

Chapter 26

Eating Disorders in Childhood (Ages 4 Through 11 Years)

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INTRODUCTION

Eating disorders in infancy, adolescence, and adulthood have been extensively described in the literature; however, eating disorders in childhood are reported with much less frequency. In order to restrict this chapter to eating disorders in childhood, I have focused on children aged 4 to 11 years old. This will avoid, as much as possible, disorders of infancy and disorders of adolescence. In 4- to 11-year-old children reviewed in the literature with eating disorders, as characterized in DSM-III, the major and almost exclusive category mentioned was anorexia nervosa. This chapter will therefore focus on anorexia nervosa.

Anorexia nervosa is considered to be of major importance because of its increasing frequency, its severity, and because it is one of the few psychiatric disorders of childhood that can progress to death.

In the literature examined, the diagnosis of anorexia nervosa is not made in children under age 4, and the diagnosis of bulimia is rarely mentioned [1,2].

This chapter will present a historical overview through an analysis of the literature describing children with eating disorders. Some of the articles reviewed will be set forth in tables, and comments will be made. Specific studies will then be discussed in greater detail. Later clinical issues, controversies, and future direction in this field will be explored.

DEFINITION

Eating disorders according to DSM-III are characterized by gross disturbances in eating behavior; they include anorexia nervosa, bulimia, pica, rumination disorder of infancy, and atypical eating disorder. Bulimia usually has a chronic, remitting course, whereas the other three specific disorders commonly are limited to a single episode. Two of these, anorexia nervosa and rumination disorder of infancy, may have an unremitting course that progresses to death due to malnutrition and medical complications.

Anorexia nervosa is defined in DSM-III using the following criteria: (1) An intense fear of becoming obese, which does not diminish as weight loss progresses; (2) disturbance of body-image, eg, claiming to "feel fat" even when emaciated; (3) weight loss of at least 25% of original body weight, or if under 18 years of age, weight loss of original body weight plus projected weight gain expected from growth charts may be combined to make the 25%; (4) refusal to maintain body weight or a minimal normal weight for age and height; and (5) no known physical illness that would account for the weight loss.

Puberty will now be defined, because it has particular relevance here in that children with prepubertal anorexia nervosa will be the major focus of this chapter. It is possible that puberty has a pivotal biopsychosocial role in this syndrome. Dorland's Medical Dictionary [3] defines puberty as the age at which the reproductive or-

gans become functionally operative and secondary sex characteristics develop. Textbook of Pediatrics by Nelsons et al [4] indicates that puberty is an arbitrary point in the continuum of maturation: the menarche in girls (just under 13 years in the United States), and some less clearly defined event occurring approximately two years later in boys. Adolescence is defined as the period of time between puberty and maturity [5].

Normal developmental prepubescent changes are pertinent to weight problems in 4- to 11-year-olds. These changes precede the first secondary sex changes of adolescence and are integral elements of maturation, not simply preparatory ones. Boys have slightly less subcutaneous fat during the middle years of childhood. The fat in subcutaneous tissue, which showed a steady proportionate decrease in amount from the ages of 1 to 6 years in both sexes, begins to reaccumulate as early as 8 years in girls and 10 years in boys.

A HISTORICAL BACKGROUND OF ANOREXIA NERVOSA IN CHILDREN

Morton [6], in a book published in 1694 in England, was probably the first writer to refer to this symptom complex, as he does in the chapter entitled, "Of a Nervous Consumption." This description was followed by Lasegues' [7] in 1873 in France, under the name of "l'Anorexia Hysterique." Independently, Sir William Gull [8,9] described the same condition in England in 1874, giving the condition its current name, anorexia nervosa. Twenty years later in 1894, Collins [10] described in the *Lancet* a 7-1/2-year-old girl who was refusing all food. She was emaciated and exhibited "morbid egotism," selfishness, vanity, and self-absorption. One year later in 1895 Marshall [11] in England recorded a fatal case in a girl, 11 years of age, in which the autopsy revealed the same absence of lesions as was found in Gull's fatal case [12-14]. The early English literature [15-17] focused mainly on eating difficulties in infants and preschoolers and therefore included only a small number of children in the 4- to 11-year-old range. After Collin's and Marshall's description of prepubertal children the most frequent publications were not in the English but in the French and German literature [18-26].

Irwin [27] in 1984 reviewed 893 cases in which the authors claim to be dealing with anorexia nervosa. Of the 893 cases there were 29 children (3% of the total) aged 8 through 11 years. My review of the literature supports Irwin's findings regarding the paucity of case reports of preadolescent anorexia nervosa in the literature.

Two tables have been made to allow the reader an opportunity to compare and review many of the papers

on eating disorders in childhood. Table 1 [28-34] describes epidemiological studies of children aged 4 to 11 years. Table 2 [1,2,27,12-14,35-45] gives brief clinical comments of cases reported in the literature.

EPIDEMIOLOGICAL SURVEYS OF CHILDREN WITH ANOREXIA NERVOSA

Table 1 reviews epidemiological surveys of 447 patients. The authors of these surveys state that the patients studied had anorexia nervosa. Unfortunately, the criteria for defining the disorder were not consistent. The articles were selected after excluding numerous studies that did not have any children younger than 12 years old. The studies often do not clearly relate what percentage of children are under 12 years old. In spite of the methodological problems, it is apparent that the frequency in children as compared with adolescents and adults is small. However, of children in the epidemiological studies, girls outnumber boys (86% girls to 14% boys), and onset of symptoms was often related to disappointments in object relations. Also in this population it was observed that sexual problems and suicidal behavior were minimal [19].

THIRTY-THREE CASE STUDIES OF ANOREXIA NERVOSA IN 4- TO 11-YEAR-OLDS

Table 2, titled "Thirty-three Case Studies of Anorexia Nervosa in 4- to 11-Year-Olds" gives an overview of this topic. Parameters such as age, sex, precipitant, personality, treatment, and follow-up are set forth in as much detail as each case report will allow. The case studies extracted from the literature were heterogeneous in composition. In addition, they are a reflection of the many adventitious influences to which referral policies are subject. Consequently, it is difficult to arrive at conclusions without qualification. However, some general comments can be made.

In the case studies of anorexia nervosa reported in 4- to 11-year-old children, as with other age-groups, there is a preponderance of females (23 females to 9 males, or 73% to 27%, respectively). In this review of the literature there are probably more males than would be expected, because anorexia nervosa in males in this age range is indeed a rare event and publishable. The female preponderance is of special interest, because in most psychiatric disorders of childhood there are more males than females.

In 23 (69%) of the 33 cases a precipitant is described. Five were related to a birth in the family, four began after the child was teased about being fat, three were to do with separation, and three related to bereavement.

Table 26.1 Epidemiological surveys of 4- to 11-year old children with anorexia nervosa

Author	Age of Onset	Sample
Anyan 1983	3 females age 10 and 1 male age 10	Sample of 137 females and 17 males with anorexia nervosa who were treated at the outpatient and inpatient services for adolescents at the Yale-New Haven Hospital.
Galdston 1972	50 patients 8 to 16. Those ages 11 and under not specified.	41 girls and 9 boys were all hospitalized on a childrens' psychiatric ward. Only 3 of 50 were suicidal. All were able to recall a disappointment in a valued relationship that had been invested with personal ambitions. No evidence of heterosexual activity. All compliant.
Goetz et al 1977	Details not given	Sample of 30 children between the ages of 9.5 and 16 years admitted to the Childrens Hospital of Pittsburgh between 1954 and 1970 (28 females and 2 males).
Hall 1978	Youngest child was 12	Sample consisted of the first 50 patients referred to a child psychiatrist from a defined geographic area in New Zealand
Halmi 1974	8% of sample were < 10	Sample of 94 divided into groups < 10, between 10 and 15 and > 25 years old. The sample was a retrospective study of the files of the Iowa General and Psychopathic Hospitals, 1920-1972.
Halmi et al 1979	2 children age 10 & 3 children age 11. Gender not given.	Sample consisted of 105 subjects who participated in a collaborative study. 1/3 had not reached puberty.
Pugliese 1983	14 children age 9 to 17. Those aged 11 was not delineated.	Authors state that the children had a fear of obesity resulting in short stature and delayed puberty. They claim that children did not have anorexia nervosa, which is controversial. The sample consisted of 14 of 201 patients who attended a pediatric endocrinology clinic.

Other precipitants are enumerated in table 2. The frequency of identification of external precipitants in adolescents and adults varies; for example, Theander [46] identified specific causes in 50%, Halmi [32] in 55%, Morgan and Russell [47] in 65%, while Casper and Davis [48] could identify precipitation factors in all their patients.

Two-thirds of the 33 children were hospitalized. Frequency of hospitalization, as with other diseases, is influenced by the patterns of practice in the community and other factors.

At follow-up there was information on 29 (89%) of the 33 cases. Of these 29, 18 (62%) were described as improved, three (10%) slightly improved, seven (24%) not improved, and one (4%) dead from anorexia nervosa. The 33 cases in my sample can be compared to Bruch's [49] series of 38 females with anorexia nervosa. The age of onset in her sample was from 10 to 26 years. Thirteen (36%) were reported to be recovered, and 23 (64%) as not recovered. Two had died, but the cause of death was not reported.

Premorbid personalities in the case studies examined are varied. Terms such as depressed, shy, schizoid, and hysterical are used. The idea that the child is either pre-psychotic or has significant ego defects was alluded to in 6 (18%) of 33 children described.

Frequently in young adolescents with anorexia nervosa the term conscientious is used. Significantly, the term conscientious was mentioned in only two of the 33 childhood anorexia cases. In contrast, the adolescent an-

orexia nervosa patient is usually a high achiever, superficially compliant, and often described as conscientious.

Since table 2 was compiled, I discovered an article by Jacobs and Isaacs [56] which you will be well advised to review.

DESCRIPTIONS OF SPECIFIC STUDIES

Some of the early series, which reported preadolescent cases of anorexia nervosa, appeared in the late 1950s and the early 1960s. Falstein [1] in 1956 described one 9-year-old and two 10-year-old children. They were unique in that they were all males. One had a typical adolescent precipitant. Children at school began calling him "Fats" and "Tubby," while the other two had more atypical precipitants. One precipitant was the death of a dog that was poisoned, and the other precipitant related to family arguments.

Blitzer et al [13] in 1961 reported seven children with onset of anorexia nervosa at age 11 or before and the sex ratio was two boys to five girls.

In 1968 Warren [44] described 20 cases of anorexia nervosa in girls. Three of the girls had onset of symptoms at age 11 or before. Girls aged 10 to 15 years were divided into three groups. Eight were prepubertal, four were pubertal, and eight were postpubertal. Warren does not give a precise definition of puberty in the paper, although he states that the postpubertal girls were menstruating before the onset of illness. It was Warren's observation regarding the 20 cases that, "as they showed

Table 26.2 33 Case Studies of Anorexia Nervosa in 4- to 11-years olds

Author	Age of Onset	Age When First Seen	Sex	Precipitant	Permorbid Personality	Hospitalized	Outpatient Therapy	Follow Up	Comment
Botella 1978	6	6-1/2	m	N.R.	depressed shy	no	several months	improved	mother wished him dead since birth
Blitzer 1961	7	10-1/2	f	N.R.	hysterical phobias	5 months	N.R.	recovered	
	8-1/2	11	f	N.R.	hysterical	1-1/2 years	N.R.	recovered	
	10-1/2	10-3/4	f	parents' separation	depressed	2-1/2 months	N.R.	died	pt. had magic idea of sacrifice in order to reunite separated parents
	10-1/2	10-3/4	f	N.R.	compulsive depressed	1 month	N.R.	slightly improved	
	11	11	f	N.R.	depressed hysterical	2 months	N.R.	recovered	
	11	16	m	N.R.	schizoid	2-1/2 years	N.R.	slightly improved	
	11-1/2	12- 3/4	m	N.R.	schizoid compulsive phobic	2 years	N.R.	slightly improved	
Brown 1983	10-3/4	12-3/4	f	death of uncle, 2 friends moved	cheerful	no	3-1/2 yrs	improved	a lot of fathers' attention until late latency
	9-3/4	11-1/4	f	brother had 5 brain surgeries	paranoid schizoid	no	17 months	improved	
	9-1/4	9-3/4	f	best friend moved away	depressed	no	8 months	improved	a lot of father's attention until late latency
English 1937	4	6	f	father attempted vaginal intercourse and had child perform fellatio		no	2 years	did well	father was a chronic alcoholic and was probably mildly psychotic
	7	N.R.	m	fear mother might have another child					
Falstein 1956	10	11	m	fear of fatness	shy depressed prepsychotic	8 months	N.R.	poor	residential placement suggested bulimic episodes; eating problems throughout childhood
	9-3/4	10	m	arguments between grand-parents and parents	demanding provocative hostile	14 days mother uncooperative	none		insisted he had a protuberant abdomen when it was scaphoid
	10-1/2	11	m	death of dog that was poisoned		no	a few interviews	improved	distortion of body image; brief bulimic episode; mother rejecting & hostile
Forchheimer 1907	6	7	f	N.R.	oppositional	no	4 weeks	improved	child intelligent and suspicious
Irwin 1981	9-1/2	9-3/4	f	teased about being fat		yes	N.R.		parents neurotic mother was rejecting; bulimic episodes; claims abdomen protuberant when actually scaphoid
Irwin 1984	9	10	f	teased about being fat	compliant perfectionistic	yes			exercised excessively; interest in preparing food
	11	11-3/4	f	breast development		yes			loss of interest in everything except cooking

Table 26.2 33 Case Studies of Anorexia Nervosa in 4- to 11-years olds (continued)

Author	Age of Onset	Age When First Seen	Sex	Precipitant	Permorbid Personality	Hospitalized	Outpatient Therapy	Follow Up	Comment
Lesser 1960	10	N.R.	f	viral illness	hysterical	1 month		uneventful recovery improved	
Mintz 1983	9-1/3	10	m	began just after aunt gave birth	depressed	no	3 times a week for 2 years		fluids decreased; exercise increased; drank only milk; wished to be a baby
Reinhart et al 1972	8-1/3	8-2/3	f	birth of sibling	depressed	no	yes	2 years normal wt.	
	10-1/3	11	f	seemed to be reacting to her mothers urging her older sister to lose weight	depressed at times psychotic	1 year		fair to poor	6 years later she was heavy but not obese; psychologically fragile; in hospital had tube feeding and ECT
Shafii et al 1975	7-1/3	8	f	cry for help to liberate her from suppressive home environment	passive dependent depressed	6 months	refused	none	returned to normal weight in hospital but did not accept outpatient therapy tube feeding
Sperling 1978	6	7	f	birth of brother patient age 6	paranoid features	no	1-1/2 years	improved	followed into late adolescence and she did well; had fear of cats; suspicious mother wasn't giving her good food psychoanalytically oriented psychotherapy
Sylvester 1945	4	4	f	loss of mother's attention when father returned home & she became pregnant	shy depressed	7 months		3 years doing well	
Tridon et al 1983	11	11	m	experienced an injustice; suicide of relative	obsessive paranoid prepsychotic	no	12 months	poorly schizoid paranoid	possible schizophrenic evaluation; he defended a friend who was bullied by peers; he was excluded from his peers; he went on a hunger strike to protest the social injustice he perceived she was followed until age 20 and was healthy
Warren 1968	10- 1/2	N.R.	f	N.R.	shy conscientious	yes		see comments	by age 14 she had not recovered
	11-1/6	N.R.	f	N.R.	shy & anxious	yes		see comments	
	11-1/2	N.R.	f	N.R.	shy & anxious	yes		see comments	by age 17 she had not recovered
Werman & Katz 1975	11-1/2	13	f	father said she was a walking garbage can	hysterical ego defects	3 weeks	5 weeks	see comments	homosexual orientation in late adolescence; father abusive and possibly sexually involved with neighborhood children
	11-1/2	13	f	same as above	ego defects	no	no	see comments	same as above except she did not have homosexual orientation

N.R. = not reported

no obvious differences in etiology, in features of their illness, and in the follow-up results, they were considered together." This study suggested that there is little differences between prepubertal and postpubertal anorexia nervosa.* It is not difficult to take issue with this hypothesis. The number in the sample is quite small and the age range of the girls is narrow (10 to 15 years). For example, two of the prepubertal girls were aged 11 years old, and two of the postpubertal girls were aged 12 and 13 years old. This study does not really compare children who are distinctly prepubertal to a group of postpubescent older adolescents who have completed all aspects of puberty. Nor does the paper clearly define puberty. Therefore, it is not surprising that differences were not found.

Sours [51] in 1979 indicated that latency-age girls tend to display besides the standard criteria for anorexia nervosa, defects in ego structure and organization along with pregenital instinctual fixation and infantile object dependency. In reference to boys, Sours mentions that these patients are usually prepubertal or early adolescent chubby boys who fear oedipal-genital feelings toward the mother. In wake of the regressive shift they experience a fear of maternal dependency and, sometimes, a merger with the inner object. They view their chubbiness as an indication of femininity, weakness, and homosexuality. A strong, negative, oedipal history and feminine identification is usually apparent. He also mentions that prepubertal onset, duration beyond five years, and persistence through adolescence are grave prognostic indicators. These areas are controversial.

Irwin [2,27] has written the only paper that presents a series of preadolescent and latency-age children. Fifteen cases of early-onset anorexia nervosa (age 12 and under) are identified based on records from Children's Memorial Hospital between 1960 and 1980. He describes the clinical characteristics and the possible connection to affective disorder (depression) of this early-onset variant of anorexia nervosa.

CASE ILLUSTRATION

Mary's family came to the University of California, Irvine, Child Study Center from a city about 800 miles away requesting treatment for their daughter. Mary, aged 10, had gone from 106 lb to 79 lb over about six months time. She had been unsuccessfully treated in her own area. Weight loss started as dieting to lose a few pounds but did not stop, becoming critical when her parents took a three-week vacation without her. Her best and only girlfriend had moved away, so she was left with adult friends of her parents.

Mary, who was depressed and obsessive, described her problem as follows: "I have a computer in my mind and stomach that says 'You dummy, don't eat that!'" It was an obsessive and driving voice that frightened her. She was fearful of eating, overeating, and not eating. She wanted to please her parents, but the voice inside her told her not to.

Her mother was 45 years old, overweight, serious, and dominating. Mary's parents had been married for 27 years. They became upset with the "rat race" in California and had moved three years before.

Her father was a 48-year-old, tall, extroverted man, with a deep voice, large hands, and a beard resembling that of a biblical prophet.

Although Mary was extremely thin and on the verge of being hospitalized, she saw herself as excessively obese. Her pediatric endocrinologist indicated that she had not had menarche.

Mary was born when her brother was 10. Her mother had not wanted another child. Throughout her childhood there were several separations. Mother returned to work when Mary was 3 months old. At 15 months the entire family left her with another family for three weeks when they went on vacation. At age 2 years she was sent to nursery school against her will. Generally during her life her parents took "adult" vacations.

Mary had never been able to oppose her parents nor the adult regime, which the family followed. Although not really overweight when her diet began, she was teased by boys about being fat. Her general helplessness led her to seek control of her life by controlling her weight. She shielded herself from budding sexuality by losing weight. Mary's depression and anorexia nervosa was contributed to by her mother's laissez-faire attitude toward her from the time of conception. Mary's parent's lack of empathy and inability to make contact with their daughter also happened with their son. He had experienced a marked depression, which lasted from the third through ninth grades. It wasn't until family therapy had started that they knew about it.

Mary received outpatient psychotherapy twice a week individually and family therapy once a week with her parents. Treatment continued for three months, when they decided to return home and resume with the former psychotherapist who was now obtaining consultation from a state facility. They telephoned a few months later to say that Mary was eating better and was happier.

DISCUSSION OF CLINICAL ISSUES

The course of illness in children with early-onset anorexia nervosa is different than in late adolescence and

* Similar ideas have been expressed about major depressive disorders in children. [59]

early adulthood, although there are phenomenological similarities.

Children in Piaget's [52] stage of concrete operations are more likely to generalize pathological food intake to fluid intake. In Irwin's study, three children stopped all food and fluid intake for an average of four days. At this stage of development they are less able to abstract, and even water is thought to be "food." Therefore, these children believe that water can cause them to gain weight and they abstain. In Warren's [44] series of 20 children, two prepubertal 12-year-olds died. In Blitzer's series of 15 children, one 10-year-old child died. These reports underlie the seriousness of anorexia nervosa.

Prepubertal adipose distribution differs from that found in postpubertal women. At average weight an 8-year-old girl will have a smaller percentage of total body fat than her 16-year-old counterpart. Having less total body fat initially, school girls will be more emaciated than young women who lose an equal percentage of total body weight.

In Irwin's [27] study of 15 preadolescent girls, two thirds of the patients required hospitalization less than six months after beginning dieting.

Children in the 4- to 11-year-old age range are, in Erikson's [53] terminology, developing initiative and industry as opposed to guilt and inferiority. In contrast, adolescents are developing identity as opposed to identity diffusion. Children are more dependent than adolescents on their families. Consequently, it might be expected that they would be influenced more by relationships within the family than by issues related to adolescence such as appearance, identity, and separation from the family. Children were profoundly affected by such stressors as birth of a sibling, poisoning of a dog, family arguments, divorce, and deaths. Fourteen (65%) of the 22 children for which a precipitant was given had stressors of this type. The more typical adolescent precipitant relating to being teased about being fat was mentioned in only 4 (18%) of the 22 children. This adolescent precipitant was less common in the younger children. This distinction is important in that an intense fear of becoming obese is a DSM-III diagnostic feature of anorexia nervosa. In future studies this diagnostic feature needs to be explored in more detail, because the case studies reported here did not provide enough detail to comment definitively on this point.

Children in the 4- to 11-year-old age range in Freudian terminology are in the oedipal and latency stages. Fantasies about pregnancy and avoidance of it could be of importance. In one girl the precipitant was being forced to perform fellatio [13]. The precipitant in several children was related to a birth in the family. In latency, the drives are quiescent in theory, which might help account for the apparent decreased incidence of anorexia nervosa.

Growth retardation in undernourished prepubertal children is a concern. Phillips [54] has emphasized that the impact of diet on growth is determined by the timing of altered nutrition. He points out that nutritional restrictions during tissue hyperplasia are likely to result in permanent limitation of growth. Lucas [55] in reviewing the records of a series of patients who began to lose weight before mid-adolescence found that of 35 girls and 12 boys, only 3 girls and 2 boys had an impairment of linear growth. It may be that once the chain of events initiating the pubertal growth spurt has been set into motion, only an extreme weight loss can stop it.

In 6 (17%) of the 33 cases in my sample, prepsychosis or significant ego defects were reported. This number seems high and needs to be examined in future studies.

Rapidity of deterioration characteristic of this age-group has important implications for treatment. There is little time for outpatient interventions to reverse the weight loss. It is especially important in the 4- to 11-year-olds to correctly identify the diagnosis at an early stage to implement treatment on an outpatient basis to avoid hospitalization.

CONTROVERSIES

There is some controversy over whether lean latency-age children need to lose 25% of their original body weight to be equivalent to a 25% weight loss in older adolescents or young adults. Irwin [2,27] has suggested that a 15% weight loss would be more appropriate as a diagnostic criteria for anorexia nervosa in prepubertal children.

Is early-onset anorexia nervosa merely a variant of the more usual presentation, or is it a different entity? Irwin [27] and Sours [51] intimate the latter possibility. In Irwin's [27] study and in the cases reviewed in this chapter, although none of the children could be diagnosed as suffering from a primary affective disorder, many of the children exhibited depressive symptoms. Could early-onset anorexia nervosa be a childhood form of affective disorder?

Six of the 33 cases demonstrated prepsychotic features or significant ego defects. This could indicate that these children have another psychiatric diagnosis with anorexia as a symptom, or it could indicate the children are more disturbed than adolescents or adults with anorexia nervosa.

Is prepubertal anorexia nervosa a different disorder than the adolescent or adult form? Developmental issues are different in childhood, which in part accounts for an altered clinical presentation. Organic factors related to hormonal homeostasis are also different before puberty. I think that anorexia nervosa does occur

in younger children and that there are both similarities and differences from the adolescent form.

FUTURE DIRECTION

It is possible that these younger children suffer in a different way than their adolescent counterparts because of the difference in developmental variables. Systematic biochemical, phenomenological, longitudinal, natural history, and family research on these children, separate from their older cohorts, will provide the basis for greater understanding.

REFERENCES

- Falstein EI, Feinstein SC, Judas I. Anorexia nervosa in the male child. *Am J Orthopsychiatry*, 1956; 26:751-70.
- Irwin M. Diagnosis of anorexia nervosa in children and the validity of DSM-III. *Am J Psychiatry*, 1981; 138:1382-3.
- Newman Dorland WA. *Dorland's Illustrated Medical Dictionary*, 23rd ed. Philadelphia and London: WB Saunders Company, November, 1962: 94.
- Nelson EN, Vaughn VC, McKay JR. *Textbook of pediatrics*. Ninth edition. 1969: 28-9.
- Merriam-Webster A. *Webster's New Collegiate Dictionary*. Springfield, Massachusetts: G & C Merriam Company, 1977: 47.
- Morton R. *Phtisiologica: On a treatise of consumption*. London: Sam, Smith and Benj. Walford, 1694:202-203.
- Lasegue EC. De l'anorexie hysterique. *Arch Gen Med*, 1873; 21:385-403. Translation: On hysterical anorexia. *Med Times & Gaz*, 1873; 2:265-266, 367-369. New York: International University Press, 1964; 104-31.
- Gull WW. Anorexia nervosa. Kaufman MR, Heiman M, ed. *Evolution of psychosomatic concepts*. New York: International University Press, 1964; 104-31.
- Gull WW. Anorexia nervosa. Kaufman MR, Heiman M, ed. *Evolution of psychosomatic concepts*. New York: International Universities Press, 1964; 132-40.
- Collins WJ. Anorexia nervosa. *Lancet*, 1894; 1:202-3.
- Marshall CF. A fatal case of anorexia nervosa. *Lancet*, 1895; 1:817.
- Botella C, Botella S. Two cases of anorexia nervosa. *J Child Psychotherapy (Paris)*, 1978; 4:119-29.
- Blitzer JR, Rollins N, Blackwell A. Children who starve themselves: Anorexia nervosa. *Psychosomatic Medicine*, 1961; 23:369-83.
- Brown SB. A retrospective study of six cases of primary anorexia nervosa in young females. Unpublished dissertation, Institute for Clinical Social Work, 1983.
- Rose JA. Eating inhibition in children in relation to anorexia nervosa. *Psychosomatic Medicine*, 1943; 5:117-24.
- Sherman JC, Sherman M. Birth fantasy in a young child. *Psychoanalytic Review*, 1929; 16:408-19.
- Nemiah J. Anorexia nervosa—a clinical psychiatric study. *Medicine (Baltimore)*, 1950; 19:225-68.
- Comby J. Anorexie nerveuse. *Arch Med Enf*, 1909, 12:926.
- Comby J. Anorexie nerveuse chez les nourissons. *Arch med Enf*, 1912; 15:697.
- Comby J. Anorexia infantile et juvenile. *Press Med*, 1927; 1:40.
- Lutz J. Kombination einer neurose der pubertatsmagersucht mit katatonerartigen zustandschild. *A Kinderpsychiat*, 1947-48; 14:68.
- Ruegg M. Zum psycheschen bild der pubertatsmagersucht. Discussion Zurich, 1950. In Thoma H. *Anorexia nervosa*. New York; International University Press, 1967.
- Trefzer C. Hungerstreik in Kindersalter. Discussion. Zurich, 1939. In Thoma H. *Anorexia nervosa*, New York: International University Press, 1967.
- Wissler H. Die pubertatsmagersucht. *Monatschrift Kinderheilklinik*, 1941; 85:172.
- Milner MA. A suicidal symptom in a child of three. *International J Psychoanalysis*, 1944; 25:53-61.
- Rank B, Putnam MC, Rochlin G. The significance of the "emotional climate" in early feeding difficulties. *Psychosomatic Medicine*, 1943; 5:117-24.
- Irwin M. Early onset of anorexia nervosa. *Southern Medical Journal*, May, 1984; 77:5.
- Anyan WR Jr, Schowalter JE. A comprehensive approach to anorexia nervosa. *Child Psychiatry*, 1983; 22:122-7.
- Galdston R. Mind over matter. Observations on 50 patients hospitalized with anorexia nervosa. *J Am Academy of Child Psychiatry*, 1972; 11:114-31.
- Goetz PL, Succop RA, Reinhart JB, Miller A. Anorexia nervosa in children. A follow-up study. *Am J Orthopsychiatry*, 1977; 47:597-603.
- Hall A. Family structure and relationships of 50 female anorexia nervosa patients. *Australian and New Zealand Journal of Psychiatry*, 1978; 12:263-8.
- Halmi KA. Anorexia nervosa: Demographic and clinical features in 94 cases. *Psychosomatic Medicine*, 1974; 36:18-26.
- Halmi KA, Casper RC, Eckert ED, Goldberg SC, Davis JM. Unique features associated with age of onset of anorexia nervosa. Elsevier North-Holland Biomedical Press. *Psychiatry Research*, 1979; 1:209-15.
- Pugliese MT, Lifshitz F, Grad G, Fort P, Marks-Katz M. Fear of obesity: A cause of short stature and delayed puberty. *N Engl Med*, 1983; 9:513-8.
- English OS, Pearson GHJ. *Common neurosis of children and adults*. New York: Norton, 1937; 82-100.
- Forchheimer F. Anorexia nervosa in children. Pediatrics half a century ago. *Archives of Pediatrics*, 1907; 24:801-10.
- Lesser LI, Ashenden B, Debuskey M, Eisenberg L. Anorexia nervosa in children. *Am J of Orthopsychiatry*, 1960; 30:572-80.
- Mintz IL. Fear of being fat: The treatment of anorexia nervosa and bulimia. In: Philip C, ed. *Anorexia ner-*

- vosa and bulimia in males. New York: Wilson Aranson, 1983; 264-77.
39. Reinhart JB, Kenna MD, Succop RA. Anorexia nervosa in children: Outpatient management. *J Am Academy Child Psychiatry*, 1972; 11:114-31.
 40. Shafii M, Salguero C, Finch SM. Psychopathology and treatments of anorexia nervosa in latency-age siblings. Anorexia a deux. *J Am Child Psychiatry*, 1975; 14:617-32.
 41. Sperling M. Psychosomatic disorders in childhood: Case histories of anorexia nervosa. New York, London: Jason Aaronson, 1978; 142-149.
 42. Sylvester E. Analysis of psychogenic anorexia and vomiting in a four-year-old-child. *Psychoanalytic Study of the Child*. New York: International Universities Press, 1945; 1:167-187.
 43. Tridon P, Crombez Y, Marchand P, Prot F, Vidailhet C. L'anorexie mentale du garçon, *Acta Paedopsychiat*, Nancy, France, 1983; 49:311-9.
 44. Warren W. A study of anorexia nervosa in young girls. *J Child Psychol Psychiat*, 1968; 9:27-40.
 45. Weman DS, Katz J. Anorexia nervosa in a pair of identical twins. *Child Psychiatry*, 1975; 14:4.
 46. Theander S. Anorexia nervosa: A psychiatric investigation of 94 female cases. *Acta Psychiat Scand (Suppl)*, 1970; 214:1-194.
 47. Morgan HG, Russell GFM. Value of family background and clinical features as predictors of long-term outcome in anorexia nervosa: Four year follow-up study of 42 patients. *Psychol Med*, 1975; 5:355-71.
 48. Casper RC, Davos JM. On the course of anorexia nervosa. *Am J Psychiatry*, 1977; 134:974-8.
 49. Bruch H. Eating disorders. New York: Basic Books, 1973; 274-286.
 50. Kashani J. Current perspectives in childhood depression: An overview. *Am J of Psych*, 1981; 138(2): 143-153.
 51. Sours GA. The primary anorexia nervosa syndrome. In Noshpitz JD, ed. *Basic handbook of child psychiatry*. New York: Basic Books, 1979; 2:568-580.
 52. Piaget J. The child's conception of the world. New Jersey: Littlefield, Adams, 1975;1-33.
 53. Erikson EH. *Childhood and society*, second edition. New York; WW Norton, 1963;247-274.
 54. Phillips LS. Nutrition, metabolism and growth. In: Daughady WH, ed. *Endocrine control of growth*. New York: Elsevier Press, 1981: 121-73.
 55. Lucas AR. Undernutrition and growth. *N Engl J Med*, 1983; 309:550-1.
 56. Jacobs BW, Isaacs S. Pre-pubertal anorexia: A retrospective controlled study. *J Child Psychol Psychiat*, 1985; 27:237-250.

