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An observational, cross-sectional study on Eating disorders amongst college going students.

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ABSTRACT

The aim of this research paper was to point out the actual factors behind the Eating disorder (ED) prevalent in the college going students in Belagavi, Karnataka and to study the actual factors behind the Eating disorders. As Eating disorder (ED) is a very under-studied topic & hard-to-diagnose because of the psychiatric condition. Especially among the young adults who are mostly college students who face many challenges as they navigate through a transitional stage of life shows a high mortality rate. To find out the risk factors leading to eating disorders among students. To compare the prevalence level among male and female students. An observational and cross-sectional study was conducted on 200 students from age group 18–25 years by means of simple random sampling. The heights and weights of the students were recorded. A descriptive study design with following questionnaires were distributed among the participants - Eating Attitudes Test (EAT26), Perceived Stress Scale (PSS), Body Shape Questionnaire (BSQ34), and Demographic Details. The results were analyzed and tabulated using the SPSS software (version 20.1). Written consent was obtained from the individuals and the permission was obtained from the Head of the institutions. A detailed instruction was given to all the students by the assessor who is not involved in the study. It was found that 13% of the students had a high risk for eating disorders. High risk was associated with severe body shape concerns ($p < 0.001$) and high stress. Other factors that had influence were - peer pressure, a history of counselling, excessive physical exercise and the history of certain behavioral symptoms like the use of diet pills and laxatives ($p < 0.001$). Eating Disorders (ED) mainly affect women. High stress and body shape concerns have been found to be intrinsically associated with eating disorders. Eating disorder risk is highly prevalent in medical and paramedical students.

Keywords: ED - Eating Disorder, AN - Anorexia Nervosa, BN - Bulimia Nervosa, Homoeopathy

1. INTRODUCTION

Eating disorders also called EDs, refer to a group of conditions that involve either insufficient or excessive intake of food which becomes detrimental to one's physical and emotional well-being. Most common forms of eating disorders includes Bulimia Nervosa, Anorexia Nervosa, Binge Eating Disorder are serious mental illnesses characterized by body image disturbances and eating behaviors [1]. A recent literature review has indicated that binge eating, Bulimia Nervosa and Anorexia Nervosa, had the highest lifetime prevalence [2]. College years tend to coincide with the typical age of the onset for EDs [3,4], and it is a well-documented fact that EDs are a significant concern among college going students [5,6] with a higher risk of restrictive EDs [7]. College years fall into "emerging adulthood", a crucial developmental phase of teen-adults. [8]. Academic life, being an integral part of all college students' may push students towards stress life if there is no healthy attitude towards their academic goals. The various academic pressures - meeting grade requirements, tests, the volume of study material to be learned, and a parallel job have been shown to be a significant source of stress for students [9]. Academic stress is caused by high workloads, but also coincides with a stage of life in which students have to face many types changes. This situation results in a change in the habits of the students pertaining to their physical activity and food habits [10]. EDs in college students can also be associated to lower academic performance [11], co-morbid mental disorders, and other somatic conditions [12]. Over 70% of the students with EDs have reported to have co-morbid disorders like anxiety disorders (>50%) and mood disorders (>40%) [12]. Like most young people, only about a quarter of college students with some mental health issue seek professional care [13]. Healthcare renunciation - foregoing or delaying of health care, has been a focal point of debates on public health in the past decade [14]. Talking about the Indian scenario, a study in which 210 medical students of Chennai were examined using eating attitudes test (EAT) and BITE self-report questionnaires, reported that

14.8% of the population (study) had eating distress syndrome. [15] . According to World Health Organization (WHO) states 7.5% of the Indian population suffers from some form of mental disorder. Only in the last decade mental health has gained traction in field of medicine as mental illnesses in India accounts for nearly 15% of the global mental, neurological, and substance abuse disorder burden . It is found that one-sixth of all health-related disorders is related to mental illness

2. MATERIALS AND METHODS

Study setting

An observational, cross-sectional study was conducted on 200 students, of age group between 18 and 21 years from AMSHMC & JNMC of Belgaum by the process of simple random sampling. The data collection for the study was conducted in month of February 2022.

Sample size and sampling.

The sample size was taken to be 200 with a confidence level of 95% and relative precision of 20% of p-value. The students were selected by means of simple random sampling using a random number table.

Study subjects

Criteria for Inclusion : Age group - 18 to 25 years Undergraduate students from first to final year and Post Graduate students who were willing to participate in the study were included from departments of the Homoeopathy, Pharmacy, Nursing and Medicine.

Exclusion Criteria : Students with ages above 25 were excluded. Students with known mental disorder or who were in medication.

Data collection

The BMI was calculated as weight/height² (kg/m²) based on the WHO's criteria The body weights were measured using calibrated electronic scales and their standing height were measured using wall-mounted stadiometer.

The students of each college were assembled and they were made to fill three validated questionnaires one each for Eating Disorders Risk (EAT26), Body Shape Concern (BSQ), and Stress (PSS) . The investigator explained every question while the students filled it and clarified any doubts they had to ensure that there were no misconceptions about the meaning of any question,

3. QUESTIONNAIRES

Eating Disorders - EAT26

The EAT26 is the first step in the screening process of eating disorders. The questionnaire addressed three main aspects of the concerned disorders and has three sub-scales for testing - dieting, food preoccupation, and oral control. [16].

There are 26 questions and they are scored as follows - Always - 3, Usually - 2, Often - 1, Sometimes, Rarely, Never at 0. (Question 26 is scored in reverse.)

A score of 20 or more on the EAT26 is considered to be a good determinant of high risk for an eating disorder, while a score less than 20 is low risk..

Stress - PSS

The PSS is most widely used psychological instrument for measuring the perception of stress. Thee questionnaire were designed to measure the frequency of situations in a person's life when they feel out of control and helpless [17]. A score between 27 and 40 in the PSS is regarded as high stress, 13 and 27 as moderate stress, and a score less than 13 as low stress. The questions in the PSS ask about thoughts and experiences over the preceding month.

Body Dissatisfaction - BSQ 34

The Body Shape Questionnaire (BSQ) analyses the discomfort of various aspects of body shape based on thoughts and feelings experienced over the past four weeks.

It was developed by Cooper et al in 1987 to measure the concerns about body shape [18]. A score greater than 140 indicates a severe concern with body shape, scores between 111 and 140 indicates moderate concern, scores between 80 and 111 indicates a mild concern while scores less than 80 indicates no concern.

The maximum score of this questionnaire is 204, where, the higher the score, the greater is the indication of dissatisfaction and discomfort with one's body.

Statistical analysis

SPSS version 20.1 software was used for data entry and analysis of the variables . A students t-test was used to find the difference in means between the groups and Chi-square test was conducted as a test of significance to find the difference in proportions.

Results

A total of 200 students had participated in the study. The frequencies of students were almost equally distributed across all the four colleges. All the students who participated had ages between 18 and 25 years. Of the students who responded, 42% were males while 58% were females, as shown in Table 2. Almost half of the students were staying in hostels and homes.

Table 4.

Table-1

Age (years)	N (%)	High Risk (≥ 20) N (%)	Low Risk (< 20) N (%)
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18	20 (10)	2 (10%)	18 (90)
19	30 (15)	6 (20)	24 (80)
20	20 (10)	5 (25)	15 (75)
21	25 (12.5)	3 (12)	22 (88)
22	30 (15)	6 (20)	24 (80)
23	25 (20)	3 (12)	22 (88)
24	30 (15)	3(10)	27(90)
25	20 (10)	2 (10)	18 (90)

Prevalence of eating disorders among students with different age group (N=200)

Table-2

Gender	N (%)	High Risk (≥ 20) N (%)	Low Risk (<20) N (%)
Male	84 (42)	10 (11.9)	74 (88.1)
Female	116 (58)	20 (17.24)	96 (82.76)

Prevalence of Eating Disorders in males and females(N=200)

Table-3

Course	N (%)	High Risk (≥ 20) N (%)	Low Risk (<20) N (%)
Nursing	46 (23)	4 (8.70)	37 (91.30)
Pharmacy	50 (25)	7 (14)	39 (86)
Homoeopathy	54 (27)	9 (16.67)	42 (83.33)
MBBS	50 (25)	10 (20)	42 (80)

Prevalence of eating disorders among students in different courses: (N=200)

Table-4

Place of stay	N (%)	High Risk (≥ 20) N (%)	Low Risk (<20) N (%)
Hostel	100 (50)	15 (15)	85(85)
Home	90 (45)	10 (11.11)	80 (88.89)
Apartment	10 (5)	5 (50)	5 (5)

Prevalence of eating disorders among students with respect to place of stay(N=200)

Table-5

BMI	N (%)	High Risk (≥ 20) N (%)	Low Risk (<20) N (%)
<18.5 - underweight	38 (19)	4 (10.52)	34 (89.48)
18.5 - <25 Normal	116 (58)	15 (12.93)	111 (87.07)
25 - <30 Overweight	36 (18)	10 (27.78)	26 (72.22)
>30 - Obese	10 (5)	1 (10)	9 (90)

Prevalence of eating disorders among students with respect to BMI: (N=200)

Table-6

Exercise	N (%)	High Risk (≥ 20) N (%)	Low Risk (<20) N (%)
Everyday	84(42)	17 (20.24)	67 (79.76)
3 days per week	54 (27)	6 (11.11)	48 (89.89)
1-3 days per week	30 (15)	2(6.67)	28 (93.33)
Never	32 (16.)	5 (13.89)	27 (86.11)

Prevalence of eating disorders among students with respect to exercise: (N=200)

Table-7

History of counselling	N (%)	High Risk (≥ 20) N (%)	Low Risk (< 20) N (%)
Yes	46 (23)	13 (28.26)	33 (71.74)
No	154 (77)	17 (11.04)	137 (88.96)

Prevalence of eating disorders among students with respect to counselling: (N=200)

Table-8

Difficulty with peers	N (%)	High Risk (≥ 20) N (%)	Low Risk (< 20) N (%)
Never had problems	36 (18)	5 (13.89)	31 (86.11)
Rarely	68 (34)	8 (11.76)	60 (88.24)
Sometimes	78 (39)	9 (11.54)	69 (88.46)
Usually	14 (7)	8 (57.14)	6 (42.86)

Prevalence of eating disorders among students with respect to issues with peers: (N=200)

From the data collected, 23% had gone in the past for counselling and at present they have stopped -(Table 7) from therapists. They were having anxiety, stress or depression. It was found that there were no patient who consulted to therapist for eating disorders. On asking about the difficulties or issues they experienced with peers. It was also noted according to table-8 in the population that students having difficulties with their peers regularly were 7%. It was also found that students who had no idea about eating disorder and never heard of the term 'eating disorder' were 7.5% whereas 72% of the population were familiar with term 'eating disorders', but they did not had the exact idea about the symptoms and its presentations nor encountered any case of eating disorder.

EAT26 disclosed that 30 (15%) of the participants in high risk for a possible eating disorder as they scored above 20 on the test (Figure 1).

Among males, 11.9% while 17.24% of the females reported high-risk scores (Table-2).). Students with no exercise had a higher EAT26 score than those with regular exercise schedules.

Proportion of Students in three questionnaires with different risk categories in the -

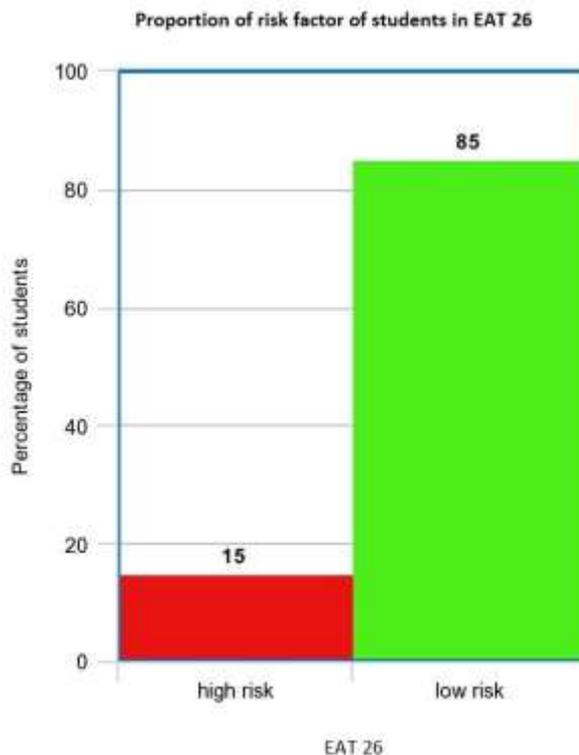


Figure a : High risk (15%) and low risk (85%)

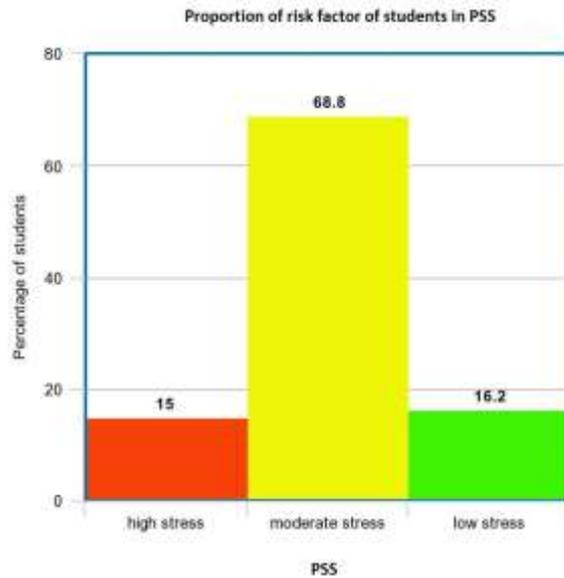


Fig b : high stress (15%), moderate stress (68.8%), and low stress (16.2%);

According to PSS scale result disclosed that 30 students (15%) are under high stress with 27 score and above.

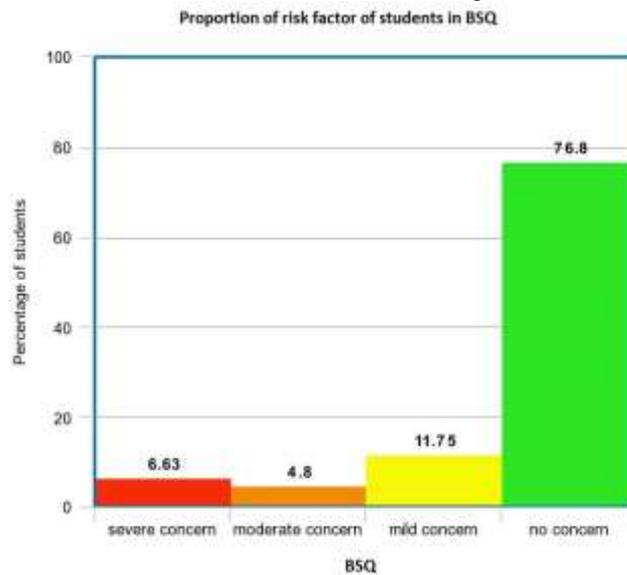


Fig (c) : severe concern (6.63%), moderate concern (4.8%), mild concern (11.75%), and no concern (76.8%).

According to the BSQ questionnaire, after analysis it is found that 6.6% having severe and 4.8% of the students moderate body shape concerns . Upon cross-tabulation, 20 of the 22 (90.9%) people who showed severe concern on the BSQ scale also had high risk on the EAT26 scale ($p < 0.001$)* (not shown in the table). The correlation between EAT26 scores and BSQ was high (the Pearson correlation coefficient 0.683) and was statistically significant ($p < 0.001$).

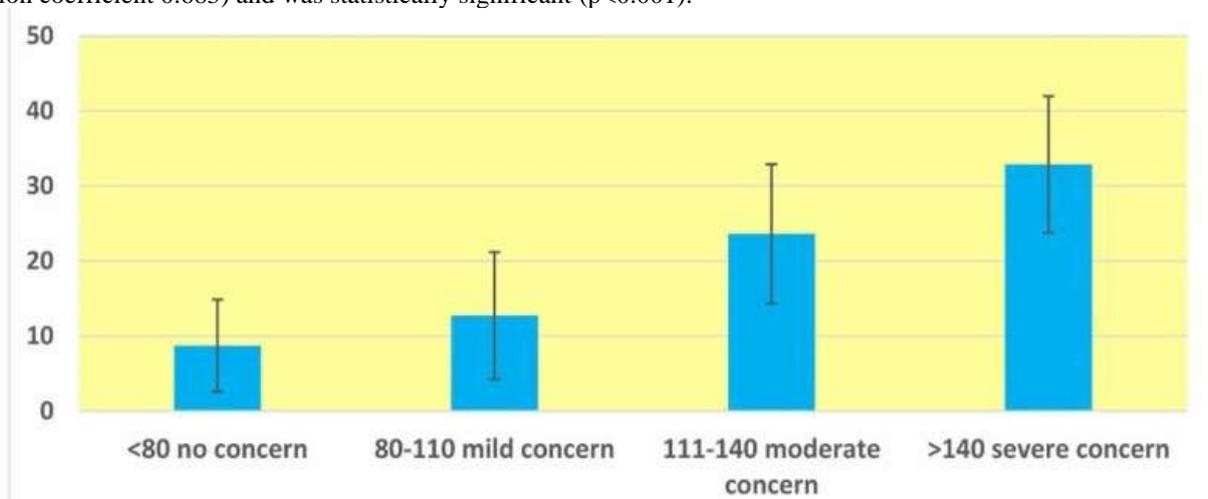


Figure 3

Error Bar Diagram Showing Mean (SD) Score of EAT26 at Different Levels of Body Shape Concerns

4. DISCUSSION

This study shows 15 % of health sector as the prevalence in eating disorders. In India , this is presented as eating disorder of no specific type (EDNOS/EDS) [19] This study did not fit under the umbrella of AN or BN, .An increased prevalence has been seen in university students. 14.8% of the participants were put at risk for eating disorders in one of the research article by Srinivasan et al published in the year 1995.

Only quarter of the students (24.3%) were knowing about the presentation of symptoms and prognosis . So this study also shows that students with non-healthcare background might have lesser knowledge as compared to health background.

There should be awareness of eating disorders among the populations that focus on adolescents and students in colleges. The reports with high risk must be carefully assessed for other psychiatric disorders. To reduce the prevalence of these disorders early diagnosis can be done via screening questionnaires.

5. CONCLUSION

Eating Disorders (ED) mainly affect women. High stress and body shape concerns have been found to be intrinsically associated with eating disorders. Eating disorder risk is highly prevalent in medical and paramedical students.

6. SOLUTION

However, there are certain homeopathic cures for these mental eating disorders. They must be prescribed by a doctor before intake. The remedies are as follows:

- Antimonium Crudum is extremely effective on infants vomiting milk immediately after breast-feeding. The child might be stubborn and grumpy and dissatisfied at most times.
- Natrum Mur is suited for those who loose appetite and hunger from fear of being rejected or hurt emotionally. They have a special craving for salt. They feel better in an empty stomach. They have terrible headaches.
- Phosphoric Acid is beneficial for eating disorders caused by chronic diseases. Those suffering from it, are indifferent to all emotions and taste of food with loss of appetite.
- Lycopodium children would eat very little food but may be very hungry as, eating very little food satiates them easily.
- Nux vomica is another appetite stimulant but should only be used with the advice of an expert homoeopath.
- Carcinosis is suited for people suffering obsessive compulsive disorder. The fear of becoming fat and have grief or fears related to body weight.
- Ignatia Amara is suited for people who give up eating from grief, fright, or emotional shocks , disappointments. They are hysterical persons , loss of control of emotions and they faint very easily.
- Sepia is effective for eating disorder due to hormonal imbalance in teens especially in girls. They have Acid dyspepsia with a bloated abdomen and a sour belching, and a faint sinking feeling at epigastrium.
- Arsenicum Alb for irritable , oversensitive people who are paranoid about dirt, germs and being poisoned by food. Such people cannot bear the sight and smell of food. Nausea, retching and vomiting after eating and drinking.

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