

Anoxia Nervosa: A Brief Introduction

¹Pushpa Lata Tigga

Abstract: Anoxia Nervosa Eating disorders are relatively rare among the general population. This review discusses the literature on the incidence, prevalence and mortality rates of eating disorders. Study searched online Medline/Pubmed, Embase and PsycINFO databases for articles published in English using several key terms relating to Anoxia Nervosa an eating disorders and epidemiology. Anorexia nervosa is relatively common among young women. While the overall incidence rate remained stable over the past decades, there has been an increase in the high risk-group of 15–19 year old girls. It is unclear whether this reflects earlier detection of anorexia nervosa cases or an earlier age at onset. All eating disorders have an elevated mortality risk; anorexia nervosa the most striking. Compared with the other eating disorders, binge eating disorder is more common among males and older individuals (Epidemiology, Incidence Prevalence, Mortality, Eating disorders, Anorexia nervosa).

Introduction

The food what we eat is the main source of energy that help for the physical, mental and social development of an individual. There are people who knowingly abstain food for known and unknown reasons. There are related concerned about their how they look and can feel self conscious about their bodies. This can be especially true when they are going through puberty and undergo dramatic physical changes and face new social pressure. This will leads to a rare phenomenon of psychological disorder called Anorexia Nervosa. The term anorexia nervosa was established in 1873 by Sir William Gull, one of the Queen Victoria Personal physicians. The term is of Greek Origin ‘An’ prefix denoting negation and ‘orexis’ prefix denoting appetite. This means a lack of desire to eat (Wikipedia 2010). People with anorexia have an extreme fear of weight gain and a distorted view of their body size and shape. As a result, they strive to maintain a very low body weight. Some restrict their food intake by dieting, fasting or excessive. They hardly eat at all and often

¹ RGNF Research Fellow, Department of Anthropology, University of North Bengal, Darjeeling, West Bengal, Pin- 734013, Email: riyatigga_143@rediffmail.com

try to eat as few calories as possible, frequently obsessing over food intake. The small amount of food they do eat becomes an obsession. Anorexia nervosa or food phobia are also becoming increasingly common in adolescence (Westenhoefer 2002). Anorexia Nervosa is a psychiatric disorder characterized by the refusal of an individual to maintain a minimum normal body weight often to the point of starvation. In both the DSM-IV and ICD-10 unification system World Health Organization has been viewed as a culturally bound disorder rare as absent except in western cultures where there is a pervasive pressure to diet to obtain a socially desirable weight and or shape British Medical Association and Board of science and education 2000 (Wikipedia 2010). It is often coupled with distorted self image which may be maintained by various cognitive biases that alter how the affected individual evaluates and thinks about her or his body, food and eating. Persons with anorexia nervosa continue to feel hunger, but deny themselves to have small quantities of food. The average calorie intake of person with anorexia nervosa is 600 – 800 calories per day, but extreme cases of complete self starvation are known. It is a serious mental illness with a high incidence of co-morbidity and the highest mortality rate of any psychiatry disorder. They are so common in the United States that 1 or 2 out of every 100 adolescent had struggled with anorexia or bulimia (Anderson 2011). Anorexia most often has its onset in adolescents and is most prevalent among adolescent girls. Recent studies show that the onset of anorexia range from 13 to 17 years in average and it also reduced to 9 to 12 it can affect men and women of any age, race and socio economic and cultural background. Anorexia nervosa occurs in females 10 times more than in males (Nakamura and Moto 2000). Anorexia nervosa is an eating disorder characterized by excessive weight loss with disturbed body composition: reduction of lean body mass and marked depletion of fat deposits (Vaismen et al.,1988, Mazeses 1990). Anorexia nervosa is an eating disorder characterized by immoderate food restriction, inappropriate eating habits or rituals, obsession with having a thin figure, and an irrational fear of weight gain, as well as a distorted body self-perception. It typically involves excessive weight loss and is diagnosed approximately nine times more often in females than in males (Szmukler et al., 1986, Turnbull et al.,1996, Anderson 1974, Chopra and Tulchinky 1974, Caron et al., 1989, Brabe et al., 1993, Goˆtestam et al.,1998, Carlson and Heart 2007, Don and Sandra 2008,).

Over viewing Prevalence of Anoxia Nervosa

Based on international data the lifetime prevalence for female is between 3% and 1.5% and between 0.1% and 0.5% in males (NEDC 2010). Such study reported that approximately one in 100 adolescent girls develop anoxia nervosa. Anoxia has highest mortality rate on any psychiatric disorder 1 in 5 premature deaths occur. 90% of cases of anoxia nervosa occur in female. The disorder is associated with a high risk of mortality, a low recovery

rate, high co morbidity, physical complications, and with a high risk of relapse (Sullivan 1995, Mizes & Palermo, 1997, Kaye et al., 2000, Vitello and Lederhendler, 2000). Among 15-24 year old females, Anoxia nervosa has a standardized mortality rate that is 12 times the annual mortality rate from all causes. The onset of anorexia nervosa usually occurs during adolescence; at a mean age of 17 years (Willi et al., 1990). Morbidity includes osteoporosis, an ovulation, dysthymia, obsessive compulsive Disorder, and social isolation (NEDC 2010). Although anorexia nervosa is an uncommon disorder, with an estimated prevalence of 0.3%–1% (De Filippo et al., 2000, Kaye et al., 2000), the consequences are burdensome for the individual as well as for the society. Family and twin studies allow for the estimation of the heritability--the influence of genetic factors on the specific phenotype of the anorexia nervosa in 50-80%. The rapid development of the molecular biology methods gives possibility for the searching of the specific genes increasing the risk of anorexia nervosa. A risk of psychiatric disorders within families of patients with anorexia nervosa has not been demonstrated definitively. Perinatal factors such as cephal hematoma and premature birth were associated with anorexia nervosa in a population-based study (Cnattingius et al., 1999). The association between geographic location of residency and the prevalence of anorexia nervosa has not yet been demonstrated (Rather and Messner, 1993, Hoek et al., 1995,). Clinical observations that anorexia nervosa is more common in a higher socioeconomic class compared with other socioeconomic strata have not been supported convincingly by epidemiologic studies (Rogers et al., 1997, McClelland and Crisp, 2001,). An important role for factors related to ethnicity has been suggested by some U.S. studies that showed a lower prevalence among African Americans compared with Caucasians (Andersen and Hay, 1985; Rhea, 1999; Striegel 2000). Adoption has also been mentioned in one study as a risk factor for eating disorders (Holden, 1991). Few study reported that Anorexia nervosa has been shown to run in families and one twin study, using unsystematic ascertainment, has shown substantially higher concordance rates in monozygotic than in dizygotic twin pairs, and previously reported on the only population-based twin sample examined for anorexia nervosa (Holland et al., 1984, Strober et al.1990, Walters and Kandler 1995 Although the limited suggested by the small number of affected twins and genetic factors significantly influence the risk for anorexia nervosa and substantially contribute to the observed comorbidity between anorexia nervosa and major depression (Gorwood et al.,1998,Wade et al., 2000). A study was conducted in Poland to determine an accurate anthropometric measurement for clinical assessment of fat depletion in girls with anorexia in connection with body composition measured by dual energy X-ray absorptiometry. In 64 female anorexia nervosa patients aged 12.8–23 years and the mean is 16.0 ± 1.8 percentages, body mass index, skin fold thickness, mid-upper arm and thigh circumference, fat mass and lean mass were determined and compared with the data of 71

records. Girls with anorexia nervosa had lower anthropometric tracts and were fat depleted compared to controls 14.9 ± 7.3 with 27.4 ± 6.4 percentages of fat mass using dual energy x-ray absorptiometry all <0.00 percentage so thigh circumference strongly correlates with dual energy x-ray absorptiometry of fat depletion and demonstrates a slight clinical advantage (Nowicz and Abramowicz 2011). The study was systematically compiled and analyzed the mortality rates in individuals with anorexia nervosa, bulimia nervosa, and other eating disorders which are not specified was conducted in United States of America. A systematic literature search, appraisal, and meta-analysis were conducted of the Medline, Pub med, Psyc info and embase data bases they published between January 1, 1986, and September 30, 2010 that reported mortality rates in patients with eating disorders. This case for early intervention in anorexia nervosa in exploration of maintaining factors (Mamman and Russell 2011). A retrospective study was conducted at London on 102 anorexia nervosa patients where reported with case records and follow up announcements after a mean lapse of 5.9 years. Over 80 percentages of the patients had an onset of illness within 7 years of menarche and on the whole the group was pre morbidity obese. Over 70 percentages came from professional and managerial class function, and 80 percentages were described as complaint children's (Grisp ad Hsu 2002). A study was conducted at United States of America was to compare the set shifting scores of 24 adolescent females with anorexia nervosa with 37 matched normal adolescent controls ages from 14 to 20. The method used for the study in socio demographic, psychological and biological data. The sociodemographic data and intelligence quotient of the study and control were similar. Adolescent females with anorexia nervosa had significantly worse set shifting score than the control group (Anasrney and Zarcone 2011). A study to determine whether there was any cases of anorexia nervosa in female students attending two secondary schools in the North – east region of Ghana. In this study the Body Mass Index of students was calculated after measuring their height and weight. Of the 668 students who were screened for body mass index, 10 with a body mass index below 17.5 Kg/mc appear self starvation. All 10 viewed food restriction positively and in religious terms (Wikipedia 2010).

Indian Scenario

In India prevalence of anorexia nervosa is lower than that of western countries but appears to be increased due to westernization and industrialization. The symptoms of anorexia nervosa were mostly seen in pre-pubertal period belong to middle and lower socio – economic group and or the family with only child. There are more females with anorexia nervosa having female and male ratio of 5:1 than in the psychogenic vomiting group having female and male ratio of 2:15 but this was not significantly different (Kuboki and

Nomura 1996). A study was conducted in sample consisted mostly of females adolescents from middle socio economic status towns and villages of north-eastern India. The result indicated that north eastern states of India with a mean age of 12.6 years are more prone to anorexia nervosa. The mean age of onset of symptoms and duration of symptoms was 11.2 years and 19.2 years respectively (Sjostedt and Nathawat 1998).

An exploratory study was conducted among 577 adolescent girls on eating and weights concerns at Sikkim, India. The findings revealed that concern with weight reduction is growing among adolescent girls, particularly among urban girls of affluent families. Girls from families with a higher economic status are about two times more likely to report dissatisfaction with their body weight and these girls are five times more likely to report the need for dieting (Mishera 2010).

A study conducted in Delhi, India on adolescents with anorexia nervosa have low bone mineral density in a prospective observational study lumbar and whole body bone mineral density was measured at 0, 6 and 12 months in 34 anorexia nervosa girls aged 12–18 years and 33 controls. The result of the studies are neuroendocrine, gastro intestinal derived peptide regulating food intake are independent predictors of changes in bone mass in anorexia nervosa (Misra and Prabhakaran 2007).

A study was conducted in Tamil Nadu, India about the prevalence and psychiatric co-morbidity among juvenile with eating disorder 41 cases with ICD 10 diagnosis of eating disorder were identified and analyzed. The prevalence of eating disorder was 25 percentages psychogenic vomiting was the commonest eating disorder and anorexia nervosa the emerging eating disorder (Treanure and Russell 2010).

Prevention aspect

There is no known way to prevent anorexia nervosa. Early treatment may be the best way to prevent the disorder from progressing. Knowing the early signs and seeking treatment right away can help prevent complications of anorexia. There are many ways adults can help children and teens form a healthy view of them and learn to approach food and exercise with a positive attitude (Lilenfeld et al., 1998). Doing this may prevent some children and teens from having this disorder. Encourage a healthy view of self and others. Teach children to take good care of their bodies. Avoid making comments that link being thin to being popular or beautiful. Have a healthy approach to food and exercise. Avoid punishing or rewarding your children with food. Be a good role model for healthy eating and exercising. The cause of anorexia nervosa is not clear. It is likely a combination of inherited (genetic) vulnerability and environmental factors (Rathner and Messner, 1993, Hoek et al., 1995;).

Anorexia nervosa tends to cluster among biological relatives. Sisters of patients with anorexia nervosa have a 6% risk of having the illness themselves. More distant relations have a risk up to 4%. A variant of depression or anxiety. Anorexia, depression, anxiety and obsessive-compulsive disorder tend to run in families, and many people with anorexia nervosa have symptoms of depression or obsessive-compulsive disorder. Associated with personality traits. People with anorexia nervosa are often given to compulsiveness and perfectionism. The eating may be an extension of, or a strong expression of, those traits. Triggered by fears about becoming an adult. One fear may be related to new sexual feelings and activities that begin in adolescence. Sometimes the illness is triggered by a life event linked to normal development, such as moving away from home (Filippo et al., 2000, Kaye et al., 2000).

Cultural influences, including images from television and film and pressure from peers, leave the impression that thin is best. In some professions (for example, ballet dancing or modeling), thinness is highly prized, putting participants at risk. But culture is only part of the story. The illness has been known to have occurred hundreds of years ago, even at times when social pressures and conceptions of ideal body image were quite different. Family difficulties can provoke the illness, but their importance may have been overemphasized in the past. Sometimes family problems develop after the disease has started, because a person with anorexia nervosa may test the patience of those she lives with. In advanced stages of the illness, the restrictive dieting is hard to reverse. At that point, hunger may disappear completely and the pursuit of thinness becomes a way of life. Starvation causes medical complications of its own, such as thyroid problems, anemia and joint pains. Extreme dieting can lead to death in the most severe cases, most commonly because of an irregular heartbeat caused by an imbalance of the salts in the bloodstream (Morgan and Russell 1975, Eisler et al., 2000).

Conclusion

Anoxia Nervosa is a severe psychiatric illness that leads to substantial morbidity and mortality. Still, an extremely limited amount of research exists on effective treatments for this disabling disorder. To advance the field in identifying and disseminating effective interventions for Anoxia Nervosa, it is crucial that treatment research in this area be prioritized. The comprehensive investigation should be required for many other factors such as race/ethnicity, body image and BMI that is associated with this disorder. The combined effect of all of these parameters allows one to appreciate the complexity of Eating Disorders; however these issues were too complicated for this concise review. It is very important that these conclusions alter clinical practice. We Researcher should be made aware of such findings in order to screen female patients for such behavior and

counsel them on safer methods of weight loss. More research is necessary to understand how disordered eating behaviors blossom into Eating Disorders and why the girls of the low SES group display such conduct.

References

- Andersen, A.E., and A. Hay. 1985. Racial and socioeconomic influences in anorexia nervosa and bulimia. *International Journal of Eating Disorders* 4:479–487.
- Anderson, D.C. 1974. Sex-hormone-binding globulin. *Clin Endocrinol (Oxf)* 3:69-96.
- Andres, Perpina, S. Lozano, and E. Serra. 2011. *Clinical and biological correlation of adolescent anorexia nervosa in Spain*. <http://www.pubmed.com/>.
- Barbe, P., Bennet, A. Stebenet, M. Perret, B. and Louvet. J.P. 1993. Sex-hormone-binding globulin and protein-energy malnutrition indexes as indicators of nutritional status in women with anorexia nervosa. *American Journal of Clinical Nutrition* 57(3):19-22.
- Carlson, N., Heth, C. Miller, Harold., Donahoe, John, Buskist William. G. Martin., Schmaltz Rodney. 2007. *Psychology: the science of behaviour-4th Canadian ed.* Toronto, ON: Pearson Education Canada pp:414–415.
- Caron, P. Bennet, A. Barousse, C. Nisula, B.C. Louvet. J.P. 1989. Effects of hyperthyroidism on binding proteins for steroid hormones. *Clinical Endocrinology (Oxf)* 31:219-24.
- Chopra, I.J., and Tulchinsky, D. 1974. Status of estrogen-androgen balance in hyperthyroid men with Grave's disease. *Journal of Clinical Endocrinology Metab* 38:269-77.
- Cnattingius, S., Hultman, C.M. Dahl, M. and Sparen. P. 1999. Very preterm birth, birth trauma, and the risk of anorexia nervosa among girls. *Archives of General Psychiatry* 56:634–638.
- De Filippo, A., Signorini, R. Bracale, F. Pasanisi, F. and Contaldo. F. 2000. Hospital admission and mortality rates in anorexia nervosa: Experience from an integrated medical-psychiatric outpatient treatment. *Eating and Weight Disorders* 5:211–216.
- Don, H. and H. Sandra. 2008. *Psychology*, p. 593. Worth Publishers, New York ISBN 978(1):4292-0143-8.
- Eisler I, C. Dare, M. Hodes, and D. Russell. 2000. *Journal of Child Psychology and Psychiatry* 41: 727-736.

- Evrard, F., Cunha, P. Mariana., Michel M., and M. Lambert. 2004. Devuyst O. Impaired Osmoregulation in anorexia nervosa: a case-control study. *Nephrology Dialysis Transplantation* 19: 3034–3039.
- Go Testam, K.G., L. Eriksen, T. Heggstad, and S. Nielsen. 1998. Prevalence of eating disorders in Norwegian general hospitals 1990–1994: Admissions per year and seasonality. *International Journal of Eating Disorders* 23:57–64.
- Gorwood, P.I., M. Bouvard, M.C. Mouren-Siméoni, A. Kipman, and J. Adès. 1998. Genetics and anorexia nervosa: a review of candidate genes. *Psychiatric Genetics* 8:1-12.
- Grisp, A.H., L.K.G. Hsu. 2002. Brittien Harding. A Study of 102 female patient of eating disorder in London. <http://www.pubmed.com/>.
- Hamberg, P., J. Warne. 1996. How long-term therapy for anoxia nervosa ?in treating eating disorders. Jossey-Bass, San Francisco ,CA,US pp. 71-99.
- Hoek, H.W., Bartelds, A.I. Bosveld, J.J. Van der Graaf, Y. Limpens, V.E. and Spaaij. C.J. 1995. Impact of urbanization on detection rates of eating disorders. *American Journal of Psychiatry* 152:1272–1278.
- Holden, N.L. 1991. Adoption and eating disorders: A high-risk group? *British Journal of Psychiatry* 158:829–833.
- Holland, A.J., A. Hall, R. Murray, G, F.M. Russell, A.H. Crisp. 1984. Anorexia nervosa: a study of 34 twin pairs and one set of triplets. *Br J Psychiatry* 145:414–419.
- Jauregui, Lobera, I. and Leon, Lozano, P. 2010. Traditional and new strategies in the primary prevention of eating disorders in Spain ????? 3:263-72.
- Kaye, W.H., K.L. Klump, G.K.W. Frank, and M. Strober. 2000. Anorexia and bulimia nervosa. *Annual Review of Medicine* 51:299–313.
- Konstanty Nnowicz J. and P. Abramowicz. 2011. Thigh circumference as a useful predictor of body fat in adolescent girls with anorexia nervosa in Poland. Publish Karga AG. <http://www.pubmed.com/>.
- Kuboki, P., and Nomura S. 1996. Epi-dermological data on anorexia nevosa in Japan. *Psychiatry Research* 62: 11-16.
- Lilienfeld, S. O. 1998. Pseudoscience in contemporary clinical psychology: What it is and what we can do about it. *Clinical Psychologist*. ? 51-3.
- Misra, M. and R. Prabhakaran. 2007. Prognostic Indicator of changes in Bone Density Measure in Adolescent Girls with Anorexia in New York. <http://www.pubmed.com>.
- Mamman, P. and S. Russell. 2011. Prevelance of Eating disorder & psychiatric co-morbidity among children and Adolescent in Tamil Naidu, India. <http://www.pubmed.com/>.

- Mazess R.B. and H S. Barden. 1990. Ohlrich ES. Skeletal and body composition effects of anorexia nervosa. *Am J Clin Nutr* 52:438-41.
- M.C. Anasrney, Zarccone E.R., Singh, J.P. 2011. *Restrictive Anorexia and set shifting in Adolescence in New York, USA*. Publish: Ersevier Inc.
- McClelland, L. and A. Crisp. 2001. Anorexia nervosa and social class. *International Journal of Eating Disorders* 29: 150–156.
- Mishera, S.K. 2010. Eating disorder and weight concerns among Sikkim Adolescent girl in Kolkata, India.21: 1 – 7. <http://www.pubmed.com/>.
- Mizes, J.S., and T.M. Palermo. 1997. Eating disorders. In *Handbook of prevention and treatment with children and adolescents*, ed. R.T. Ammerman and M. Hersen, New York: Wiley 572–603.
- Morgan, H. G. and G.F.M. Russell. 1975. Value of family background and clinical features as predictors of long-term outcome in anorexia nervosa. *Psychological Medicine* 5:355-371.
- Nakamura, K., Yama, Moto, M. 2000. Prevalence of Anorexia nervosa and bulimia nervosa in a geographically define area in Japan. *Interernational of Journal Eating Disorder* 28:173–180.
- Rathner, G., and K. Messner. 1993. Detection of eating disorders in a small rural town: An epidemiological study. *Psychological Medicine* 23:175–184.
- Rhea, D.J. 1999. Eating disorder behaviors of ethnically diverse urban female adolescent athletes and nonathletes. *Journal of Adolescence* 22:379–388.
- Rogers, L. M.D. Resnick, J.E. Mitchell, and R.W. Blum. 1997. The relationship between socioeconomic status and eating-disordered behaviors in a community sample of adolescent girls. *International Journal of Eating Disorders* 22: 15–23.
- Rybakowski F., A. Słopien, P. Czernski, A. Rajewski, and J. Hauser. 2001. Genetic factors in the etiology of anorexia nervosa. *Psychiatria Polaska* 35 (1):71-80.
- Sjostedt, J.P. and Nathawat S.S. 1998. Eating disorders among Indian and Australian University Students. *Journal of Social Psychology* 138: 351-357.
- Moore S. Schreiber, R.H., Lo G.B., Crawford P. A., and Obarzanek, J. 2000. Eating disorder symptoms in a cohort of 11 to 16-year-old black and white girls: the NHLBI growth and healthy study. *International Journal of Eating Disorders* 27:49–66.
- Strober, Lampert M., Morrell, C. W., Burroughs, W. J., and Jacobs, C. 1990. A controlled family study of anorexia nervosa: evidence of familial aggregation and lack of shared transmission with affective disorders. *International Journal Eating Disorder* 9:239–253.
- Sullivan , P. 1995. Mortality in Anoxia Nervosa. *American Journal of Psychiatry* 13:1073-1074.

- Szmukler, G. McCance, C. McCrone, L. and Hunter, D. 1986. Anorexia nervosa: A psychiatric case register study from Aberdeen. *Psychological Medicine* 16:49–58.
- The National Eating Disorders Collaboration. 2010. Eating disorder prevention, Treatment and Management: an evidence Review. Retrieved from:<http://www.nedc.au/nedc-publications/>. Com.
- Treanure, J, and Russell, G. 2010. A Systematic compile and Analysis the mortality rates in individual with Anorexia nervosa and Bulimia Nervosa. <http://www.pubmed.Com/>.
- Turnbull, S. Ward, A. Treasure, J. Jick, H. and Derby, L. 1996. The demand for eating disorder care. An epidemiological study using the general practice research database. *British Journal of Psychiatry* 169(6):705–712.
- Vaisman, N. Rossi, M.F., Goldberg, E. Pibden, U. Wykes, U. and Pencharz, P.B., 1988. Energy expenditure and body composition in patients with anorexia nervosa. *Journal of Pediatrics* 113(5):919-24.
- Vitello, B. and Lederhendler, I. 2000. Research on eating disorders: Current status and future prospects. *Biological Psychiatry* 47(9):777–786.
- Wade, TD. Bulik, CM. Neale, M. Kendler, KS. 2000. Anorexia nervosa and major depression: shared genetic and environmental risk factors. *American Journal of Psychiatry* 157(3):469-71.
- Walters, E.E. and Kendler, K.S.1995. Anorexia nervosa and anorexic-like syndromes in a population-based female twin sample. *American Journal of Psychiatry* 152:64–71
- Westenhoefer, J. 2001. Prevalence of eating disorders and weight control practices in Germany in 1990 and 1997. *International Journal of Eating Disorders* 29(4) 477– 481.
- Wikipedia, Essential data. 2010. Anorexia Nervosa: An article from Townson university and duke eating disorder program.
- Willi J. Giacometti G. and Limacher B. 1990. Update on the epidemiology of anorexia nervosa in a defined region of Switzerland. *American Journal of Psychiatry* 147:1514–1517.