

Research Article

A cross-sectional study of disturbed eating attitudes and behaviours in medical students

Panchami^{1*}, Teenu Samuel²

¹Department of Physiology, Father Muller medical college, Mangalore, Karnataka, India

²MBBS Student, Father Muller Medical College, Mangalore, Karnataka, India

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*Correspondence:

Dr. Panchami,

E-mail: dr_panchami@gmail.com

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ABSTRACT

Background: The final phase of medical school is characterized by many demands, requirements, and responsibilities, in addition to insecurities that typify the end of the program. Weight and shape concerns are also considered part of the core pathology of eating disorders. The purpose of this study is to investigate eating attitudes and to correlate disturbed eating habits with anxiety, self-esteem, body weight satisfaction and BMI in medical students.

Methods: This is a cross-sectional observational study in a random sample of medical students aged between 17-21 years including a total of 150 medical students. Information was gathered from a structured questionnaire on eating attitudes and behaviours (eating attitude test -26, EAT-26), anxiety (Beck anxiety inventory), self-esteem (Rosenberg Self-Esteem Scale), fear of being overweight (body image and eating questionnaire for adults-16). Data was represented as mean±S.D. Chi-square test and Pearson's correlation was used to investigate the relation between different parameters. P value less than 0.05 was found to be significant.

Results: In this study, 4.7% of medical students were found to have eating disorder and all were girls. On comparison of eating score with anxiety showed a positive correlation ($p=0.001$), positive correlation between EAT score and body image dissatisfaction ($p=0.001$), no significant relationship between self-esteem ($p=0.73$) and no significant relationship between EAT score and BMI ($p=0.294$).

Conclusions: The prevalence of eating disorder symptoms in this study was calculated using the cut-off scores of the questionnaires, which indicate possible cases of eating disorders. A diagnostic interview is necessary to corroborate the self-report data and to obtain an accurate estimate of prevalence of full syndrome eating disorders.

Keywords: Eating attitudes, Eating behaviour, Eating attitude test, Rosenberg self-esteem scale

INTRODUCTION

The origin and course of eating disorders constitute a multifactorial etiopathology. Anorexia nervosa (AN) and bulimia nervosa (BN) are severe eating disorders that usually begin during adolescence, occur most commonly in females, and are associated with an intense fear of gaining weight. The onset of anorexia nervosa is usually between the ages of 10 and 30, with 85% of all anorectic patients developing the illness between the ages of 13 and 20 years.¹

Bulimia nervosa is a common disabling disorder, particularly in young women.²

Anorexia nervosa, bulimia nervosa (BN) and related eating disorders have a profound impact on psychological, social and physical functioning. They can affect a student's cognitive ability and their insight and motivation to receive treatment. In the absence of treatment they tend to run a chronic course with a progressively worsening prognosis. This can affect the student's ability to achieve their academic potential and

prevent them from benefiting from the broader aspects of university life. Current academic literature about eating disorders primarily involves western population. While the existence of eating disorders has been documented in non-Western countries little is known about possible risk factors in non-Western cultures for developing eating disorders.

Medical education is characterized by moments of crisis. Getting into medical school has an impact on a student's health and quality of life because it requires adaptation and lifestyle Changes. The first is the initial phase, the adaptation that requires a change in lifestyle and study method. The second crisis occurs in the intermediate phase, when students have contact with reality, extensive content to study, and multiple assessments. The final phase of medical school is characterized by many demands, requirements, and responsibilities, in addition to insecurities that typify the end of the program.³

Weight and shape concerns are also considered part of the core pathology of eating disorders.⁴ Studies have shown that effective treatments for eating disorders offer the possibility of full and lasting recovery and that delaying such treatment may worsen the prognosis for recovery. It is therefore in the best interests of students with eating disorders to receive specialist treatment as soon as possible. This study aims to recognize any disordered eating habits in medical students and also tries to recognize the etiological factors to plan and develop prevention and treatment programs. Therefore, the study includes the investigation of eating attitudes and to correlate disturbed eating habits with anxiety, self-esteem, body image dissatisfaction and BMI in medical students.

METHODS

This is a cross-sectional observational study in a random sample of medical students aged between 17-21 years. This study was performed after the institutional ethical clearance and consent from all the participants. A total of 150 medical students were recruited for this study.

Information was being gathered from a structured questionnaire on eating attitudes and behaviours (Eating Attitude Test-26, EAT-26, Anxiety (Beck Anxiety Inventory), self-esteem (Rosenberg Self-esteem Scale), Fear of being overweight (Body Image and Eating Questionnaire for adults-16). Body mass index was calculated based on self-reported height and weight.

Statistical analysis

Data was represented as mean±S.D. Chi-square test was used to compare the prevalence between boys and girls. For the correlates analyses, Pearson's correlation was used to investigate the relation between independent variables and disturbed eating attitudes. P value less than 0.05 was found to be significant.

RESULTS

Out of the 300 eligible candidates, 150 completed the questionnaire. Of the non-participants, 120 declined to participate, and 30 were excluded because of incomplete data. The prevalence of medical students endorsing disturbed eating attitudes and behaviours. Total scores suggestive of an eating disorder (EAT-26 ≥ 20) were found in 7 students (4.7%); this included 7 girls (5.1%) and zero boys. p value is 0.385 and is not significant (Table 1).

Table 1: Prevalence of disturbed eating attitudes and behaviours; N=150, p>0.05.

		Gender		Total
		Male	Female	
EAT	Normal	14	136	150
	≥ 20	0	7(5.1%)	7(4.7%)
p value				0.385 (NS)

Table 2: Association of eating disorder with self-esteem. N=150, p>0.05.

		Self esteem
EAT	r	-.147
	p	0.73 (NS)
	n	150

The correlation of Eating Attitude Test score with anxiety. There is a positive correlation between Eating Attitude Test score and anxiety and the correlation are highly significant ($p=0.001$, Figure 1). The correlation of EAT score with body image and eating showed a positive correlation and the correlation is highly significant ($p=0.001$, Figure 2).

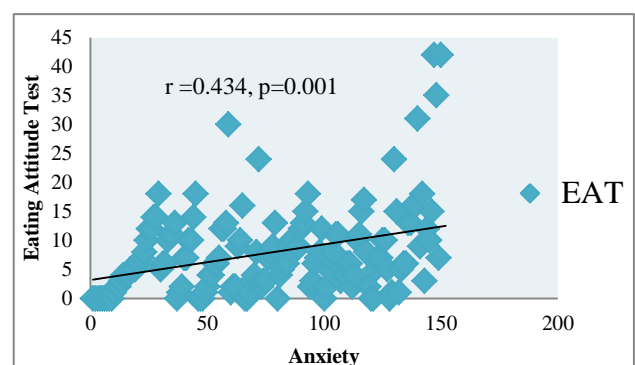


Figure 1: Association of eating disorder with anxiety; N=150, p=0.001.

The correlation of EAT score with self-esteem showed a negative correlation and the correlation is not significant (Table 2, $p=0.73$). The correlation of EAT score with Body Mass Index showed a positive correlation between but the correlation is not significant (Table 3, $P=0.294$).

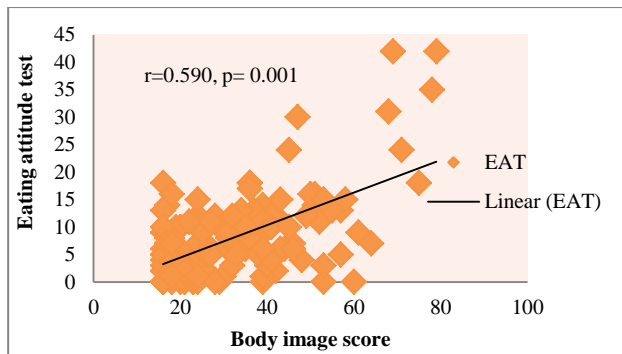


Figure 2: Association of eating disorder with body image. N=150, p=0.001.

Table 3: association of eating disorder with body mass index; N=150, p>0.05.

		BMI
EAT	r	.086
	P	0.294 (NS)
	N	150

DISCUSSION

Eating disorder and high prevalence of stress among medical students is a cause of concern as it may impair the behaviour of students, diminish learning ability, and ultimately affect patient care after their graduation. The exact cause of eating disorders is unknown.

The etiology of eating disorders in common with most other psychiatric disorders is generally considered to be multifactorial; no single etiological factor in isolation can account for the development of the disorder in an individual, nor can it be seen to account for the variation among individuals.^{3,2}

In this study, 4.7% of medical students were found to have eating disorder and all were girls. No incidence of eating disorder was reported in boys since the sample size was not sufficient to detect this. Whether or not a person develops an eating disorder will depend on their individual vulnerability, consequent on the presence of biological or other predisposing factors, their exposure to particular provoking risk factors such as anxiety, stress and body dissatisfaction and on the operation of protective factor like attending the religious service in the campus which de-stress their mind.

Studies have been conducted in western scenario to assess eating disorders in medical students. A study from US showed that 15% of the female medical students had history of eating disorders.⁶ Previous studies on male and female students showed a high proportion of female subjects (anorexia = 1% to 4.2% or bulimia = 6.5% to 18.6%) suffered from eating disorders while none of the male subjects reported positive.⁷ Another study too

reported females (binge eating, n = 49% and bulimia n = 4%) at a greater risk to develop eating Disorders.⁶

On comparison of eating score with some common factors responsible for eating disorder our study showed a positive correlation between eating disorder and anxiety and the correlation was very highly significant. Medical students are associated with high levels of stress that stands as a critically important causative factor of eating disorders.⁹

Stress can trigger an eating disorder, and for the college student who is away from home for the first time, the stress of moving into a totally different environment and meeting new people during the initial period of the course can make them more susceptible to developing an eating disorder.

To keep from gaining weight, some students engage in risky behaviours such as excessive dieting or purging food. In many cases, people learn about the risky behaviours from others students in their dorm or over the Internet, so that obsession about weight can become a strong influence on other students. Individuals with eating disorders may have abnormal levels of certain chemicals that regulate such processes as appetite, mood, sleep and stress. For instance, both people with bulimia and anorexia have higher levels of the stress hormone cortisol.¹⁰

Some research also suggests that individuals with anorexia have too much serotonin, which keeps them in a constant state of stress.¹¹ Thus, it is quite important to analyze all such instabilities in medical students who are an asset for the future of this country.

Our study also showed a positive correlation between EAT score and body image and this is consistent with other studies which show that eating disorder is not randomly distributed in the general population and that women are more prone to eating disorders and also that women with eating disorders have body image dissatisfaction.^{12,40}

Eating disorder is more prevalent also due to increasing pressure on women to maintain the thin ideal and a culture has developed in which thin ideal is to be even their than before, but the average weight of young women has actually increased.¹⁴ This has resulted in the discrepancy between the ideal body and the actual size of most young girls.¹⁵

Body dissatisfaction is promoted due to the clash between unrealistic cultural ideals to be thin and the biological realities which prevent many women from achieving the thin ideal. Our study did not show a significant relationship between self-esteem and is contradictory to many previous studies which showed significant relationship between self-esteem and eating disorder.¹⁶

It has been pointed out by other researchers that persons with clinical anorexia nervosa set standards so high that meeting their extreme weight loss goals may actually lead to a reduction of self-esteem, rather than an increase.¹⁷ Further, girls experience both a drop in self-esteem and an increase in dieting and eating problems as they become adolescents.¹⁸ Further, low self-esteem/self-evaluation may serve as an antecedent for eating disorders.¹⁹ Present study did not show a significant relationship between EAT score and BMI and is contradictory to many previous studies which showed significant relationship between Eating disorder and BMI. Limitations of the present study are that the prevalence of eating disorder symptoms in this study was calculated using the cut-off scores of the questionnaires, which indicate possible cases of eating disorders. A diagnostic interview is necessary to corroborate the self-report data and to obtain an accurate estimate of prevalence of full syndrome eating disorders.

Self-report measures may lead to underreporting or underestimation of symptoms of eating disorders. The participation of male students was very restrictive due to which a comparison on eating disorders and its correlation among the different sex could not be made. However, these limitations notwithstanding, the present study contributes to our knowledge about eating disorders and its relationship with the most common etiologic factors.

CONCLUSION

Eating disorder and high prevalence of stress among medical students is a cause of concern as it may impair behaviour of students, diminish learning, and ultimately affect patient care after their graduation. Present study did not show any increased eating disorder in medical students but showed a strong positive association of eating disorder with anxiety and body image dissatisfaction. The prevalence of eating disorder symptoms in this study was calculated using the cut-off scores of the questionnaires, which indicate possible cases of eating disorders. A diagnostic interview is necessary to corroborate the self-report data and to obtain an accurate estimate of prevalence of full syndrome eating disorders.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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