Background Factors in Anorexia Nervosa

A Controlled Study of 51 Teenage Cases Including a Population Sample

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Fifty-one adolescents with anorexia nervosa and 51 sex-, age- and school-matched comparison cases were psychiatrically and physically examined. Twenty-four of the anorexia cases constituted the total population of anorexia nervosa cases born in 1970. The cases were examined at a mean age of 16 years. The mothers were interviewed in detail concerning hereditary and other family factors, child’s early physical and temperamental development, and the family’s overall social situation. Medical records pertaining to the pre-, peri- and neonatal periods were analysed blind to diagnosis. Thirty-five of the anorexia cases (69%) had a reasonably plausible background factor which could have contributed to the development of the eating disorder. Similar background factors were encountered in 2 (4%) of the comparison cases. The findings are discussed as they pertain to anorexia nervosa etiology.

Introduction

Anorexia nervosa (AN) is one of the most common specific diagnoses made in adolescent psychiatry. It is not uncommon in adult psychiatry either, even though the peak incidence for age of onset appears to be in the teenage period. According to earlier reports, it would seem that peak incidence is in the late teens (Crisp et al., 1976; Szmukler et al., 1986).

Diagnostic criteria for AN are fairly similar across systems (Russell, 1970; Feighner et al., 1972) and usually include abnormal eating behaviour/attitude to eating and weight, weight loss and amenorrhea. There is often some difference with respect to the degree of weight loss required. The most commonly used criteria during the last 10 years have been those of the DSM-III (APA 1980) and the DSM-III-R (APA 1987).

Pathogenetic mechanisms are poorly understood, but genetic factors (Dally, 1969; Theander, 1970; Holland et al., 1984, 1988), hormonal influences (Fries, 1977), pubertal crises (Crisp et al., 1980), socio-cultural factors (Nylander, 1971, Garfinkel & Garner, 1982) and specific family interaction styles (Minuchin et al., 1978; Selvini-Palazzi & Vario, 1988; Humphrey, 1989) have all been implicated.

Most writers in the field have agreed that AN most likely is determined multifactorially and that no single basic cause will be found to account for all cases (Holland et al., 1988; Treasure & Holland, 1990).

It is somewhat surprising that, in spite of the fact that AN has been a relatively well-known disorder during the whole of the 20th century – and, in fact, very much at the centre of public interest for the past 30 years (starting with the “Twiggy phenomenon” in the 1960s) – not a single clearly population-based study in the field appeared before the late 1980s.

We recently published a comprehensive population study of all cases born in 1970 and living in the city of Göteborg on December 31, 1985 who at that time had or had previously had AN (Råstam et al., 1989). This study was later extended to cover the period up to December 1987 for the whole cohort born in 1970. Detailed results concerning the family background (Råstam & Gillberg, 1991), the pre-morbid and co-morbid problems (Råstam et al., 1991) and certain physical parameters (Råstam et al., 1990; Råstam et al., 1991) in the population group and a similar group of referral cases with AN have been published separately. This paper provides an overview of the major findings and new data on
prevalence and life events. Its main object is to try
to find clinically meaningful background factors
which might have contributed to the development
of the eating disorder.

Material and Methods

Subjects

AN and comparison groups: Brief overview of
study groups

Fifty-two children and adolescents with AN (49
girls and 3 boys) were invited to participate in the
present study. Forty-nine of these fulfilled the di-
agnostic criteria of the DSM-III-R (34 of whom
also fulfilled the criteria of the DSM-III). Three
female cases fulfilled almost all the criteria of the
DSM-III-R and were referred to as "AN partial
syndrome." The 52 AN cases comprised 20 cases
(18 girls, 2 boys) constituting the total population
with AN born in 1970 and screened from the
general population in December 1985, plus 5 more
AN cases (all girls) from the same birth cohort who
had developed AN between January 1, 1986 and
December 31, 1987. The remaining 27 cases (26
girls, 1 boy) represented a mixed group of clinic
and referral cases who were not born in 1970, but
were detected by the school nurses in connection
with the screening of the population born in 1970.

Fifty-two further children and adolescents,
matched with the AN group for age, sex, and
school, were also invited to participate in the study
as a comparison group (see below, Comparison
group).

The AN population group

One of the aims of the study was to reach all
children born in 1970 and living in Göteborg on
31 December 1985 who had or had had AN before
their 16th birthday. All children (n=4,291; 2,136
girls and 2,155 boys) attending the eighth grade of
göteborg schools on 31 May 1985 were
screened. Ninety-nine per cent of them were born
in 1970. Their age range at that time was thus
14.5–15.5 years. Also, every effort was made to
trace any relevant information concerning children
born in 1970 who were not attending the eighth
grade. All children born in 1970 not attending
normal schools were screened simultaneously in
another study concerning teenagers with mental
retardation (Gillberg et al., 1986). None of these
had AN.

The purpose and design of the study were de-
scribed during special seminars to school nurses and
school doctors, pediatricians, and child and adoles-
cent psychiatrists. All parents and children con-
cerned were informed by letter, and all but 11 of
the 4,291 individuals in the population consented
to participate in the study. The author also talked
on an individual basis with each of the 36 school
nurses and discussed all cases raising even the slight-
est suspicion of suffering from AN.

All growth charts were collected from the school
health services and scrutinised by M.R. For those
11 individuals who had declined participation, the
school nurse considered that the growth chart was
quite normal and unexceptional. Therefore, in the
analysis of growth charts, 100% of the population
was reached.

All 4,291 children had also been weighed and
measured by the school nurse during the months
immediately preceding the study.

All 4,291 children had completed a specially
designed questionnaire tapping problems associated
with AN.

There were 385 children who raised some sus-
picion of suffering from AN symptoms. These
were repeatedly examined by the school nurse
throughout the following year. After several inter-
views with each nurse (by M.R), the number of
suspected cases was reduced to 44 (39 girls and 5
boys). They were all contacted by M.R, for par-
ticipation in the study.

These cases (except one seen by the second
author) were all examined by the first author during
a 3-hour assessment. One girl with AN (DSM-III-
R) refused participation in the diagnostic study (see
below). Altogether 20 cases (18 girls, 2 boys) with
AN full syndrome (17) or AN partial syndrome (3)
who had developed AN before 1986 were found.
Five more cases (all girls) from the population born
in 1970 were found who developed AN during the

Attrition from the AN population group

One of the girls in the AN population group
refused participation (see above). On the basis of
growth chart assessment, and information obtained
in the questionnaire and through the school nurse
a diagnosis of AN according to the DSM-III-R,