



ORIGINAL RESEARCH PAPER

Psychiatry

A STUDY TO IDENTIFY THE ABNORMAL EATING BEHAVIORS AMONG ADOLESCENTS IN SELECTED COLLEGES AT MANGALURU.

KEY WORDS: Abnormal eating behaviors, Adolescents, Eating Disorders, and EAT-26

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ABSTRACT	Disturbance in eating behaviour significantly affects young adults. Eating Disorder is real complex and divesting condition that can have serious consequences for health, productivity and relationships, adolescents are keen to have a perfect body figure by adopting wrong eating habits.
	Methodology: A descriptive explorative approach was adopted and the study was conducted in two colleges, St. Joseph colleges and St. Agnes College in Mangaluru. Students were selected by purposive sampling technique. EAT-26 rating scale was used to obtain the data and was analyzed using SPSS version 23.
	Results: A total of 301 subjects' 27 (9%) adolescents scored above 20 which shows that positive score for EAT-26. There was association between abnormal eating behaviors and selected baseline variables.
	Conclusion: The significant prevalence of the abnormal eating behaviors among the adolescents can be easily detected by using EAT-26 rating scale which is highly effective.

INTRODUCTION:

Eating disorders are one of the most common psychiatric problems faced by adolescents, characterized by chronicity and relapse along with disordered eating behavior where the patient's attitude towards weight and shape, as well as their perception of body shape, are disturbed. They are ranked among the ten leading causes of disability.¹

Adolescents constitute about 20% of the total world population. In India adolescents constitute about 22.8% of total population which in absolute numbers is approximately 273 million forming a significant proportion of the population.²

Eating behaviour is a complex trait with both genetic and environmental influences. The eating disorders anorexia nervosa (AN) and bulimia nervosa (BN) traditionally have been viewed as socio-cultural in origin substantial genetic influence on these disorders. Dieting behaviour is quite common in industrialized countries throughout the world. AN and BN affect only an estimated 0.3 to 0.7 percent, and 1.7 to 2.5 percent, respectively, of females in the general population.³

These disorders arise from a variety of physical, mental, and psychological origins, many of which are still not well understood. Teenagers and young adults are most likely to have eating disorders, unfortunately, many suffer in silence, ashamed or embarrassed to seek help, or unaware that help is even out there.⁴

OBJECTIVES:

- To identify the abnormal eating behaviours among adolescents.
- To find out the association between abnormal eating behaviours and selected baseline variables.

MATERIALS AND METHODS:

- **Settings:** St Aloysius, St Joseph and St Agnes College in Mangaluru
- **Research approach :** Quantitative research approach
- **Research design:** Descriptive Explorative research design
- **Sample:** 301 Adolescents
- **Sampling technique:** Purposive sampling technique.

Inclusion criteria:

- Adolescents who are attending full time regular classes
- Adolescents 17-21 year of age.

Exclusion criteria:

- Adolescents who were mentally challenged.

Data collection instruments:

- Baseline proforma
- EAT-26⁵

Description of tool:

Tool 1: Baseline proforma of adolescents consists of 11 variables- age, gender, number of siblings, height, weight, BMI, Occupation of the parents, Pocket money, family income, number of meals per day, and habit of skipping breakfast.

Tool 2: Part A: EAT-26 Rating scale

The Eating Attitudes Test (EAT-26) is probably the most widely used test used to assess "eating disorder risk "based on attitudes, feelings, and behaviors related to eating disorder symptoms. EAT consist of 26 items divided into 3 domains which includes which includes attitude and behaviors towards eating. Each domain has 13, 6 and 7 items respectively. Each item was given options "always", "usually", and "often". Positively word items were given the score 3, 2, 1 for always, usually, and often respectively. Negatively worded items were given the scores "0" for all the three items that is "sometime", "rarely" and "never" rated on a six point scale, with a score of 3 assigned to the responses farthest in the symptomatic direction, a score of 2 for the immediately adjacent response, a score of 1 for the next adjacent response and a "0" score assigned to the three responses farthest in the asymptomatic direction. The maximum score will be 78.

Part B: Behavioral Questions:

This part consist of six behavioral questions which the adolescents shows in the past six months, if the adolescents in the past six months has scored any one of the positive score then need to seek an evaluation from a trained mental health professional.

Data collection procedure:

The investigator obtained permission to conduct the study from the concerned authorities of the Institute and informed consent was taken from subjects. Purposive sampling technique was used. Data was collected using self-report questionnaire (EAT-26) to identify the abnormal eating behaviors among the adolescents. The data collected was then compiled for data analysis.

MAJOR FINDINGS OF THE STUDY:

The data was analyzed and presented under the following heading:

Section 1: Frequency and percentage distribution of subjects according to baseline characteristics.

- The highest percentage of adolescents (75%) belongs to the age group 17-19, (25%) belonged to 20-21yrs.
- The majority of the subjects (90%) were female.
- A good number of the subjects had (41%) sibling.
- Most of the subjects' (51%). height was above 160 cm Majority of the subjects (46 %) were having between weight between 41-50 kg.
- The majority of the subjects (34%) were overweight and their BMI was above 25.
- The 76%, of their fathers were employed and 24% were unemployed.
- The majority of the subjects (42%) were getting pocket money <500 Rs and 27% were not getting pocket money.
- Majority of the adolescents (34%) family income was between 10001-20000 Rs and 63% of the subjects were staying in urban area and nearly all of them (74%) were staying in their own homes. Majority of the subject (47%) took 3 meals per day and 94% were taking mixed diet.
- A good number of the subjects (53%) of them had habit of skipping the breakfast.

Section II. Part A: Assessment of abnormal eating behaviors among adolescents by EAR-26.

Table 1 shows that out of 301 adolescents 27 (9%) were positive for EAT-26 score which shows that 9% of the adolescents had abnormal eating behaviors. Here the positive EAT-26 score means subjects who have the abnormal eating behaviors; whereas the negative EAT-26 score indicates the normal eating behaviors.

Table 2 shows that overall Mean percentage of abnormal eating behaviors among adolescents was 13.66%, indicating no abnormal eating behaviors.

Table 3 shows the area wise mean percentage scores, in the area of "Dieting" 12.42%, "Bulimia and Food Preoccupation" (8.08%), and "Oral control" 15.65%, are less than cut off point for abnormal eating behaviors, signifies that no abnormal eating behaviors among the adolescents.

Table 4, shows the total frequency of the most common answers to the questionnaire and its distribution by gender. Overall, the negative response, option "Never" showed the highest frequency among the adolescents in the table and "Sometime" a positive response for "I find myself preoccupied with food," and "I cut my food into small pieces."

Section II Part B: Distribution of the subjects according to their behavioral responses:

Table 5 shows that the higher frequency of the behaviors once a day or more (7%) were doing exercise for more than 1 hour in order to lose weight, (4%) of them were having binges eating, and (3.6%) of them were using laxatives and diet pills, (3%) of them induced vomiting to control their weight or shape, (4%) of them lost 20 kg in the past 6 months and (9%) of subjects were treated for eating disorders.

Section-III: Association between abnormal eating behaviors among adolescents and the selected baseline variables.

There was association between abnormal behaviors and selected baseline variables like -No. of siblings ($\chi^2 = 12.248, p = 0.007$), BMI ($\chi^2 = 9.842, p = 0.007$), and No. of meals per day ($\chi^2 = 6.358, p = 0.042$) were found significant at 0.05 level of significance.

Discussion:

A cross-sectional study conducted by Alberton VC, et al. among the medical students at a University in, Brazil. The results showed that 10% of the students were found to be having abnormal eating behaviors.⁶ Similar cross sectional study conducted by Yirga B et al. among high school adolescents in Ethiopia, where 8.6% of the students had disordered eating.⁷ A cross-sectional study was conducted by Ramaiah RR. among medical students in Karnataka. The results showed that 16.9% of the students had eating disorder symptoms and disordered eating attitudes and

behaviours.⁸

Conclusion:

The assessment of the abnormal eating behaviors among the adolescents can be easily detected by using EAT-26 was highly effective in early identification and treatment of abnormal eating behaviors among the adolescents may prevent progression and reduce the risk of chronic health consequences.

Table- 1 Distribution of subjects according to their EAT-26 score.

EAT-26 Score	Frequency (f)	Percentage (%)
Positive EAT-26 score (score >20)	27	9
Negative EAT-26 score (score <20)	274	91

Maximum score =78

Table 2: Mean, Standard deviation, and mean percentage of abnormal eating behaviors among adolescents.

Variables	Range of score	Mean±SD	Mean Percentage(%)
Abnormal eating behavior	0-41	10.66 ±3.61	13.66

Maximum score =78

Table 3: Domain wise distribution of mean, SD and mean percentage of abnormal eating behaviors among adolescents.

Domains	Range of score	Maximum score	Mean ±S D	Mean percentage(%)
1. Dieting	0-26	39	4.84±5.083	12.42
2. Bulimia and Food Preoccupation	0-9	18	1.46 ±1.985	8.08
3. Oral control	0-17	21	3.29±3.174	15.65

Maximum score =78

Table 4: Most common answers to the questionnaire and its distribution by gender.

Question	Answer	Total n=301	Gender	
			Female (n=272)	Male (n=29)
1. I am terrified about being overweight.	Never	117	114	3
2. I avoid eating when I am hungry	Never	159	150	9
3. I find myself preoccupied with food.	Sometime	86	77	9
4. I have gone on eating binges (excessive) where I feel that I may not be able to stop.	Never	133	130	3
5. I cut my food into small pieces.	Sometime	101	85	16
6. Aware of the calorie content of the food that I eat.	Never	133	110	3
7. I particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc)	Never	157	156	1
8. I feel that others would prefer if I ate more.	Never	211	208	3
9. I vomit after I have eaten.	Never	242	227	15
10. I feel extremely guilty after eating.	Never	225	217	8
11. I am preoccupied with a desire to be thinner.	Never	138	137	1

12	I think about burning up calories when I exercise.	Never	102	101	1
13	Other people think that I am too thin.	Never	125	124	1
14	I am preoccupied with the thought of having fat on my body.	Never	113	112	1
15	I take longer than others to eat my meals.	Never	128	127	1
16	I avoid foods with sugar in them.	Never	154	153	1
17	I eat diet foods.	Never	163	162	1
18	I feel that food controls my life.	Never	100	99	1
19	I display self control around food.	Never	98	97	1
20	I feel that others pressure me to eat.	Never	141	140	1
21	I give too much time and thought to food.	Never	123	122	1
22	I feel uncomfortable after eating sweets.	Never	141	140	1
23	I engage in dieting behavior.	Never	185	184	1
24	I like my stomach to be empty.	Never	221	217	4
25	I have the impulse to vomit after meals.	Never	239	224	15
26	I enjoy trying new rich food.	Never	133	132	1

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Table 5: Frequency and Percentage of abnormal eating behaviors among adolescents in the past 6 months.

n=301

Behavioral Questions in the past 6 months have you:	Never	Once a month or less	2-3 time a month	Once a week	2-6 times a week	Once a day or more
A.Gone on eating binges (excessive) where you feel that you may not be able to stop?	166 (55%)	46 (15%)	20 (7%)	41 (14%)	15 (5%)	13 (4%)
B.Ever made you sick (vomited) to control your weight or shape?	244 (81%)	32 (11%)	4 (1%)	3 (1%)	8 (3%)	10 (3%)
C.Ever used laxatives, diet pills or diuretics (drugs) to control your weight or shape?	269 (89.3%)	8 (3%)	5 (1.6%)	5 (1.6%)	3 (0.9%)	11 (3.6%)
D.Exercise more than 60 minutes a day to lose or to controls your weight.	201 (67%)	39 (13%)	8 (3%)	16 (5%)	14 (5%)	23 (7%)
E.Lost 20 kg or more in the past 6 months.	Yes 13 (4%)	No 288 (96%)				
F.Have you ever been treated for an eating disorder?	Yes 26 (9%)	No 275 (91%)				

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