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KNOWLEDGE AND ATTITUDE ABOUT OBESITY AMONG MBBS STUDENTS

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ABSTRACT INTRODUCTION

Obesity carries significant health implications for both chronic diseases and mortality. The importance of obesity as a health problem in the US is an increasing evident. Studies undertaken in metropolitan cities of Pakistan had revealed an increased incidence of obesity in school children. The lives of medical students are shaped by work, college and social environment that promote inactivity and overeating, leading them to become obese. This study was carried out to evaluate knowledge and attitude of medical students regarding obesity.

METHODOLOGY:

A Cross Sectional Descriptive Study was conducted in October 2020. Students of all five classes of MBBS (first year to final year). Consent was taken and online questionnaire was filled due to Covid Restrictions. Data was analyzed using SPSS version 21.

RESULTS:

262 students participated in the study, aged between 17-25 years. About one third of the students (30.3%) considered themselves as obese. Majority (92.4%) have the basic knowledge about obesity. Majority (91%) have the knowledge about Obesity being a disease. About 78% of participants strongly agreed Obesity as a Health indicator. More than one third (41%), were likely to do exercise while others do try to exercise in different intervals to keep themselves protected against obesity. About two third (66%) of the students use various interventions to keep in good shape.

CONCLUSION:

Majority of medical students have knowledge and an appreciable attitude towards obesity. Awareness of medical students should be focused on healthy diet and positive effects of physical activity.

KEY WORDS:

Obesity, medical students, knowledge & attitude

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INTRODUCTION

Obesity carries significant health implications for both chronic diseases and mortality. The occurrence of overweight and obesity have risen globally and in the list of such countries, US is at the top because more than 2/3rd of adult population in USA is overweight or obese[6]. Nearly 60% adults in Canada and Australia were overweight and obese[7]. In European Countries, prevalence of overweight and obesity were recorded in 10% to 27% in males. However, this trend is slightly ascending 10% to 38% in females[8].

The problem of obesity is also increasing in developing countries. In Saudi Arabia, 16% male and 24% females were obese, relatively higher prevalence was found in Kuwait 32% and 44% respectively. Prevalence of obesity and overweight in Chinese and Iranian populations were 27.3% and 26.3% respectively. Overall 25% of general population in Pakistan is also affected by overweight and Obesity[9]. Studies undertaken in metropolitan cities of Pakistan had revealed an increased incidence of obesity in school children.

Besides general population, a notable prevalence of overweight and obesity is also found among nurses, medical students and professionals. This percentage is greater than general population[10,11]. A study conducted in America in 2007, exhibited mean BMI of nurses was 27.2 and almost 54% nurses were obese[12]. Another study from America showed that 24.3% and 18.4% of the undergraduate students were identified as overweight and obese respectively[15]. A study in Indian students showed mean BMI of 23, and 25.6% & 17.4% obese and overweight respectively[13]. Another cross-sectional study among nursing students in Kuwait to assess the association between Body Mass Index and wealth promoting lifestyle showed females who were overweight and obese secured the prevalence of 24.1% and 11.1% respectively and 31.6% & 14% male were overweight and obese respectively[14]. A Malaysian study showed that 30.1% of the students were overweight and obese[16]. A similar study in Sudanic Medic Students showed 17.8% and 9.2% were overweight and obese respectively[17]. A study from nursing students in Nigeria showed prevalence of overweight (142/1000) and obesity (41/1000)[18].

An emergent body of research, suggests there may be common biological mechanisms underlying a cluster of adverse health effects i.e. Obesity, Hypertension, altered lipid levels and other metabolic abnormalities referred to as Metabolic Syndrome. The data demonstrates the relevance of Metabolic Syndrome in obese for both Type 2 Diabetes Mellitus and Cardiovascular Diseases. The consideration of Metabolic Effects as a group is supported by finding in laboratory animals where early life exposure to certain Organophosphate pesticides can disrupt lipid metabolism induce weight gain and cause other metabolic responses that mimic those seen in Diabetes Mellitus and Obesity[19]. A recent study reported that prenatal exposure to Hexachlorobenzene was associated with increased BMI (Body Mass Index) and weight in children at 6.5 years. A study in Adult Occupational exposure to Organophosphate pesticide reported an

increased risk of Diabetes Mellitus in exposed worker. Several animal and cellular studies suggest that endocrine disrupting chemicals (i.e. Diethylstilbestrone) contribute to increased weight and diabetes[20,21].

The relationship between characteristics of build environment and obesity is most likely significant in children than adults as children are less able to leave their local environment without the help of adult. Build environment that provide exercise through the inclusion of nearby recreational areas, walk able communities and those that provide healthy eating options through reducing the number of food restaurants while providing access to fresh products are thought to reduce the frequency of obesity in children. Green environments that contain greater number of natural environment and features like parks and tracks may contribute to increased levels of physical activity in children that reduce the risk of obesity[22]. Another study reviewed that children living in Suburban Community with higher socioeconomic status may spend greater amount of time commuting in a car rather than walking which may also contribute to sedentary lifestyle that promote obesity[23,24].

In 1912, The Association of life Insurance Medical Directors and the Actuarial Society of America studied the longevity related to ideal weight in insured population under the article “Report of the Joint Committee on the Medico-Actuarial Mortality Investigation” with the main prospective of “Average weight may not have the lowest mortality”-What is ideal Weight? This study resulted in the outcome that “Ideal weight based on longevity”[25]. In 2000,WHO defined overweight and obesity as “the disease in which excess body fat has accumulated to such an extent that health may be adversely affected” and underscored that practical definition of obesity is based on the level of BMI(Body Mass Index)[26].

An emergent body of research suggests that the people who are most likely to be overweight are those who have a high genetic risk of developing obesity and whose lives are also shaped by work, school and social environments that promote overeating and inactivity. People who live in deprived areas often experience high level of stress including major life challenges and trauma, often their neighborhoods offer a few opportunities and incentives for physical activity and options for accessing affordable healthy food are limited. Psychological experiences play a big role up to half of adults attending specialist obesity services have experienced childhood adversity[26].

Some research studies were also found in Pakistani population. A study was conducted among 404 medical students of CMH Lahore Medical College in 2011. The study showed that there were only 8.2% and 2.4% of students were overweight and obese[27]. A study conducted among postgraduate trainee doctors in Karachi, found 31.6% and 28.2% were overweight and obese respectively[28]. Another cross-sectional study from Karachi conducted among 428 medical students from two public medical institutes showed that prevalence of overweight and obese was 14.7% and 12.4% respectively[29]. The aim of this study is to create “awareness about obesity among medical students.

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The objective of this study is to assess knowledge and attitude about obesity in medical students of Sialkot Medical College, Sialkot.

METHODOLOGY:

The study design is "Cross Sectional Descriptive Study". This study was done in October 2020.

Out of 500 MBBS students of Sialkot Medical College, Sialkot, and 262 students gave consent and enrolled in the study. Every participant has different characteristics i.e., socio-economic status, educational history, family structure, ethnic background and body weight composition.

DATA COLLECTION & ANALYSIS:

Simple Random Sampling, A type of Probability Sampling was employed. Data was collected with online Questionnaire having questions in 6 sections.

1. Questions about demographic details.
2. Questions about basic knowledge about obesity.
3. Questions about risk factors/causes of obesity.
4. Questions about Comorbidities related to obesity.
5. Questions about use of obesity as a health indicator.
6. Questions about the interventions that can prevent obesity.

The online questionnaire form was conveyed to medical students through social media platforms like Whatsapp, Facebook, Instagram and gmail and was received through the same channel. Various variables were collected and analyzed, like age, gender, weight, number of meals taken/day, frequency of exercise/day/week, type of diet consumed, obesity as a health indicator.

Data was analyzed using SPSS version 21. Statistical analysis comprised of descriptive statistics and Chi-Square Test. The permission of the study was granted by the Institutional Review Board (IRB), of Sialkot Medical College, Sialkot. The study was done online because of the restrictions of COVID-19 pandemic. The confidentiality of the respondents and the data gathered from the respondents was ensured.

RESULTS:

262 students participated in the study from the following classes.

Year of MBBS	Number of Students	Percentage
First Year	32	12.2
Second Year	45	17.1
Third Year	60	22.9
Fourth Year	80	30.53
Final Year	45	17.1
Total	262	100

AGE & SEX OF MEDICAL STUDENTS:

All the medical students who participated were aged 15-25 years. 66% were females and 34% were males

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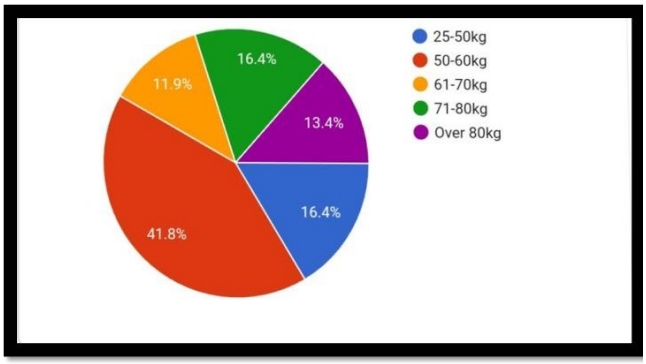
Fiqure-1, WEIGHT OF MEDICAL STUDENTS

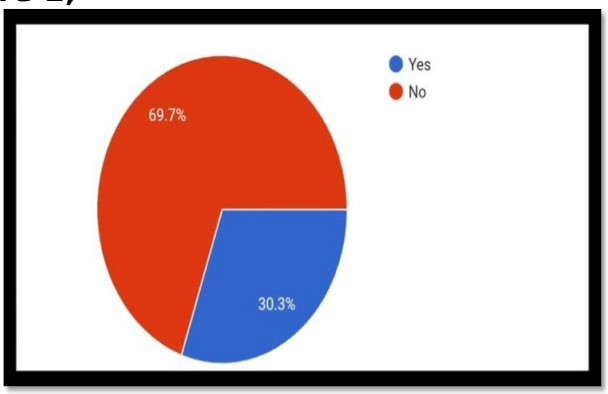


The weight of most (53.7%) of the students was between 50-70 kg as shown in the table.

OBESITY PREVALENCE:

About one third (30.3%) of the participated students consider themselves obese while the remaining do not.

Fiqure-2,



BASIC KNOWLEDGE ABOUT OBESITY:

According to our study, 92.4% of participants have the knowledge about obesity that it is increase in fat cells of the body while 7.6% of the participants are lacking in the basic knowledge about Obesity.

OBESITY AS A DISEASE:

Majority (91%) of the participants have the knowledge about Obesity being a disease while the remaining do not bother to consider obesity as a disease.

OBESITY AS MOST PREVALENT FORM OF MALNUTRITION:

About half (51%) of medical students strongly agree that obesity is most prevalent form of malnutrition and only one third (34%) disagree.

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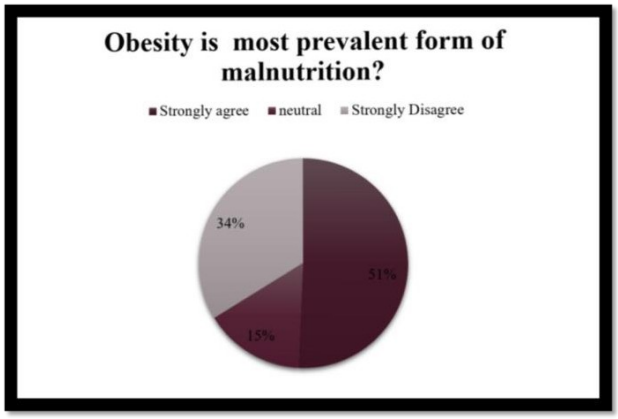

OBESITY AS A HEALTH INDICATOR:

More than two third (78%) strongly agreed with obesity as a Health Indicator and only 13% disagree with it.

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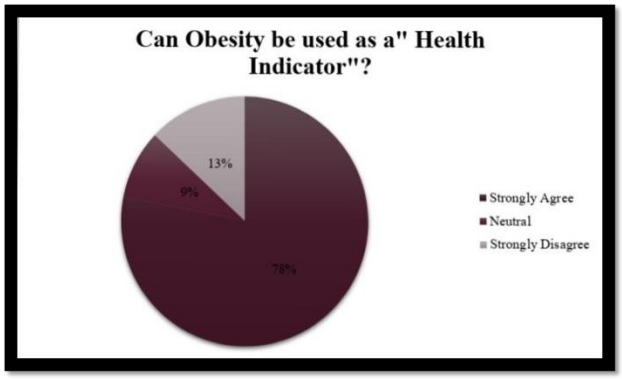

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RISK FACTORS/CAUSES OF OBESITY:

Majority of the students strongly agreed about fast food and soda being one of the causes of obesity. About half of the students believed over-eating and society modernization as causes of obesity.

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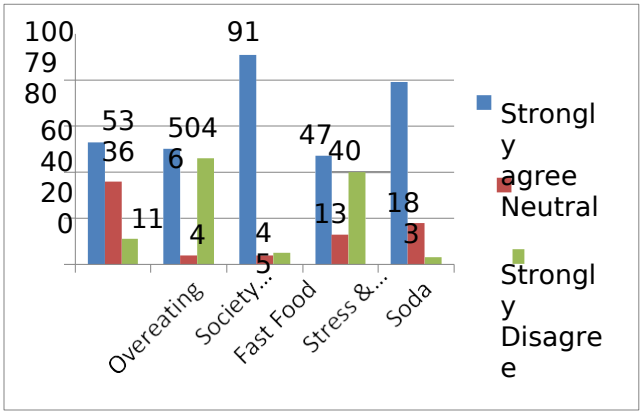

NUMBER OF MEALS TAKEN BY STUDENTS:

Majority (84%) of the students were taking 2-3 meals/day and only 13% were having 4 meals/day

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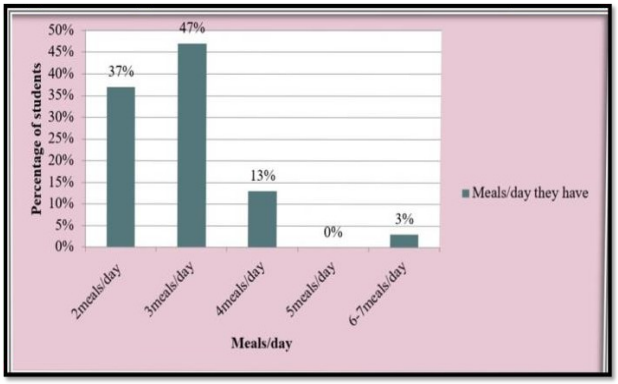

CO-MORBIDITIES RELATED TO OBESITY:

Majority (>60%) of students have knowledge about the comorbidities related to obesity.

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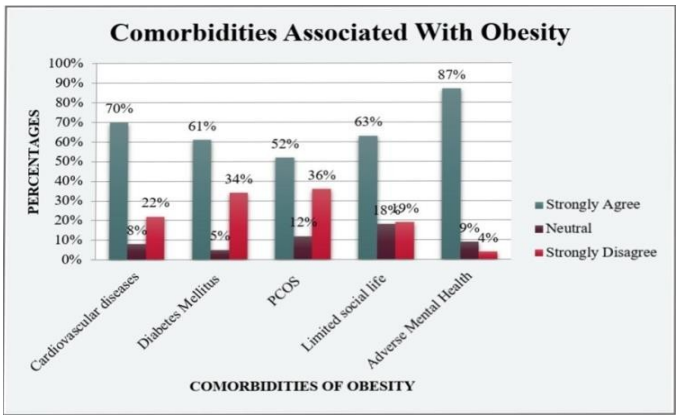

ATTITUDE OF STUDENTS REGARDING OBESITY:

More than one third (41%) of the involved participants are likely to do exercise 3times/day to prevent themselves from obesity while others participants do try to exercise in different interval to keep themselves protected against obesity.

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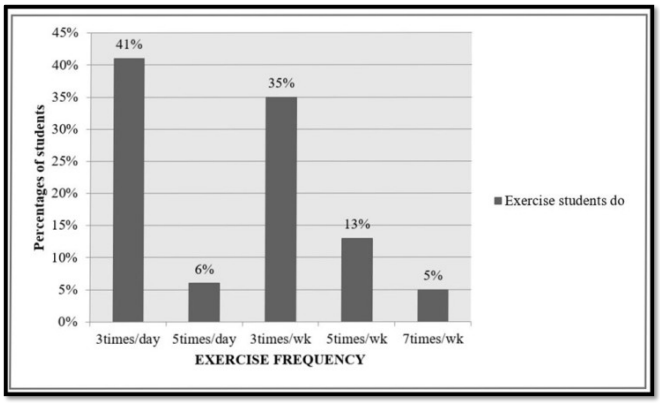

INTERVENTIONS:

Following interventions are followed by the participants to keep themselves in shape. Majority (66%) do all the necessary interventions to keep themselves in good shape.

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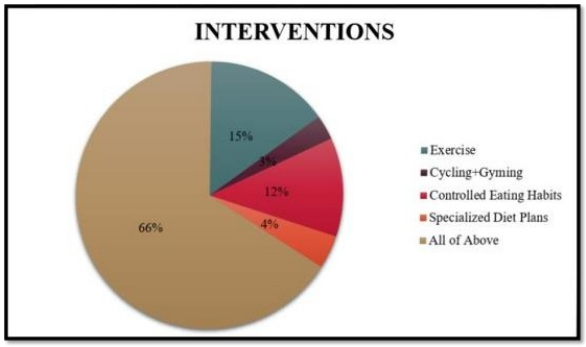

DISCUSSION

Obesity is usually defined in terms of Body Mass Index (BMI). Adults with BMI of 25 to 29.9 are identified as overweight and those with a BMI more than 30 as obese. These cut-offs are based on an epidemiological evidence.[2] Waist Circumference and waist to hip ratio are the common adjuvant measures used to classify the distribution of body fat in people who are overweight, as obesity related complications are most closely correlated with abdominal fat distribution[3-5]. A study was conducted to identify the prevalence of overweight and obesity and associated factors among young undergraduate nursing students of Health University in Karachi, Pakistan. It was a cross-sectional study that was accomplished at Institute of Nursing, Dow University of Health Sciences from December 2015-2016. Information was collected from 146 students via pretested questionnaire and standard tools were used for height and weight measurement while in our survey, information was collected from 262 students via online questionnaire.

In the referenced study, there were 44.5% males and 55.5%females subjects respectively while in our survey 33.8% males and 66.2% females participated.

In the referenced study, approximately 35% of the involved population has the basic knowledge about obesity while in our study; a majority of population about 92.4% has the basic knowledge regarding obesity.

In the referenced study, Majority of nursing students about 58.2% considered eating snacks between meals was the major cause that leads to obesity but in our survey 88% of the participants came to the fact that excessive consumption of junk/fast food and Soda drinks is the major junk food now-a-days which is excessively leading to obesity. In the referenced study 65% of nursing students perform physical activity at least 30 minutes daily to prevent obesity while in our survey, about 41% of medical students perform physical activity (exercise) 3 times/day to keep themselves safe from being obese.

Only Physical activity was being used as an intervention against obesity while in our survey, 66% of the medical students performed all of the below mentioned interventions to protect themselves from obesity and hence from all the other comorbidities related to it.

The interventions are exercise, cycling and gym, controlled eating habits and specialized diet plans.

CONCLUSION AND RECOMMENDATIONS:

From our Survey, we conclude that majority (91%) of medical students considered obesity as a disease and becoming more prevalent. We conclude that majority of medical students have outstanding

knowledge and an appreciable attitude towards obesity. Majority of the students are keen to keep a healthy and an active lifestyle to keep them protected from the comorbidities related to obesity. There are certain factors in their life like stress, studies, lack of healthy food opportunities at college, and the ways to tackle these factors needs to be addressed in the medical students. Awareness to medical students should be focused on healthy diet, positive effects of physical activity.

LIMITATIONS OF STUDY:

• Due to small sample size, the results of this study cannot be generalized to the whole population.

• Bias may have occurred, as the study was limited to online method of data collection due to COVID-19 pandemic circumstances.

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