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Research Article

Eating disorders among medical students of a rural teaching hospital: a cross-sectional study

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ABSTRACT

Background: Eating disorders are complex psychiatric syndromes in that can lead to significant and potentially life threatening medical and nutrition complications. Literature from India in this regard is restricted and issues such as eating attitudes and body shape dissatisfaction remain unexplored in the Indian setting. It has been argued that eating disorders are culture-bound disorders specific to western societies. Consequently, these conditions remain understudied in most non-western settings. Objectives: 1) To determine the prevalence of eating disorders and body shape perception among medical students. 2) To assess any association between eating disorders and body shape perception.
Methods: A cross-sectional study was conducted among 172 medical students using Eating Attitudes Test-26 (EAT-26), and the Body Shape Questionnaire (BSQ). Anthropometric measurements like height, weight was done for body mass index calculation and analysis was done with open Epi and Microsoft excel.
Results: An overall prevalence of overweight was calculated to be 17.4% and obesity, 6.4%. The prevalence of eating disorder symptoms and disordered eating attitudes and behaviours in our study was 16.9% and a significant correlation between distorted eating attitudes and age with body shape dissatisfaction was found.
Conclusions: The prevalence of overweight and obesity is on rise and a comparable level of eating disorders was observed. It is recommended to assess BMI along with the body shape concerns while screening for eating disorders among medical students.

Keywords: Eating disorders, Body shape perception, Body Mass Index (BMI)

INTRODUCTION

Eating disorders are complex psychiatric syndromes in which cognitive distortions related to food and body weight and disturbed eating patterns can lead to significant and potentially life threatening medical and nutrition complications.[1] The three types of eating disorders are: Anorexia Nervosa (AN), Bulimia Nervosa (BN) and Eating Disorder Not Otherwise Specified (EDNOS).[2]

Eating disorders have become increasingly prevalent in adolescents of all racial, ethnic and socioeconomic groups. More than 75% of eating disorder cases begin during adolescence.[3]

Eating disorders are associated with the highest morbidity and mortality rates among psychiatric disorders. Mortality ranges from 7-10%, most frequently related to cardiovascular changes secondary to starvation, gastric haemorrhaging, and suicide.[4]

Eating disturbance is related to biological, developmental, psychological and socio-cultural factors.[5] In particular, cultural pressure is thought to be an

important determinant of the increasing incidence of eating disorders among vulnerable adolescents.[6]

Eating disorders have been associated with body image disturbances, disordered eating attitudes, and other psychiatric difficulties.[7,8] Increased psychological problems and low self-esteem could be the possible connecting link between dissatisfaction with body image and abnormal eating behaviour.[9]

It has been argued that eating disorders are culture-bound disorders specific to western societies.[10] Consequently there is limited published literature on body shape and eating attitudes from non-western settings.[11] Consequently, these conditions remain understudied in most non-western settings.[10]

The non-Western populations have been relatively protected from eating disorders, perhaps because in several non-Western cultures fatness and obesity traditionally symbolize affluence, beauty, prosperity and fertility.[12,13]

However, recent comparative epidemiological studies have demonstrated an increase in patients with eating disorders in populations previously deemed immune to factors leading to body dissatisfaction.[14]

Literature from India on both anorexia nervosa and bulimia nervosa is restricted to a few case reports.[15,16] Similarly, issues such as eating attitudes and body shape dissatisfaction remain unexplored in the Indian setting. However, with increased westernisation of many Asian societies, it becomes imperative to study eating attitudes and body shape concerns in these populations.

Hence an attempt has been made to assess the prevalence of eating disorders and body shape perceptions among our medical students as all the students are hostel inmates away from their home and can be viewed to be at a higher risk to eating disorders compared to general population.

METHODS

Study design

A cross-sectional study

Study setting

Tertiary care rural medical college, Adichunchanagiri medical college. B. G. Nagara

Selection of participants

All the medical students who were willing to co-operate for the study. All the students were hostel residents of the medical college. Informed consent to participate in this study was taken and the study was approved by the ethical committee.

Methods of measurement

Data was collected using Eating Attitudes Test-26 (EAT-26), and the Body Shape Questionnaire (BSQ). Anthropometric measurements like height, weight was done for Body mass index calculation. Body Mass Index (BMI)) was calculated using the formula weight (kg)/height^2 (m^2) BMI less than 18.5 was considered under-weight, less than 25 was considered normal, 25-29.9 was overweight and 30 or above obese.

Data collection and processing

Data was collected by forming a survey team of 3 members who were trained and standardised especially for height and weight measurement to ensure internal validity. Data forms were scrutinized for missing values, entered, analysed using open Epi and Microsoft excel. Statistical methods: Percentages, proportions, parsons' correlation

RESULTS

In the present study of 172 study subjects, the mean age was 21 years, mean weight - 58.5 kg, mean body mass index - 21.58, mean EAT - 26 score was 10.58 and BSQ - 58.4 (Table 1).

Table 1: Socio-demographic and anthropometric profile of the study subjects (n = 172).

Variable	Mean ± SD
Age	21 ± 4.507
Height	1.64 ± 0.11
Weight	58.5 ± 12.0
Body mass index	21.58 ± 4.49
EAT-26 score	10.88 ± 7.30
BSQ score	58.4 ± 28.5

Table 2: Classification of study subjects by body mass index (BMI), eating attitudes test-26 (EAT-26), and body shape questionnaire (BSQ).

Test	No of study subjects (n=172)
BMI (kg/m^2)	
Underweight (<18.5)	36 (20.9%)
Normal (18.5-24.99)	95 (55.2%)
Overweight (≥25.0)	30 (17.4%)
Obesity (≥30.0)	11 (6.4%)
EAT-26 score	
≤20	143 (83.1%)
>20	29 (16.9%)
BSQ score	
Not worried about body shape (<81)	130 (76%)
Slightly worried (81-110)	22 (13%)
Moderately worried (111-140)	19 (11%)
Total	172 (100%)

About 55.2% of the study subjects had body weight in the normal range, 17.4% were overweight and 6.4% were obese (Table 2).

Around 16.9% of them had problematic eating attitudes which require further diagnostic studies for confirmation and 11% had worries or dissatisfied about their individual body shape who may require counselling.

Table 3: Classification of study subjects eating attitudes test-26 (EAT-26), body shape questionnaire (BSQ), and body mass index (BMI).

Variable correlation	Pearson correlation	P value (2 tailed)
BMI		
With Age	0.038	0.620
With BSQ	0.039	0.611
With EAT-26	0.0619	0.419
Age		
with BMI	0.0376	0.624
With BSQ	0.307	0.000
With EAT-26	-0.0197	0.797
EAT-26		
with AGE	-0.0197	0.797
With BSQ	0.287	0.000
With BMI	0.0619	0.419
BSQ		
With AGE	0.307	0.000
With BMI	0.039	0.611
With EAT-26	0.287	0.000

A positive correlation was seen between body shape distortion and eating attitudes (Table 3).

DISCUSSION

This study reports findings of overweight/obesity, body shape and eating attitudes among medical students from a rural teaching hospital in south India.

An overall prevalence of overweight was calculated to be 17.4%, prevalence of obesity was 6.4%. Chhabra et al. reported a prevalence of 11.7% overweight and two per cent obesity among medical students of Delhi.[17] Our findings are in accordance with their study. In the study conducted by Fernandez et al, the proportion of overweight/obesity was 13.2%.[18] The observed prevalence of overweight and obesity is on the higher side among our medical students which may be because of their affluence and also because all the study subjects are hostel inmates staying away from their families and have a habit of eating out regularly.

In our study the mean BMI was 21.58, similar observations was seen in a study by Szweda and Thorne.[19] Also, respective BMIs of ≥25.0 (overweight) and >30.0 (obesity) reported in 17.4% and 6.4% of our participants were higher than that reported among Chinese and Japanese female university students.[20]

The prevalence of eating disorder symptoms and disordered eating attitudes and behaviours in our study was 16.9%. This is comparable with reports from other investigators.[21-26] Who had used eating attitude test and reported prevalence of disordered eating attitudes and behaviours to be between 16.5 and 27% in different study groups.

In the current study, about 16.9% of the study subjects had the EAT-26 score higher than the cut-off, which was much higher than other studies. Studies conducted among Brazilian university students found the rate of abnormal eating attitudes to vary from 8 to 8.5%.[27,28]

In the present study, a significant correlation between distorted eating attitudes and body shape dissatisfaction was found. Similar observations have been reported in various studies in different cultural settings.[29,30] Correlation between BMI and EAT-26 scores has also been reported in previous studies in Western and Asian settings.[31,32]

CONCLUSIONS

The present study among medical students revealed that the magnitude of overweight and obesity is on rise. A low proportion of medical students were found to have BMI in normal range. Since a validated and standardised instrument was used comparisons with different studies could be done readily. It is recommended to assess BMI along with the body shape concerns while screening for eating disorders among medical students. Also since all of our students are hostel inmates staying away from their families an annual survey and appropriate counselling can go a long way in preventing eating disorders in them.

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