

Screening For Risk of Eating Disorders: A Study among Students from Selected Colleges In Bengaluru

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Abstract

Background: Eating disorders refer to a group of conditions characterized by abnormal eating habits. It has impact on both physical and socio-emotional health of young people. The study will help in early identification of eating disorders. Addressing eating disorders at the early stage can prevent further physical and psychological complications.

Objectives: To assess the risk of eating disorders among college students using Eating Attitudes Test-26(EAT-26) screening tool.

To determine their behaviors and its association with eating disorders.

Method: A cross sectional study was conducted among students studying in pre-university and degree colleges. The colleges were selected by simple random sampling technique. A total of 500 students participated in the study. Eating Attitudes Test-26(EAT-26) screening tool developed by Garner et al was used to collect the data. The questionnaire was self administered to the students to assess the risk of eating disorders and behavior pattern.

Results: The mean age of the students was 17.60 ± 1.13 years. Risk of disorders was present among 94(18.8%) students. Behavior patterns for development of eating disorders were present among 313(62.1%) students. Among 313 students 73(23.3%) had eating disorder risk. The association between the risk of eating disorders and behavior patterns was found to be statistically significant ($p < 0.05$).

Conclusion: The study concludes that there is an existence of eating disorders among college students and was significantly associated with behavioral domain. This shows the necessity of initiating routine screening and intervention programs to control eating disorders.

Key words: Eating disorders, Risk, Eating Attitudes Test, Body Mass Index

Introduction

Eating disorders are group of conditions characterized by unusual eating habits. They involve

either insufficient or excessive food intake that is detrimental to an individual's physical and emotional health. The most prevailing forms of Eating disorders are Binge eating disorder, bulimia nervosa and anorexia nervosa.¹

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Eating disorder (EDs) is a complex illness that has effect on both physical and socio-emotional health of young people, and contributes to significant morbidity.²

Extreme fear of gaining weight is observed in people with anorexia, which drives them to maintain a body weight far less than normal. Bulimia is characterized

by a pattern of binge eating, accompanied by attempts to get out unwanted calories. People with binge eating disorders often eat an uncontrollable, large amount of food during the binges.¹

Globally many people suffer from this disorder. It is estimated that as many as 24 million individuals in the United States suffer from eating disorders. Nevertheless from past few years it has been introducing in India too. In India the information regarding these disorders is very limited but it is increasing very rapidly day by day due to the effect of media and westernization.³ Screening for eating disorder is an essential step in the process of early identification and intervention.²

Young adults who are college students face many challenges as they navigate this transitional life stage. This period, known as 'emerging adulthood', is characterized by self-focus, identity exploration, and major changes in home life and education/work situations. Emerging adults are at particularly high risk for weight gain and disturbed eating behaviours (Lewis et al., 2000; Hoek, 2006). Disturbed eating behaviours are abnormal practices associated with eating disorders [e.g. restraint, emotional, disinherited, binge, and night eating].⁴

The earlier these disorders are identified and assessed, the greater the chances are for enhanced treatment and better recovery. Therefore, we intend to undertake a descriptive study to assess the risk of eating disorders among college Students.¹ College students were selected as the study group because they are at a receptive and can be motivated to make appropriate healthy modifications and in turn they can influence the community at large.

Aims and Objectives

- To assess the risk of eating disorders among college students using Eating Attitudes Test-26 (EAT-26) screening tool.
- To determine their behaviors and its association with eating disorders.

Materials and Method

A cross-sectional study was conducted among students studying in Pre -university and degree colleges

present in urban field practice area of a tertiary care hospital, Bengaluru.

Inclusion criteria

- The students aged between 16-19 years.

Exclusion criteria

- The students who are absent on the day of data collection.
- Students who do not give consent for the study.

Study duration: 6 months

Sample size:

The sample size was calculated as 489 by considering the study done by Babu S² et al . A total of 500 college students were considered for the study.

Sampling method

The 500 study subjects were chosen by simple random sampling method in 2 stages from 5 pre-university colleges and 4 degree colleges

Methodology

A pilot study was conducted before the actual study, following which necessary changes were incorporated in the questionnaire before the actual study. The data has been excluded from the main study.

Data was collected after obtaining clearance from the ethical committee of the institution. The permissions from the college authorities was obtained before data collection. The participants were explained in detail about the research, and written informed consent was obtained. The participating colleges and students were ensured that a complete confidentiality is maintained. The colleges will be visited three times to track down students absent in previous visits to decrease the non-response rate.

Study tools

The study tool consists of semi structured questionnaire which was self administered to the students. The questionnaire consists of two sections. Section A is a self - report standardized questionnaire. EAT-26 (Eating Attitudes Test-26) developed by Garner et al⁵ to assess

the risk of eating disorders. EAT-26 questionnaire has three criteria for determining the risk of having eating disorder, the first part for socio-economic variables, second comprised of Eating Attitude Test (EAT) to assess the abnormalities in eating behavior and the third part has behavioral questions indicating possible eating disorder symptoms or recent significant weight loss.

EAT test item consists of 26 questions, it is usually answered as always, usually, often, sometimes, rarely or never which was graded as 3,2,1,0,0,0 respectively for first 25 questions and 0,0,0,1,2,3 for the 26th question.

The EAT-26 score \geq 20 indicate a tendency to develop an eating disorder that would require evaluation by a specialist.

Behavioral questions are in yes or no format. If the answer was yes to one or more questions, it will be considered as the behavioral criteria are met. If one or more of these criteria are met, they are at high risk of having eating disorders and should be evaluated by a specialist.

Those who complete the questionnaires are then examined for various anthropometric parameters: Weight (Kg) and height (meters) will be measured. Body Mass Index (BMI) will be calculated.

Statistical Analysis

The data was compiled in Microsoft (MS) Excel worksheet and analyzed using SPSS (Statistical Package for Social Sciences) software version 20.0. The descriptive statistics- All qualitative variables were presented as frequency and percentages. All quantitative variables were presented as mean and standard deviation. Chi-square tests of significance were applied to analyze the association between eating disorders and demographic variables. *p* values of less than 0.05 were considered statistically significant.

Results

A total of 500 college students participated in the study. The mean age of the students was 17.60 ± 1.13 years. In the total study participants 241 (48.2%) of them had BMI within normal range where as 95 (19%) of the study participants were under weight and 81 (16.2%) of them were obese. The mean BMI among females was 21.4 ± 3.7 and among males 21.8 ± 3.9 .

Risk of eating disorders was present among 94 (18.8%) students. Behavior patterns for development of eating disorders were present among 313 (62.1%) students. Among 313 students 73 (23.3%) had eating disorder risk. The study participants with abnormal behavior are 2.4 times more likely to develop Eating disorders compared to those with normal behavior.

Table 1: Demographic profile of study participants (N=500)

Variable	Frequency	Percentage (%)
Age(years)		
16	116	23.2
17	110	22.0
18	131	26.2
19	143	28.6
Gender		
Males	215	43.0
Females	285	57.0
Total	500	100

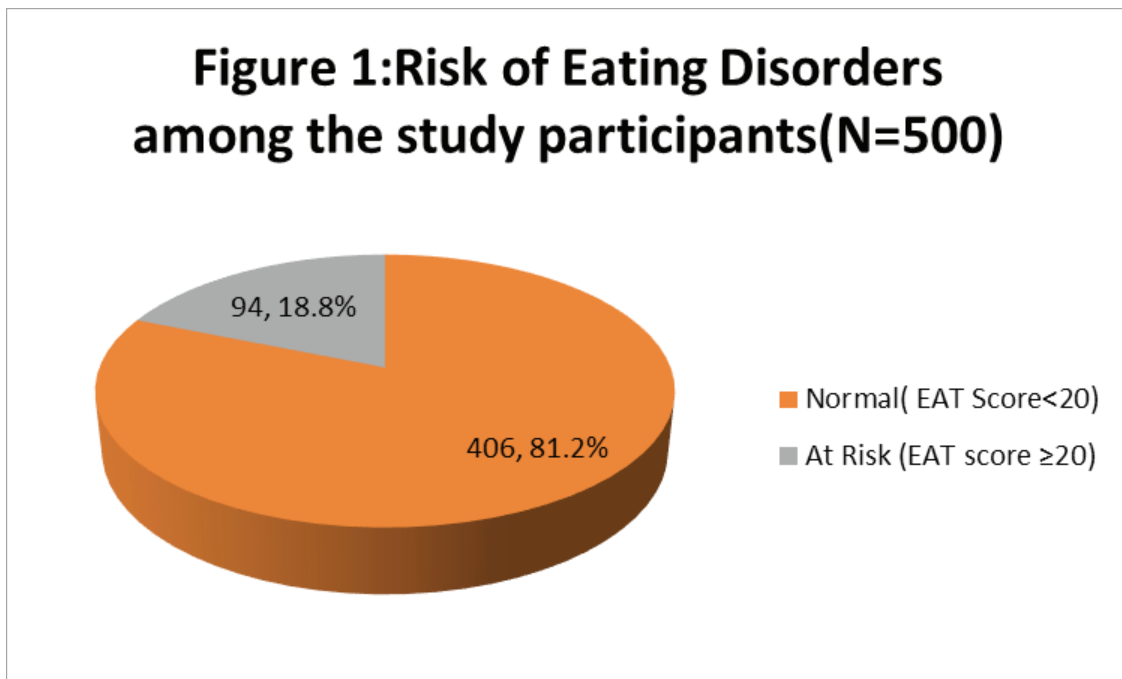


Figure 1: Risk of eating disorders among the study participants (N=500)

Table 2: Association of Body Mass Index and Eating disorders among study participants (N=500)

Factor	Normal EAT Score(<20)	At risk EAT Score(≥20)	Total	Chi-square p value
BMI				
Obese	61(75.3)	20(24.7)	81(100)	χ ² -4.92 p-0.17
Overweight	68(81.9)	15(18.1)	83(100)	
Normal	204(84.6)	37(15.4)	241(100)	
Underweight	73(76.8)	22(23.2)	95(100)	

Table 3 : Gender wise distribution of study participants according to their behaviour patterns for development of Eating disorders. (N=500)

Behaviour patterns	Frequency (%)		Total	Chi-square p value
	Females	Males		
Abnormal	172(55.0)	141(45.0)	313(100)	χ ² -1.432, p-0.231
Normal	113(60.4)	74(39.6)	187(100)	

Table 4: Association between demographic variables and eating disorder (N=500)

Factor	Normal EAT Score (<20)	At risk EAT Score (≥20)	Total	Chi-square p value	Odds Ratio	95% CI
Behavior pattern						
Abnormal	240(76.7)	73(23.3)	313(100)	χ^2 -11.21 p-0.00	2.40	1.42-4.06
Normal	166(88.8)	21(11.2)	187(100)			
Gender						
Female	227(79.6)	58(20.4)	285(100)	χ^2 -1.04 p-0.31	1.27	0.80-2.21
Male	179(83.3)	36(16.7)	215(100)			
Age (years)						
16-17	179(79.2)	47(20.8)	226(100)	χ^2 -1.07 p-0.29	1.26	0.80-1.98
18-19	227(82.8)	47(17.2)	274(100)			

Discussion

EAT questionnaire has been increasingly utilized for screening eating disorders. In the present study the prevalence of eating disorders was 18.8 % (Figure 1). When compared to Indian studies, the results were comparable with the study done by Srinivasan TN et al (14.7%)⁶, Upadhyah AA et al (26.67%).⁷ When compared with Asian countries, the rate of disturbed eating attitude and behaviour, measured by EAT-26 was 10.3% in Korea ⁸ and 11.2% in Japan.⁹

The results were similar to the present study in the study done by Anistine D et al where the prevalence was 17%.¹⁰ The prevalence was slightly higher i.e. 24.2% in the study done by Rauof M et al among adolescents in Iran.¹¹

In the present study 19% of study participants had BMI in underweight category and 16.6% in overweight category. A study done by Rawat R et al on prevalence of eating disorders among adolescents³ reported 41.19%, 12.88% in study by Selvan TV et al¹² were in underweight category.

The study done in Karachi has observed significant association between eating disorders and BMI where

28(15.6%) of the participants had eating disorders with BMI < 18.5.¹ The association was statistically significant in studies done by Kumar S et al,¹³ Babu S et al² which differs from the present study where the association was not statistically significant (Table 2).

The number of study participants with eating disorders was more in younger age group and age was significantly associated with eating disorder. Similar results were observed in the study done by Memon et al where 21.1% among 18-21 yrs had eating disorders with no statistical significance.¹

Table 4 shows the significant association between the behavior and eating disorders. The results were similar to the study done in Mangalore city among 1855 adolescents where 21.2% of the participants had behavioral pattern for development of eating disorder ($p < 0.05$).²

The data was collected by self administering the questionnaires so there is a possibility of recall/memory bias or hiding of information which is the limitation of the study. However, higher response rates are one of the strengths of the present study.

Conclusion

Changing lifestyle and social stigma have made physical appearance a priority issue among adolescents. This has made them to take extreme measures to reduce or maintain body weight at the cost of their own health. The study concludes that there is an existence of eating disorders among college students and was significantly associated with behavioral domain. This shows the necessity of initiating routine screening and intervention programs to control eating disorders.

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