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Obesity among dental students

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Abstract: Obesity is a chronic medical condition associated with various oral health problems. The worldwide prevalence of obesity is 27.8%. Since obesity has a high prevalence worldwide, it is considered and prioritized as a major issue with regard to the economics of developed nations. Obesity is a disease with multiple aetiological factors, with genetics and specific obesity-related genes playing key roles. Due to the recent trends associated with urbanization, including increased refined food product consumption, unhealthy dietary habits, and a lack of physical activity, obesity is spreading fast. Obesity has been identified as a risk factor for various systemic diseases, including hypertension, cardio- vascular disease, metabolic diseases, osteoarthritis, respiratory difficulties, and some oral diseases, such as periodontal disease.The aim of the study is to accesses the prevalence of obesity among dental students of a private dental college.The study involve acessesing the obesity of various dental students using BMI index. All the data collected was computed in excel formal and statistical analysis was done.The study was conducted to accesses a change in 6 months period. All the data was statistically significant. After statistical analysis it was found that there was significant change between the initial and the data collected six months after. Thus in the current study it was observed the mean variation of the weight, food pattern and the BMI of each students and was found to have significant higher variation

Keywords: Body weight, body mass index, obesity

1. Introduction

Obesity is a chronic medical condition associated with various oral health problems. Overweight and obesity are defined as abnormal or excessive fat accumulation in the body that may impair health. Obesity is often associated with diabetes, hypertension, other cardiovascular diseases, osteoarthritis and is the fifth leading risk factors for global death. Obesity is emerging as a serious problem throughout the world, not only among adults, but also children, teenagers and young adults. The worldwide prevalence of obesity is 27.8%. Since obesity has a high prevalence worldwide, it is considered and prioritised as a major issue with regard to the economics of developed nations. Obesity is a disease with multiple etiological factors, with genetics and specific obesity-related genes playing key roles. Due to the recent trends associated with urbanisation, including increased refined food product consumption, unhealthy dietary habits, and a lack of physical activity, obesity is spreading fast. Obesity has been identified as a risk factor for various systemic diseases, including hypertension, cardio- vascular disease, metabolic diseases, osteoarthritis, respiratory difficulties, and some oral diseases, such as periodontal disease.In addition, obesity is associated with an increasing burden of oral diseases and adverse effects on oral health-related quality of life. As a result, medical and dental professionals are facing challenges

associated with identifying patients with obesity and prioritising their general and oral health care needs. Studies focused on patient beliefs have reported that health professionals are the primary group capable of helping patients identify obesity and its associated health risks. However, physicians were found to be hesitant to carry out obesity prevention and management counselling to their patients. The reasons for this are unknown, but may be due to a lack of knowledge and negative attitudes of health care professionals towards obesity management.

As obesity is one of the major predisposing factors for oral diseases, there is a need to counsel patients visiting dental hospitals and clinics in order to identify the underlying causes of obesity and carry out obesity management and prevention procedures. There is a lack of data about the understanding of dental professionals with regard to obesity management. Studies have reported that more than one-third of dental students and dental hygiene students had one hour or less of obesity education as part of their dental school curriculum.[26-30] These findings suggest that there is an urgent need for additional training about obesity-related health risks as part of the dental school curriculum.

2. Materials and methods

The study involves assessment of BMI of individual dental students for a period of six months period. A total of 100 students were involved in the study. The initial weight, height and the food intake frequency of each students were noted. The same data was collected after six months. All the data collected were tabulated in Excel format and statistical analysis were done. Both the initial record and the post-six months record were compared and evaluated.

3. Results

The values were statistically significant. The variables in this study were weight, BMI and food intake frequency off each students. In statistics t-test, Kolmogorov–Smirnov, and Shapiro–Wilks tests were done using SPSS software(IBM SPSS Statistics for Windows, Version 23.0, Armonk, NY: IBM Corp. Released 2015).

Paired T-Test to compare mean values between pre and post-operative

Variables	Time	N	Mean	Std. Dev	t-value	p-value
Weight (kg)	Pre-operative	50	61.32	9.204	5.524	<0.001
	Post-operative	50	67.78	8.874		
Height (cm)	Pre-operative	50	164.44	10.345	-	-
	Post-operative	50	164.44	10.345		
BMI	Pre-operative	50	18.77	2.6133	4.816	<0.001
	Post-operative	50	24.23	2.5120		

Food pattern (Frequency)	Pre-operative	50	5.00	1.088	5.140	<0.001
	Post-operative	50	8.5	.970		

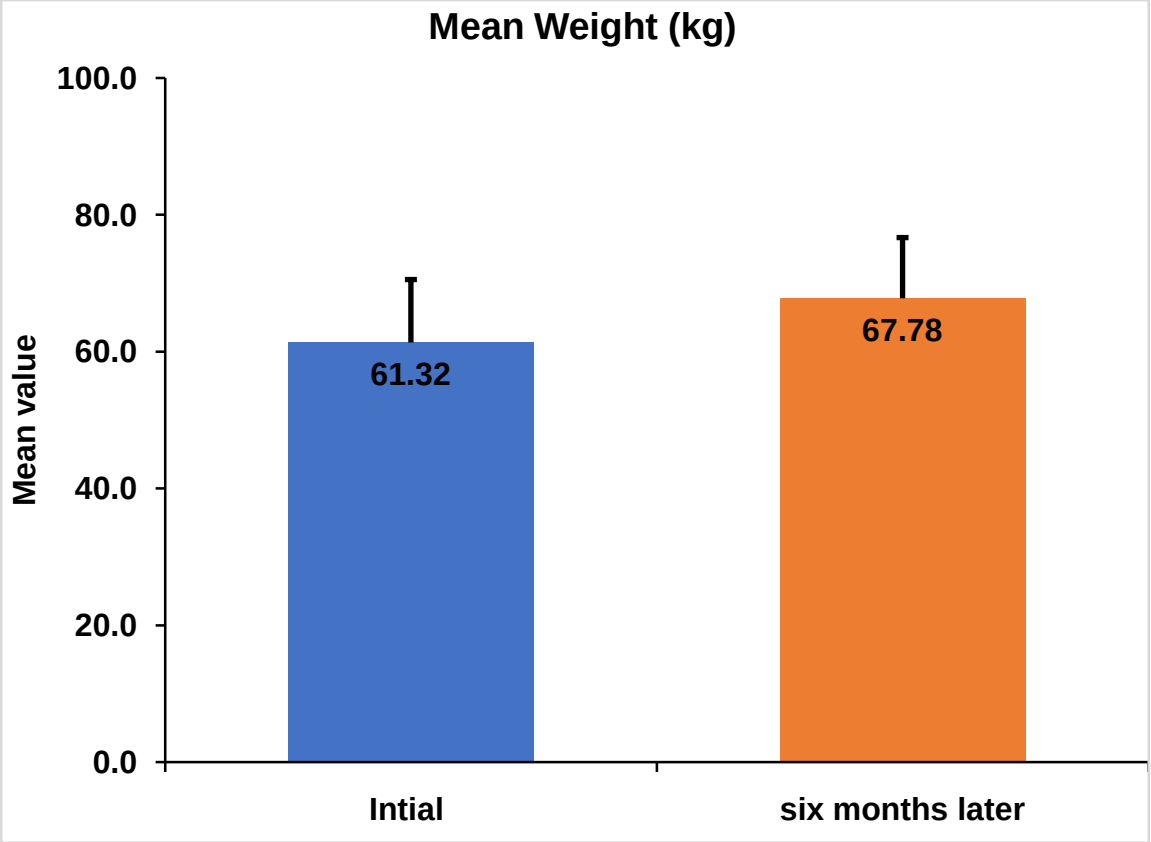

Chart 1 mean of weight in six months

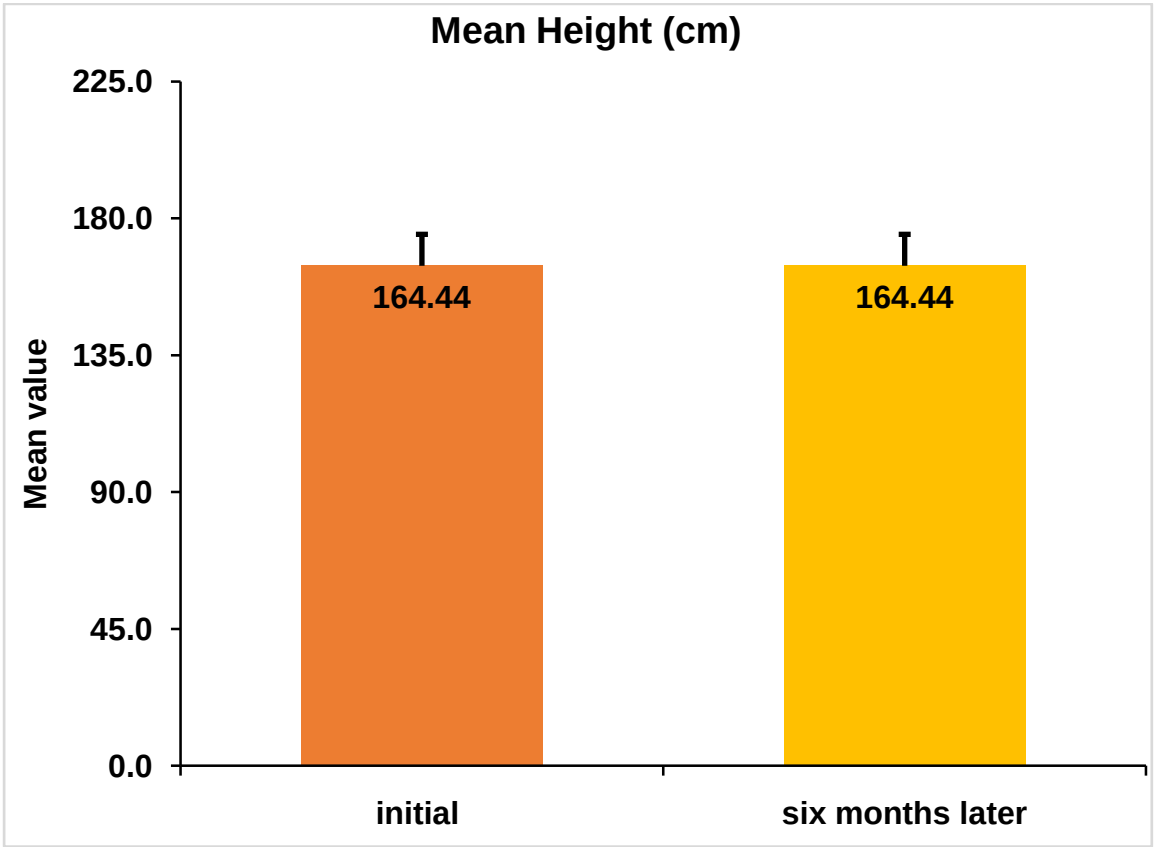

Chart 2 mean of height in six months

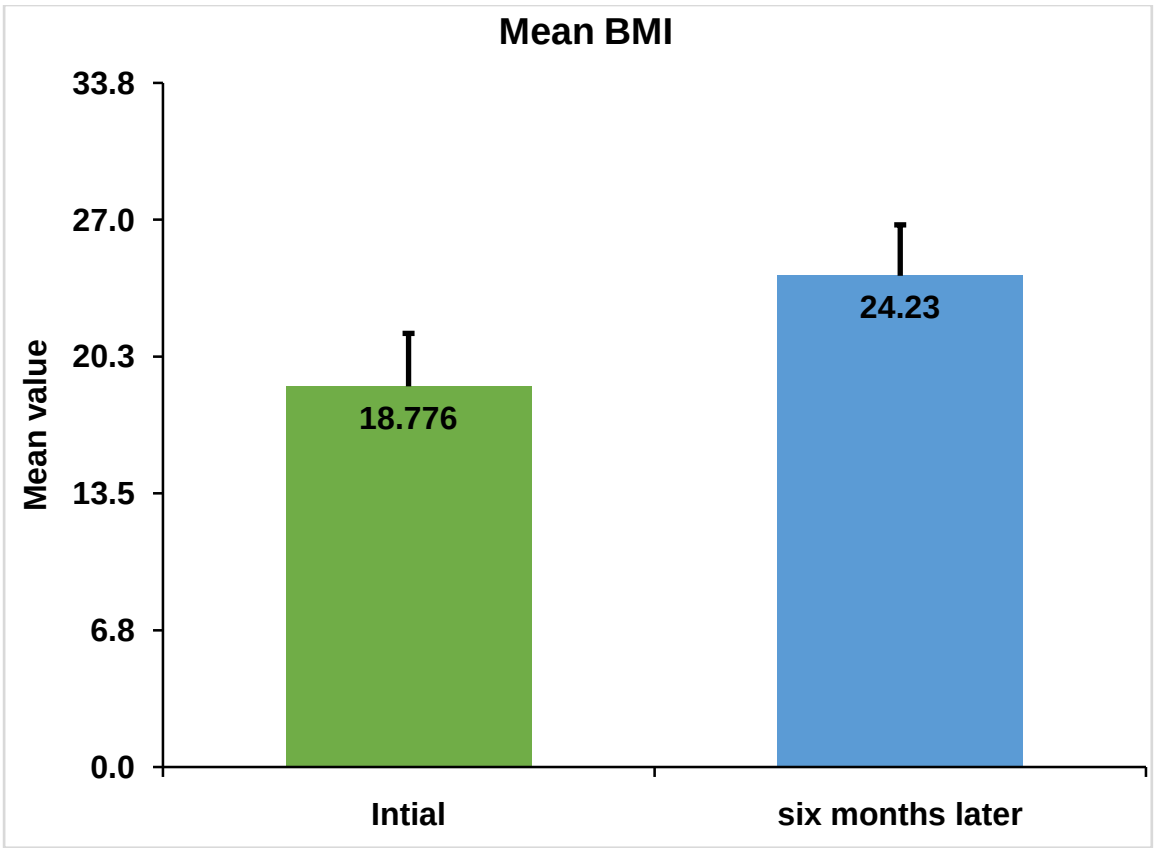

Chart 3 mean BMI in six months

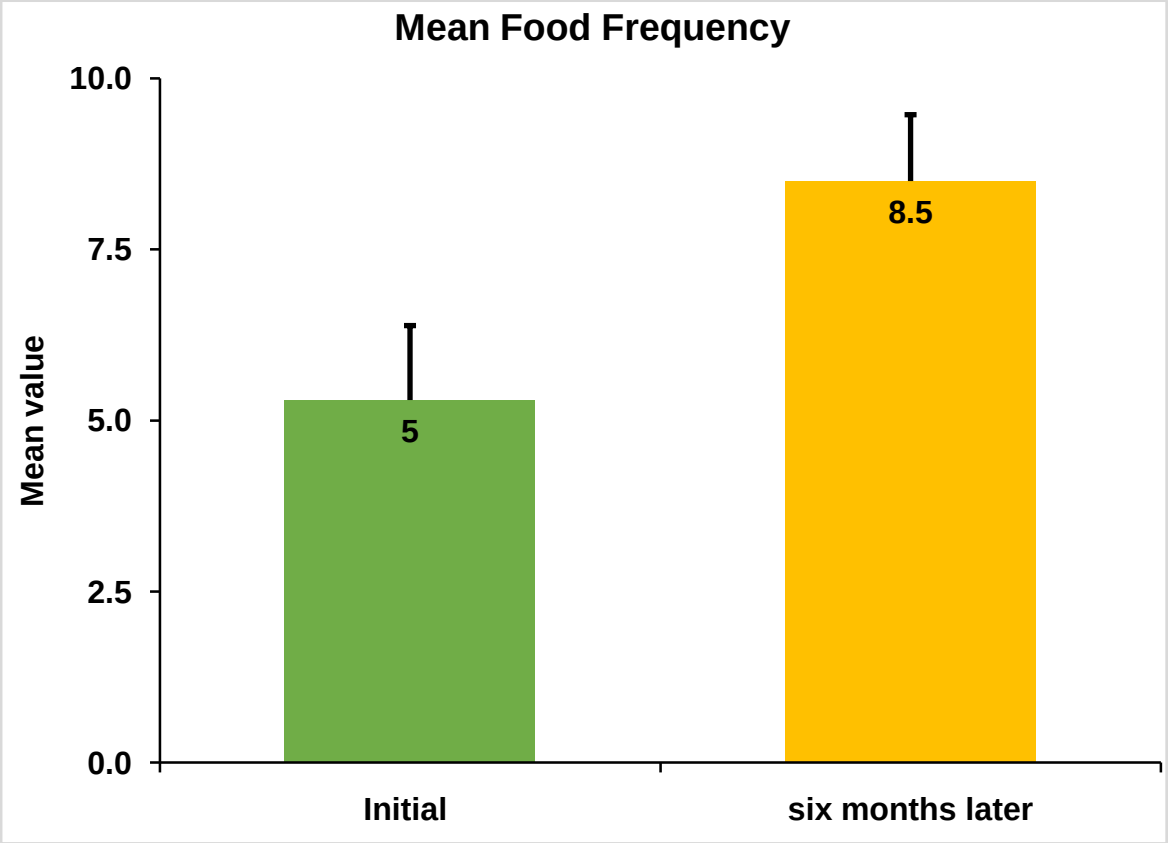

Chart 4 mean food frequency in six months

4. Discussion

More than two-thirds of the dental students reported having between 0 and 1h of formal obesity related education as part of their dental school curriculum. Other studies have also identified a similar lack of dedicated obesity-related education in the dental school curriculum(Fogelman et al., 2002). One study reported that 40% of dental students had 0–1 h of formal obesity-focused education as part of their dental school curriculum (Magliocca et al., 2005). Another study reported that 72% of primary care physicians believed that they lack proper training for providing obesity-related education to their patients (Fogelman et al., 2002). These findings are disappointing and may be a result of a lack of interest and priority setting by institutions and health authorities with regard to obesity related education.

In this present study a period of six months were used to find the changes in the students. It was found that there were significant weight again among the students. The mean height was almost same. As one of the factor in the body mass index has increased significantly it has resulted in the increase in the mean MeanBMI(chart 3). This is because the food intake frequency is increased in an irregular fashion(chart 4). This irregular intake of food will accumulate the amount of carbohydrates in the the body which is turned into insoluble form. Students tend to be irregular in their food pattern for doing their work where they don't give much importance to having food. This in-turn will affect the digestion pathway. Most of the students are not aware of their part as they give much low of importance to the fact of regular food intake. This modification tend to change the metabolism off the individual persons.

In a study by RanjanaTiwariet.al., accessed live obesity of 131 students which they found 10% of obesity in the individuals. Another study by Chhabra et al.,which reported a prevalence of 11.7% overweight and 2% obesity among medical students of Delhi. In an another study conducted in Kelantan by the Department of Medicine, University Sains Malaysia, prevalence of overweight & obesity was 21.3% & 4.5% respectively. A study conducted on prevalence of overweight & obesity from AIMST University in Malaysia showed a prevalence of pre obesity (BMI 25- 29.9) & obesity as 15.9% & 5.2% respectively which was quite high in comparison to this study. In a study conducted by Gupta et al(7) among medical students the prevalence of 17.5% and 3.4% for overweight and obesity respectively was found.

5. Conclusion

Thus in the current study it was observed the mean variation of the weight, food pattern and the BMI of each students and was found to have significant higher variation. So a better awareness among the student should be done to reduce the obesity which reduce the risk of any systemic diseases.

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