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Original Article

Assessment of Obesity Level in Dental Students- A Clinical Study

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***ABSTRACT*:**

Background: Obesity has emerged as an epidemic not only in the developed countries but also in the developing countries. The present study was conducted to assess obesity level in dental students. **Materials & Methods:** The present study was conducted on 580 dental students which comprised of 280 males and 300 females. In all subjects, height (mm) and weight (Kg) were measured. Students with body mass index (BMI) above 95th percentile were considered as obese, those between 85th and 95th percentile as overweight, and those with BMI below the 5th percentile were considered as underweight. **Results:** 60 males and 70 females were obese, 55 males and 40 females were underweight, 165 males and 190 females were overweight. The difference was non- significant (P> 0.05). Age group 18-20 years had 50 obese, 35 underweight and 140 overweight students, 20-22 years had 25 obese, 40 underweight and 85 overweight students and 22-24 years had 55 obese, 20 underweight and 130 overweight students. The difference was significant (P< 0.05). 110 males and 125 females had habit of taking 3-4 meals a day, only 55 males and 65 females try to eat fiber and 115 males and 110 females eat in between snacks. The difference was non- significant (P> 0.05). **Conclusion:** Dental students are more prone to develop obesity. The prevalence of obesity and overweight children is increasing day by day.

Key words: Obesity, Overweight, Underweight

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INTRODUCTION

Obesity has become a worldwide phenomenon cutting across regional and economic barriers. Obesity has emerged as an epidemic not only in the developed countries but also in the developing countries that are in rapid epidemiological transition, and India is no exception. School based data in India demonstrates prevalence of obesity in the range of 5.6% to 24% among children and adolescents.[1] The rate of obesity has tripled in developing countries over the past 20 years as they rapidly become more urbanized, with increased consumption of high calorie foods and adoption of a more sedentary lifestyle. Some studies observed that first year university students have significant weight gain, followed by ongoing slow but steady increase in weight.[2]

The following factors were identified to be associated with overweight and obesity among university students or (young) adults: (1) socio-demographic factors (mainly male gender, older age and higher socioeconomic status; (2) Social factors: lack of social support, capital and lack of religiousness; (3) Dietary behaviour: intakes of fiber, consumption of red meat, skip breakfast more often, high number of meals, snacking behaviour; and (4) Health risk behaviour: Physical inactivity, frequent alcohol use, and smoking; (5) Mental health and childhood abuse: poor mental health (depression, anxiety) and childhood physical abuse, sexual and verbal abuse.[3]

Obesity is a condition of abnormal or excess fat accumulation in adipose tissue, which may adversely affect health of body and increases health problems. Although the

mechanism of obesity development is not fully understood, it is confirmed that obesity occurs when energy intake exceeds energy expenditure. Obesity is most commonly caused by a combination of excessive food intake, lack of physical activity, and genetic susceptibility.[4] The present study was conducted to assess obesity level in dental students.

MATERIALS & METHODS

The present study was conducted on 580 dental students which comprised of 280 males and 300 females. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study. Information such as name, age, gender etc. was recorded. In all subjects, height (mm) and weight (Kg) were measured. Students with body mass index (BMI) above 95th percentile were considered as obese, those between 85th and 95th percentile as overweight, and those with BMI below the 5th percentile were considered as underweight. The results were subjected to statistical analysis. P value <0.05 was considered as significant.

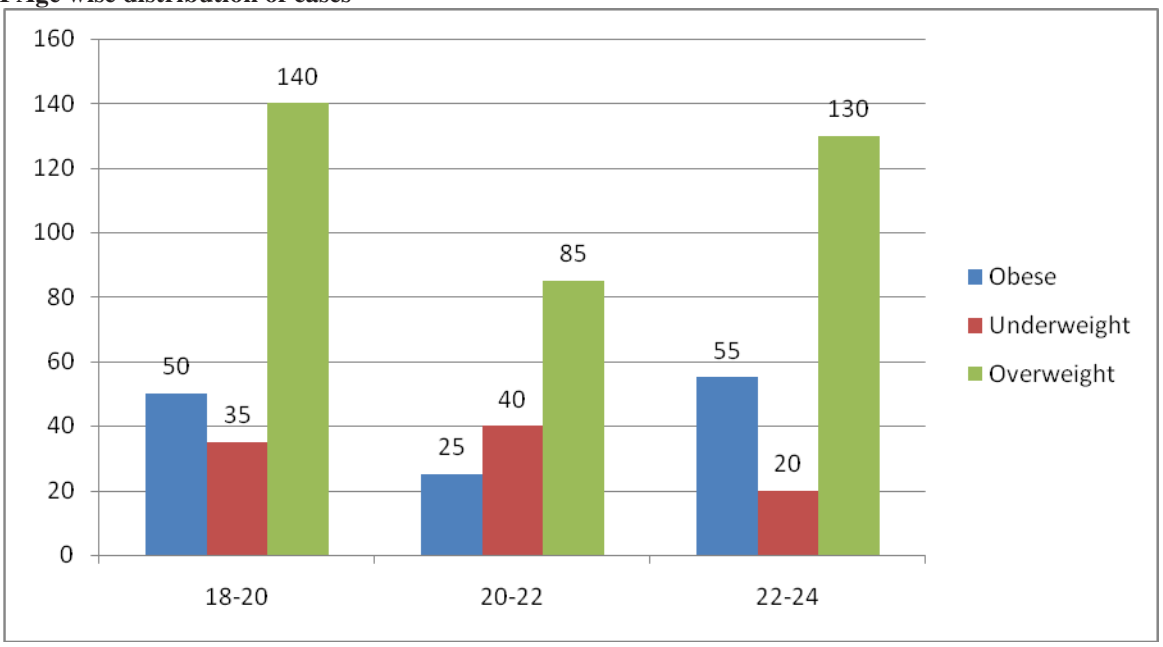
RESULTS

Table I Distribution of obesity, underweight and overweight

Parameters	Males	Females	P value
Obesity	60	70	0.1
Underweight	55	40	0.5
Overweight	165	190	0.2
Total	280	300	

It was found that 60 males and 70 females were obese, 55 males and 40 females were underweight, 165 males and 190 females were overweight. The difference was non- significant (P> 0.05).

Graph I Age wise distribution of cases



Age group 18-20 years had 50 obese, 35 underweight and 140 overweight students, 20-22 years had 25 obese, 40 underweight and 85 overweight students and 22-24 years had 55 obese, 20 underweight and 130 overweight students. The difference was significant (P< 0.05).

Table II Diet habits in subjects

Dietary variables	Males	Females	P value
No. of meals a day (3-4)	110	125	0.1
Try to eat fiber	55	65	0.5
In between snacks	115	110	0.2
Total	280	300	

110 males and 125 females had habit of taking 3-4 meals a day, only 55 males and 65 females try to eat fiber and 115 males and 110 females eat in between snacks. The difference was non- significant (P> 0.05).

DISCUSSION

Obesity is defined by body mass index (BMI) and further evaluated in terms of fat distribution via the waist–hip ratio and total cardiovascular risk factors. BMI is closely related to both percentage body fat and total body fat. Obesity in children and adolescents is defined not as an absolute number but in relation to a historical normal group, such that obesity is a BMI greater than the 95th percentile.[5]

In present study 60 males and 70 females were obese, 55 males and 40 females were underweight, 165 males and 190 females were overweight. Age group 18-20 years had 50 obese, 35 underweight and 140 overweight students, 20-22 years had 25 obese, 40 underweight and 85 overweight students and 22-24 years had 55 obese, 20 underweight and 130 overweight students. This is in agreement with Rashit et al.[6]

Peltzar et al[7] in their study found that the prevalence of underweight was 10.8%, normal weight 64.4%, overweight 18.9% and obesity 5.8%, while among women, the prevalence of underweight was 17.6%, normal weight 62.1%, overweight 14.1% and obesity 5.2%. Overall, 22% were overweight or obese. In multivariate regression among men, younger age, coming from a higher income country, consciously avoiding fat and cholesterol, physically inactivity, current tobacco use and childhood physical abuse, and among women older age, coming from a higher income country, frequent organized religious activity, avoiding fat and cholesterol, posttraumatic stress symptoms and physical childhood abuse were associated overweight or obesity. Several gender specific risk factors identified can be utilized in health promotion programmes.

We observed that 110 males and 125 females had habit of taking 3-4 meals a day, only 55 males and 65 females try to eat fiber and 115 males and 110 females eat in between snacks. This is in agreement with Shubham et al.[8] Obesity increases the risk of many physical and mental conditions. These co morbidities are most commonly shown in metabolic syndrome, a combination of medical disorders which includes: diabetes mellitus type 2, high blood pressure, high blood cholesterol, and high triglyceride levels.

Rapid weight gain which was traditionally considered as a healthy intervention for low birth weight infants is now recognized as a potential risk factor of increasing interest for obesity; In the geographically defined birth cohort of the Avon longitudinal study of pregnancy and childhood (ALSPAC), it showed that early postnatal catch-up growth, between birth and two years, is a risk factor for childhood obesity and may therefore contribute to the greatest risk for disease in adulthood.[9]

CONCLUSION

Dental students are more prone to develop obesity. The prevalence of obesity and overweight children is increasing day by day.

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