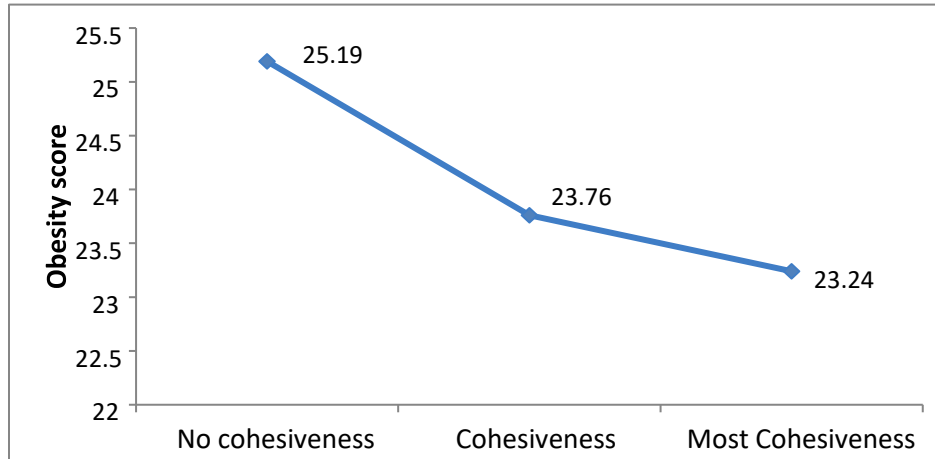


Figure 4 shows that obesity and cohesiveness are inversely proportional to each other. Obese students are less cohesive and non-obese are most cohesive.

There were 38.3% of students with normal weight, but 25.4% of students were low weight and 17.2% were overweight. The remaining 19.1% were obese. As far as social cohesiveness of students was concerned, 46.9% of students were cohesive whereas 41.0% were most cohesive in the classroom. In the same way there existed a significant negative correlation ($\rho = - .089$) between secondary school students' obesity and their social cohesiveness. Moreover, the normal weight students are relatively more cohesive ($\bar{x} = 88.49$) than the underweight student ($\bar{x} = 88.19$) and overweight students ($\bar{x} = 85.58$).

Discussion and Conclusion

The literature as well as the findings of the study state clearly that obesity is negatively correlated to students' cohesiveness. (Stanton, Jones, & Shahani, 2022). The results of the present study are also in line with that of Reeves (2023). Similarly, another research on teenagers showed that obese students experienced more problems, which caused them to adopt more damaging behaviors, like eating more full of fat foods, watching more television, and exceed eating (Udeagwu & Chidiobo, 2023). A good classroom environment and school climate positively affect the attitude of obese students. Moreover, a teacher may play a significant role in the development of social cohesiveness of obese students by providing them greater opportunities followed by some reinforcement and motivational incentives (Raj Bhandari Thapa, Metzger, Ingels, Thapa, & Chiang, 2022). Anyhow, only schools and teachers are not responsible, but the parents may also contribute to the overall academic development and social cohesiveness of their obese children. Frequent parent-teacher meetings would be useful in this regard (Smith *et al.*, 2022). A good classroom environment and school climate. positively affect the attitude of obese students. Anyhow, only schools and teachers are not responsible, but the parents may also contribute to the overall development of social cohesiveness of their obese children. Frequent parent-teacher meetings would be useful in this regard (Raj Bhandari Thapa *et al.*, 2022). Students cohesiveness was influenced by their level of obesity. The overweight students were socially less cohesive as compare the normal and underweight students.

Recommendations

Teachers should make an effort to create cohesiveness among students during teaching learning process. At higher secondary schools' obesity influences student's cohesiveness. There is a need to create awareness among teachers, regarding the hazards of obesity. Parents and teachers may be given an orientation regarding obesity and its symptoms to control and treatment. Parents and teachers should involve the students in outdoor games to reduce their weight.

Deceleration of Interest

The author declares that there was no clash of interest.

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