

KNOWLEDGE, ATTITUDE AND PERCEPTION OF DENTAL STUDENTS TOWARDS OBESE PATIENTS ATTENDING DENTAL COLLEGE IN INDIA

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ABSTRACT

Aim: To assess the knowledge, attitudes and beliefs toward obesity among clinical and preclinical dental undergraduate students of a private dental school in India. **Materials and Methods:** The total sample size in the present study accounted to 200. In order to assess knowledge, attitudes and beliefs of study subjects toward obesity, a questionnaire was adapted from a previous survey, which consisted of questions related to the student's perception of responsibilities toward obese patients, their knowledge and attitudes toward obese patients and each question had answers on a Likert scale. **Results** An overall response rate of 184 out of 200 (92%) was obtained. Out of 184 respondents, 125 (68%) were males and 59 (32%) were females. Greater proportions of students had negative attitudes toward obese patients agreeing that they feel uncomfortable when examining an obese patient. 32% of the participants agreed and 21% strongly agreed that they need to make accommodations in equipment and office furniture. Majority (93%) of the students had a positive perception toward assessing a patient's dietary habits and (77%) were interested in learning about obesity in dental school. **Conclusions:** Many of the students in clinical years had negative attitudes toward obese patients than preclinical students.

KEYWORDS: Knowledge; attitude; perception; dental; obese patients

INTRODUCTION

Obesity is defined by the World Health Organization as a condition of abnormal or excess fat accumulation in adipose tissue, to the extent that health may be impaired.^[1] Obesity is a disease with multiple etiological factors, with genetics and specific obesity-related genes playing key roles.^[2] However, there are also some environmental links to obesity. 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, cardiovascular disease, metabolic diseases, osteoarthritis, respiratory difficulties, and some oral diseases, such as periodontal disease.^[3,4] In addition, obesity is associated with an increasing burden of oral diseases and adverse effects on oral health-related quality of life.^[5] As a result, medical and dental professionals are facing challenges associated with identifying patients with obesity and prioritizing their general and oral health care needs.^[6] 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.^[7] However, physicians were found to be hesitant to carry out obesity prevention and management counseling to their patients.^[8] There is a lack of data about the understanding of dental professionals with regard to obesity management.^[5] Studies have reported that more than one-third of dental students and dental hygiene students had one hour or less of

Table 1: Responses to knowledge based obesity questions in relation to course of study

Statements on Knowledge of Obesity	Percentage	P value
Obesity is a chronic disease		
Strongly Agree	164 (89%)	0.001
Agree	20 (11%)	
Neutral	0	
Disagree	0	
Strongly Disagree	0	
Small weight losses (5-10%of body weight) can produce important medical benefits for obese patients		
Strongly Agree	74(40%)	0.001
Agree	67(36%)	
Neutral	12(7%)	
Disagree	31(17%)	
Strongly Disagree	0	
Obesity is associated with serious medical conditions		
Strongly Agree	112(61%)	0.001
Agree	67(36%)	
Neutral	5(3%)	
Disagree	0	
Strongly Disagree	0	
I can provide a differential diagnosis list for obesity		
Strongly Agree	17(9%)	0.001
Agree	45(25%)	
Neutral	11(6%)	
Disagree	83(45%)	
Strongly Disagree	28(15%)	

obesity education as part of their dental school curriculum.^[9] These findings suggest that there is an urgent need for additional training about obesity-related health risks as part of the dental school curriculum. Therefore, the purpose of this study was to understand and identify the underlying reasons for why dental professionals are often neglectful, reluctant, and hesitant when treating obese patients, and to determine the current state of knowledge, attitudes and perceptions of dental students with regard to obesity and its management.

MATERIALS & METHODOLOGY

All the undergraduate students (including internship students) pursuing their career at a private dental institution in India were invited to participate in the study. The total sample size in the present study accounted to 200 out of which 184 students present and agreed on the day of the survey were included and those unwilling constituted exclusion criterion. Ethical approval was obtained from the ethics committee of SDM College of Dental Science & Hospital, Dharwad, Karnataka, India and informed consent was taken from all the participants. In order to assess the

Knowledge, attitudes and perceptions of study subjects toward obesity, a questionnaire was adapted from a previous survey by Kumar S *et al.*^[10] The questionnaire consisted of three questions related to the student's perception of responsibilities toward obese patients, four and seven statements related to their knowledge and attitudes toward obese patients respectively. Each question had answers on a Likert scale with five categories ranging from strongly disagree = 1 to strongly agree = 5. Questionnaire was distributed by the author to all the students during a lecture and objectives of the survey were explained to the subjects. Data was analyzed using the SPSS software (SPSS Inc. Released 2007. SPSS for Windows, Version 16.0. Chicago, SPSS Inc.) Descriptive data is presented as percentages and Chi-square analysis to compare the responses between the genders and to analyze the difference between courses of study.

RESULTS

An overall response rate of 184 out of 200 (92%) was obtained. Out of 184 respondents, 125 (68%) were males and 59 (32%) were females. Table 1 demonstrates that 89% strongly agreed and 11%

Table 2: Attitudes toward obesity

Statements on Attitude towards Obese patients	Percentage	P value
I have negative reaction towards the appearance of an obese patient		
Strongly Agree	25(13%)	0.001
Agree	89(48%)	
Neutral	36(20%)	
Disagree	18(10%)	
Strongly Disagree	16(9%)	
It is difficult for me to show empathy to obese patient		
Strongly Agree	9(5%)	0.012
Agree	72(39%)	
Neutral	63(34%)	
Disagree	21(11%)	
Strongly Disagree	19(10%)	
I feel uncomfortable while examining an obese patient		
Strongly Agree	5(3%)	0.005
Agree	87(47%)	
Neutral	56(31%)	
Disagree	17(9%)	
Strongly Disagree	19(10%)	
Obese patients tend to be lazier than ideal weight patients		
Strongly Agree	46(25%)	0.001
Agree	67(36%)	
Neutral	12(7%)	
Disagree	32(17%)	
Strongly Disagree	27(15%)	
Obese patients tend to lack willpower and lack motivation in comparison to normal weight person		
Strongly Agree	30(16%)	0.001
Agree	55(30%)	
Neutral	9(5%)	
Disagree	68(37%)	
Strongly Disagree	22(12%)	
I would feel uncomfortable asking an obese patient his /her dietary habits		
Strongly Agree	81(44%)	0.001
Agree	56(30%)	
Neutral	5(3%)	
Disagree	31(17%)	
Strongly Disagree	11(6%)	
I would feel uncomfortable asking an obese patient his /her past use of appetite suppressants or current and past anti-obesity medications		
Strongly Agree	112(61%)	0.001
Agree	27(15%)	
Neutral	11(6%)	
Disagree	32(17%)	
Strongly Disagree	2(1%)	

agreed that obesity is a chronic disease. 40% of the study subjects strongly agreed that small weight losses could produce important benefits in obese patients (Table 1). Table 2 shows significantly shows greater proportions of

students had negative attitudes toward obese patients agreeing that they feel uncomfortable when examining an obese patient in addition to agreeing the statements "It is difficult for me to feel empathy for an obese patient," "overweight

Table 3: Perception of professional responsibility

Statements on Perception of Professional responsibility	Percentage	P value
I will have to make necessary accommodations of equipment in dental office to		
Treat obese patients		
Strongly Agree	21(11%)	0.008
Agree	32(17%)	
Neutral	69(38%)	
Disagree	23(13%)	
Strongly Disagree	39(21%)	
In my discipline, it is important to assess a patient's dietary habits		
Strongly Agree		0.001
Agree	172(93%)	
Neutral	0	
Disagree	5(3%)	
Strongly Disagree	7(4%)	
	0	
I would be interested in learning about obesity in dental school		
Strongly Agree		0.006
Agree	141(77%)	
Neutral	0	
Disagree	33(18%)	
Strongly Disagree	5	
	0	

people tend to lazier than normal weight people" and "overweight people lack willpower and lack motivation in comparison with normal weight people." It is evident that (Table 3) 32% of the participants agreed and 21% strongly agreed that they need to make accommodations in equipment and office furniture. Majority (93%) of the students had a positive perception toward assessing a patient's dietary habits and (77%) were interested in learning about obesity in dental school.

DISCUSSION

Though the response rate was considerable in the current study, it is not free of limitations, the first limitation being the inclusion of dental students of only one private dental college of India so; the results cannot be generalized to whole dental student population of India. Furthermore, the obesity status was not recorded in dental students, as the responses of obese students might be different from those who are non-obese. However, a research on west Philadelphia adolescents observed that all the subjects had positive self-esteem, eating habits and health behavior knowledge regardless of their obesity status.^[11] In total, 89% subjects strongly agreed that obesity is a chronic disease and 40% subjects strongly agreed that small weight losses could produce important benefits in obese patients.

These figures are in concurrence with 86.2% and 78.4% that has been reported by female dental students of Saudi Arabia.^[12] Moreover, 88% of the Australian general practitioners believed that small weight losses can produce important benefits among obese patients.^[13] It was observed that 61% of the participants strongly agreed and 36% agreed of obesity being associated with serious medical conditions, which is not in agreement with 94% of dental and dental hygiene students of university of Michigan who were aware of an association between obesity and serious medical conditions.^[14] This could be attributed to the wide attention and publicity given to obesity and its ill-effects by the government of India. There was a significant difference for knowledge about obesity between the students based on the course of study with a greater proportion of clinical students agreeing to the knowledge related questions. More than half the subjects (77.7%) were interested in learning about obesity in dental school, which is a positive indication that many dental students welcome incorporation of obesity education in the dental curriculum. Ahmed *et al.*, considered that sensitivity to the needs of obese patients may require attention to the parking, office entry, furniture, medical equipment, supplies and office reading material. In addition, they presume that the initial cost of upgrading the

office may be offset by larger dividends in the long run due to a broader range of clientele.^[15] In the present study, significantly greater percentage of students agreed that treating obese patients in dentistry means that they will need to make accommodations in equipment and office furniture, which might be due to the real life experience of clinical student's with obese patients in their routine clinics. Weight stigma (treating obese individuals as if they are deficient) and society's demands for slenderness has been a concern to obese people. It has also been observed that teachers can hold negative anti-fat attitude that may affect perception of performance among obese students.^[16] Negative attitudes toward obese people are observed both implicitly and explicitly and are even observed among obese people, children and even in health-care professionals.^[17] Thus, dental students might hold negative attitudes toward obese patients, but it is also expected that their professional education would have influenced their attitudes. However, the influence of dental education of the student's attitudes toward obesity could be understood by future studies conducted to compare the perceptions of obesity and obese population of students from medical professions and comparable young adults from the general population belonging to similar cultural environment.

CONCLUSION

There were no differences between the genders for any of the statements. Many clinical subjects had negative attitudes towards obese patients than preclinical students. Majority of the students were interested in learning about obesity in dental school which warrants inclusion of obesity education in the dental curriculum. Counseling should be conducted for these students who are future practitioners in order to instill positive attitudes in them toward obesity patients.

CONFLICT OF INTEREST & SOURCE OF FUNDING

The author declares that there is no source of funding and there is no conflict of interest among all authors.

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