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## Prevalence of Eating Disorders and Psychiatric Co-morbidity among Children and Adolescents

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*There are no prevalence or co-morbidity studies on eating disorders in India. This retrospective chart review studied the prevalence and psychiatric co-morbidity among juveniles with eating disorders. Forty-one cases with ICD-10 diagnosis of eating disorders were identified and analyzed. The prevalence of eating disorders was 1.25%. Psychogenic vomiting was the commonest eating disorders and anorexia nervosa the emerging eating disorder. The most common co-morbidities were depression, intellectual disability, and dissociative disorder.*

**Key words:** *Children, Eating disorders.*

### Introduction

The prevalence of eating disorders (ED) in this part of the world is lower than that of Western countries but appears to be increasing. Current research findings about ED in India seem to be moving in two different directions at once. On one hand there is increasing recognition of eating disorders within the multicultural Indian population(1). On the other, a persisting belief that the culture-bound syndrome of eating disorders is alien to India, and non-western cultures shield individuals from developing eating disorders(2,3). There are no prevalence or co-morbidity studies on ED in India. We conducted this study to determine the period prevalence of eating disorders,, and document the associated morbidities.

### Subjects and Methods

Consecutive children and adolescents upto 18 years of age (n = 3274) attending the Child and Adolescent Psychiatry Unit, Christian Medical College and Hospital, Vellore, from January 2000 to December 2005 were studied and those with an ICD-10 diagnosis of eating disorders (F 50.0 to F 50.9) were identified from unit registry. Reversible anonymization, restricted access and disclosure of the obtained data ensured confidentiality. A psychiatrist reviewed the case notes for demographic and illness details made by a multi-disciplinary treating team. Appropriate bivariate statistical analyses were done using SPSS and EPI-INFO.

## Results

Our study sample consisted mostly of females (61%) from middle socio-economic status (70.7%), towns and villages (65.9%) of North-eastern and Southern states of India with a mean (SD) age of 12.6 (3,4) years. The mean (SD) age of onset of symptoms and duration of symptoms was 11.2 (4.3) years and 19.2(29.4) months, respectively.

The 6-year period prevalence of eating disorder was 1.25% in our study population. The predominant ED among the study sample was psychogenic vomiting (85.4%); only six cases (14.6%) of anorexia nervosa were noted. However, there was no significant increase in overall trend in the prevalence of ED, and other eating disorders were not seen. More anorexics had developed their illness during their adolescence, were from upper socioeconomic group, and never the first born; whereas majority of the vomiters had developed the illness pre-pubertally, were from middle or lower socio-economic groups, the first-born or the only child as well as domiciled in towns. There were more females with anorexia nervosa (female: male = 5:1) than in the psychogenic vomiting group (female: male = 2:1.5) but this was not significantly

different. Also, the duration of the illness and state-wise distribution between groups was not statistically significant.

About 43.9% of patients with ED had another psychiatric co-morbidity. Patients with anorexia more often had co-morbidity (66.7%) than those with psychogenic vomiting (40%). Majority (93%) had one psychiatric co-morbidity and 7% had two or three co-morbid diagnoses. The most common co-morbidity in both groups was mood disorder (27.8%), followed by intellectual disability (22.2%) and dissociative disorder (16.7%). Substance abuse, sleep disorder, elimination disorders, adjustment disorder, oppositional defiant disorder, as well as specific learning disorders constituted the remaining co-morbidities. Among anorexics, while mood and dissociative disorder were the prevalent co-morbidities, mood disorder and intellectual disability were prevalent among vomiters as comorbidity.

## Discussion

Our study showed that the overall prevalence of eating disorders was lower than the Western data that has focused on anorexia and bulimia

**TABLE I**— Comparison of Socio-demographic Details between Anorexia and Psychogenic Vomiting Group.

Variable	Anorexia nervosa (n = 6)	Psychogenic vomiting (n = 35)	P value
<i>Socio economics status</i>			
Upper SE status	3	2	0.008
Middle SE status	2	27	
Lower SE status	1	6	
<i>Birth order</i>			
First born	0	22	0.007
Second born	2	8	
Third born	2	4	
Fourth born	2	1	
<i>Age of onset</i>			
Pre-pubertal	0	27	0.002
Adolescence	6	8	
<i>Residence</i>			
Urban	3	1	0.002
Semi urban	2	25	
Rural	1	9	

### What this Study Adds

- Eating disorders are prevalent among children and adolescents in India with co-morbidities similar to Western and other non-Western populations.

nervosa(4), but was comparable with most of the non-Western literature(5,6). The emergence of anorexia nervosa as an ED and psychogenic vomiting as the predominant eating disorder was documented. This predominance firstly, might be explained by the ICD-10 classification of psychogenic vomiting as an ED unlike in other classificatory systems. Secondly, bodily symptoms like vomiting are a sanctioned way of expressing emotional distress in non-Western cultures. Socioeconomic-cultural changes and westernization could result in the culture-change syndrome of eating disorders in India today(7). The prevalence and pattern of co-morbidity seen in our study is overall similar to those noted in the Western and non-Western countries. The prevalence of co-morbidity at about 44% is comparable with that of previous studies(8). The predominant co-morbidity of mood and anxiety disorders among anorexics has also been described(9).

Using a large number of a clinic based population to determine the prevalence of ED and diagnosis based on clinical criteria being the strength of this study, the problems associated with a retrospective chart review in a hospital population remains the caveat.

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