

Risk of several psychiatric disorders was increased in relatives of anorexics and bulimics

Lilenfeld LR, Kaye WH, Greeno CG, et al. *A controlled family study of anorexia nervosa and bulimia nervosa. Psychiatric disorders in first-degree relatives and effects of proband comorbidity.* Arch Gen Psychiatry 1998 Jul;55:603-10.

Question

In patients with anorexia nervosa or bulimia nervosa what are the familial patterns of psychiatric disorders?

Design

Case control study.

Setting

Inpatient and outpatient eating disorder programmes at Western Psychiatric Institute and Clinic, Pittsburgh, Pennsylvania, USA.

Participants

26 women (mean age 25 y) with *DSM-III-R* criteria for anorexia nervosa (including 93 relatives), 47 women (mean age 25 y) with *DSM-III-R* criteria for bulimia nervosa (including 177 relatives), and 44 women (mean age 26 y) with no history of an eating disorder (including 190 relatives). Controls were matched by age and postal code to cases.

Assessment of risk factors

Lifetime prevalence rates of eating disorders (Eating Disorders Family History Interview), mood disorders, substance use disorders, anxiety disorders (Schedule for Affective Disorders and Schizophrenia-Lifetime Version [or the school age version for those < 18 years of age]), and selected personality disorders (Structured Clinical Interview for *DSM-III-R* Personality Disorders, and the Personality Disorders Examination) were determined using face to face interviews or by telephone. Interviewers were blinded to the identity of the families.

Main outcome measure

Risk of disorders among first degree relatives.

Main results

After adjustment for sex, age, and interview type, relatives of patients with anorexia and bulimia had increased risk of major depressive disorder, clinically subthreshold forms of an eating

disorder, generalised anxiety disorder, and obsessive-compulsive disorder (table). The risk of substance dependence was reduced among relatives of patients with anorexia compared with relatives of patients with bulimia (risk ratio [RR] 0.5, 95% CI 0.3 to 1.0), and familial aggregation was independent of bulimia. The risk of obsessive-compulsive personality disorder was increased only among relatives of patients with anorexia (RR 3.6, CI 1.6 to 8.0), and evidence existed that these 2 disorders may have shared familial risk factors. Both major depression and obsessive-compulsive disorder appeared to be transmitted independently from eating disorders.

Conclusion

Risk of major depression disorder, subthreshold eating disorders, generalised anxiety disorder, and obsessive-compulsive disorder was increased in first degree relatives of patients with anorexia nervosa or bulimia nervosa compared with patients without these disorders.

Adjusted risk ratios (95% CI) for disorders among first degree relatives of patients with eating disorders and those without

Disorder	Anorexia v control women	Bulimic v control women
Major depressive disorder	2.3 (1.1 to 4.8)	2.3 (1.2 to 4.4)
Eating disorder, not otherwise specified	15.0 (1.8 to 125.1)	30.7 (4.1 to 228.0)
Generalised anxiety disorder	3.1 (1.5 to 6.8)	2.3 (1.1 to 4.7)
Obsessive-compulsive disorder	4.1 (1.4 to 12.2)	3.0 (1.1 to 8.5)

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Commentary

This study represents an important advance in the study of the heritability of eating disorders. It was carefully designed and the analytical approach is state of the art.

The key findings relate to which disorders might have shared genetic vulnerabilities. Despite controversy over the exact association between anorexia nervosa and bulimia nervosa, only a few attempts have been made to sort out whether they share genetic vulnerabilities or are inherited as separate conditions. Previous work in this area has been ambiguous or suggested separate inheritance.¹⁻⁴

Investigation of the co-inheritance of other psychiatric disorders and eating disorders is one strategy to investigate this, and it is of interest given the high

rates of familial occurrence in individuals with anorexia nervosa and bulimia nervosa. This study confirms other work suggesting separate transmission for major depression and substance use, and adds obsessive-compulsive disorder to this list. Of interest, however, is the finding that obsessive-compulsive personality disorder (OCPD) may share some genetic risk factors with anorexia nervosa, and in fact may be a risk factor for its development.

Such findings may have clinical relevance that could eventually lead to the development of strategies for identifying individuals at risk of developing eating disorders, at whom preventative strategies could be more efficiently targeted. In addition, this will have implications for treatment programmes, for example sug-

gesting an aggressive therapeutic approach to the treatment of OCPD in those recovering from anorexia nervosa. Such a strategy would emphasise the need for an integrative approach to the treatment of eating disorders—one which requires an understanding of the biology and psychology of the illnesses.

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