

## EATING DISORDERS IN INDIA

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*Data on the nature and extent of major eating disorders, anorexia nervosa and bulimia is lacking in non-white, native populations of the developing world, leaving a gap in understanding the determinants of these disorders. In a study on 210 medical students examined by a two-stage survey method, 31 subjects were found to have distress relating to their eating habits and body size not amounting to criterion-based diagnosis of eating disorders. The characteristics of this eating distress syndrome are described in relation to the major eating disorders.*

*Key words: eating disorders, medical students, survey, eating distress syndrome.*

### INTRODUCTION

Describing the emergence of eating disorders in history, Parry-Jones (1991) refers to morbid states involving food refusal or relentless reduction of food intake and of gorging followed by vomiting being mentioned in literature as far back as ancient Greek and Rome. Judging by the facility with which dictionary and lexicon references have been gathered from the 16th century onwards, it is evident that such disorders of appetite were sufficiently frequent and familiar to warrant definition in both general and medical works. Those current patterns of psychopathology, anorexia nervosa and bulimia nervosa, which are dominated by weight and shape concerns, are indeed relatively recent, in so far as such preoccupations cannot be traced back positively before the mid 19th century (Parry-Jones, 1991).

A series of studies done in the last two to three decades have reported varying prevalence rates of anorexia nervosa and bulimia nervosa. The incidence rates for anorexia nervosa range from 0.24 to 10.8/100,000 population (Kendell et al, 1973). Conservative estimates of the prevalence of these disorders in the non-college female population is well below 1% (Pope & Hudson, 1989). In the last few years, the prevalence of both these syndromes has been shown to be increasing (Szmukler et al, 1986; Bushnell et al, 1990), but much evidence has also been put forth to refute the "epidemic" nature of these disorders (Williams & King, 1987; Hall & Hay, 1991). Inflated estimates are probably due to differences in methodology as well as experimentation by adolescents. Conservative estimates are probably 1-2% for bulimia nervosa and well below 1% for anorexia nervosa (Pope & Hudson, 1989). Any increase in the observed incidence is possibly due to an increase in public knowledge, availability and acceptability of treatment more than a true occurrence of new cases (Hall & Hay, 1991).

Anorexia nervosa and bulimia nervosa were considered to be predominantly and almost exclusively a Western malady and an outcome of industrialization and the accompanying socio-economic changes in a population. However, there has been little information, till recently, on the nature and extent of these disorders in other cultures and regions of the world (Pope & Hudson, 1989). It was commented that anorexia nervosa is rare or altogether absent in non-Western cultures (Okasha et al, 1977). Russel (1985) claimed that the disorder is virtually limited to patients of Caucasian origin. He believed that his observation could not be dismissed as being due to the limited level of medical services or poor statistical returns in developing countries because cases were seldom reported among non-white immigrant western populations.

However, many studies have been conducted, some possibly motivated by the above assertions, which have reported the occurrence of major eating disorders in non-white people (both native and immigrants) living in white cultures. The studies by postal survey in Malaysia (Buhrich, 1981), of Arab University students living in Cairo and London (Nasser, 1986), on Chinese in Hong Kong (Lee, 1991) and on Asian school children in Bradford, UK, (Mumford et al, 1991) and case reports of anorexia nervosa in non-Caucasian populations in Nigeria (Nwaefuna, 1981) and India (Chadda et al, 1987) have evidenced the emergence of eating disorders in the non-Western developing world. However, the nature of the disorders observed in such populations seem to differ from that seen in the Western population (Nasser, 1986; Lee, 1991).

In India, the exact incidence and prevalence of anorexia nervosa is not known, though there is indirect evidence from various clinics and hospitals that its incidence has been increasing in the last decade (Malik, 1992). There is a lack of systematic studies on the nature and extent of eating disorders

in the non-Western world comparable to those conducted in the western populations. Patten & King (1991) have indicated that despite several methodological problems of this area of research, the study of eating disorders in non-Western cultures could offer greater insight into the determinants, especially the cultural ones, of these disorders.

With the above background, the present study was conducted with the aim of studying the nature and prevalence of eating disorders in a native Indian student population. The findings are reported and discussed in this paper.

## MATERIALS AND METHOD

The study was conducted in two stages, the initial one to screen possible cases and the second one of individual clinical interview of all the screen-positive subjects and a proportion of screen-negative subjects.

### Screening instruments:

Two screening instruments were used, the 40 item Eating Attitudes Test (EAT, Garner & Garfinkel, 1979) and 33 item Bulimia Investigatory Test (BITE, Henderson & Freeman, 1987). The English version of both the instruments were used. Although EAT is a proven reliable instrument, it was not designed for use with binge-eaters as its questions deal more with the feelings and behaviors associated with anorexia nervosa. The BITE has been used to differentiate binge-eaters and normal eaters with satisfactory reliability and validity and is recommended for use in identifying binge eaters in a given population or as a screening instrument for use in clinical setting (Henderson & Freeman, 1987); hence, both were used for screening.

Neither of these instruments have been standardized in the Indian population. The only experience with EAT in Northern India showed grossly contradictory scoring with poor internal reliability (King & Bhugra, 1990). For the purpose of this study, the questionnaires were not modified except for a few explanatory comments given for some of the items. The recommended cut-off scores of 30 on the EAT and 10 on the BITE were used to identify 'probable' cases in the study group.

### The study population:

All the students undergoing the M.B.B.S. course at the Sri Ramachandra Medical College and Research Institute in the city of Madras formed the subjects of the study. There were 662 students on the rolls at the time of the study with a nearly equal

number of boys and girls. All of them were from upper and middle socio-economic class families. All, except six non-resident Indians, were native Indians. The subjects and the research team were familiar with each other as they had been involved in undergraduate psychiatry training during the entire M.B.B.S. academic course.

In the first stage of screening, questionnaires were handed over to the subjects personally and responses collected by the team. 635 students received the questionnaires and 602 students returned their responses. In the second stage of individual interview, all the 28 subjects who scored above the cut-off score on either EAT and BITE were interviewed. Of the remaining 574 subjects, 1/3rd were selected by random sampling based on attendance rolls and 192 subjects thus identified were called for interview. All the screen positive subjects and 182 of the screen negative subjects were assessed in the second stage, totalling 210 individual interviews. There were nearly equal number of boys (n=104) and girls (n=106) in the interviewed group. Each of the interviews was conducted by one of the research team members unaware of the scores of the subject on the screening instrument.

The interview attempted to clinically evaluate the presence of anorexia nervosa or bulimia nervosa based on DSM-III-R criteria (APA, 1987). Evaluation of any history of eating disorder in the past was also done. General psychopathology was not evaluated. Attempt was made to identify milder disorders in the form of a distress, conflict or any abnormal eating habits or attitudes in the subject. Each individual's height, weight, subjective evaluation of his or her weight as normal, over-weight, or underweight was measured. This subjective evaluation was compared for concurrence or otherwise with objective norms set for the given age and height, for Indians (ICMR, 1972). While using the objective norms, a deviation of at least 10% from the mean norm was set to identify a subject as 'under-weight' or 'over-weight'.

## RESULTS

Among 210 subjects assessed individually, no criterion based diagnosis of anorexia nervosa or bulimia nervosa could be made. 31 of the subjects (14.8% of the total examined) were identified as having a syndrome of eating distress (EDS) which did not fit into any of the standard diagnostic criteria for major eating disorders. The nature of EDS is described in the Appendix.

## DISCUSSION

### Methodology:

The two stage method which has been used in this study has been described as potentially useful, though until recently under-utilized in the field of surveying for eating disorders (Patton & King, 1991). However, caution should be practiced in interpreting the presented data as it is often recorded that people with eating disorders tend to avoid participation in surveys (Johnson-Sabine et al, 1988). Nearly all the subjects were native Indians who belonged to economically affluent families. Though the relationship between socio-economic advantage and eating disorders is disputed (Pope & Hudson, 1989), the study group was expected to give a better yield of cases than a population of lower socio-economic status, if one presumes that westernization associated with a higher socio-economic status predisposes to the development of eating disorders.

The screening instruments that were used in the study have been developed and standardized in a western population. Hence, the validity of these questions in the non-western setting was doubtful to begin with. However, as locally applicable instruments are yet to be developed, we used the BITE and EAT. However the performance of these two instruments have not been dismal, given the complete absence of full syndromes of anorexia nervosa or bulimia nervosa in the study population. The validity co-efficient (not reported here) are as that would be found for any instrument where the prevalence or severity of eating disorders is very low, with high specificity and negative predictive values and low sensitivity and positive predictive values. The BITE is a little stronger than EAT in identifying and predicting a case of EDS. This is probably because EDS in the subjects was more often related to bulimic behavior rather than anorectic ones, for which the Bulimia Investigatory Test (BITE) is more sensitive than the Eating Attitudes Test (EAT).

Another methodological factor is the clinical experience of the authors in the area of eating disorders. The authors have rarely seen a case of anorexia nervosa or bulimia nervosa during their combined fifty years of experience as consultant psychiatrists. This lack of experience is shared by most mental health professionals in India (Malik, 1992) as only a few cases of anorexia nervosa have been encountered among western-oriented social groups in the Indian sub-continent (Mumford et al, 1991).

### Nature and extent of eating disorders:

The finding that no case of anorexia nervosa or bulimia nervosa was identified in the study is not surprising, but only supports the presumption that they are very rare in non-western cultures. It may be contested that the number of subjects studied is not large enough to yield any significant number of cases of anorexia nervosa or bulimia nervosa, even if they existed in the population. For a preliminary effort, the study is comparable in sample size to similar studies done in non-Western countries (Nasser, 1986; Lee et al, 1989). The symptoms of eating distress syndrome described in Appendix I differ greatly in nature and severity from the criterion features of anorexia nervosa and bulimia nervosa. The observation that girls had nearly three times more EDS than boys is comparable to the trend seen with the major eating disorders. The type of conflict regarding body image, characteristic of and basic to the development of anorexia nervosa, is noticeably absent in the population.

The EDS is of clinical importance and could not be considered a normal variation in the subjects' eating habits, as all these subjects felt the need or sought professional help to deal with their distress. The term EDS was used in place of the familiar term of 'partial syndrome' (of anorexia nervosa or bulimia nervosa; Mann et al, 1983). The nosological status of the partial syndrome is uncertain and how often it progresses to the full syndrome has not been determined (Patton & King, 1991), though a 1 year follow up of London school girls showed that the risk for girls who were dieting (not to a pathological level) was 8 times that of non-dieters (Patton et al, 1990). The case is possible similar with Eating Distress Syndrome and evidence has to be collected to support this hypothesis.

Referring to the nature of eating disorders around the 16th century, Parry-Jones (1991) mentioned the existence of "archaic" forms of eating disorders which were milder in nature, of varying severity, with evidence gathered by studies conducted at different periods and in different regions and cultures. In non-clinical settings, eating disorders are not accompanied by severe weight loss or all the features of the disorder (Patton & King, 1991). Lee (1991) found that the obligatory diagnostic features of anorexia nervosa such as the intense fear of obesity and distorted body image may not feature among non-Westernized cultures such as the Chinese, given their different outlook on body weight and shape.

Similarly the bulimia nervosa disorder observed in Asian school children by Mumford et al (1991) was not associated with excessive concern with body shape. The EDS observed in the study could be an 'archaic' form of anorexia and bulimia nervosa which is less severe with fewer symptoms. Understanding their further evolution into more severe eating disorders in a given subject or the population under study calls for prospective observations.

The study shows that a significant number of young people, especially females, exist in India who have conflicts with regard to their eating habits and body habitus and who are at possible risk for developing more serious disorders. Epidemiologically speaking, the emergence of major eating disorders in India seem to be under control by several of the regional cultural and social factors especially the permissive attitudes towards body shape, lack of social pressure to be slim and the culturally accepted practices of starvation and overeating and dress preferences. With the necessary enhancing factors in culture imbibed from elsewhere, the future emergence of these disorders in India of a nature and extent currently being observed in the West need not surprise one. The relationship of EDS to anorexia nervosa or bulimia nervosa can only be understood by future observations on the population. A time lapse study of a population in a defined region, like that by Szmukler et al (1986), could help understand the natural history of eating disorders in India.

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