

## Contribution of social and family factors in anorexia nervosa

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### ABSTRACT

**Background:** Anorexia nervosa is probably the most substantial eating disorder, with basically unknown causes, centered on psychological factors and affected by many social, biological and cultural ones. The **aim** of this study was to emerge the complex issues regarding the treatment, the early intervention and the prevention of the anorexia nervosa.

The **method** of this study included a search of the literature in several databases (Medline, EMBASE and CINAHL) to identify articles related to anorexia nervosa. **Results:** Patients with anorexia nervosa develop a refusal in ingestion of food, maintaining a distorted self-perception of their body, considering themselves as overweighed. The diagnosis even though is made according international established criteria, varies among the patients taking into consideration additional factors like family and social environment. As the patients refuse to admit the seriousness of their condition, they seek for medical assistance when disorders appear in vital organs, due to de-nutrition. In most cases hospitalization is necessary and includes a suitable diet program and medication treatment.

**Conclusions:** Psychological therapy is a basic part of the treatment, in long-term basis and is employed by behavior therapy and the patient's support. Advising the public and especially parents with children in adolescence, where usually anorexia nervosa occurs, is necessary as the prevention and the early diagnosis is the best treatment.

**Keywords:** Anorexia nervosa, treatment, prevention.

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### INTRODUCTION

Disorders in food ingestion have raised the interest of scientists the

last years due to the constantly increased number, mainly of women, that report

severe behavioral problems regarding the food. Two clinical syndromes appear in adolescent and adult age: Anorexia Nervosa and Bulimia nervosa.<sup>1</sup>

Anorexia nervosa appears at a rate of 80-85%, in young women at the age of 12-25 years old, in the middle and upper socio-economic status, in whose profession a good appearance and thinness are considered as a professional and especially desirable requirement, while the small male percentage that suffer from anorexia nervosa with compulsive exercising.<sup>2,3</sup> Although anorexia nervosa is described as primary, many patients may suffer from medical disorders, psychosis, neurosis, personality disorders and depressive inclination with lack of emotional expression.<sup>4</sup>

Anorexia nervosa is characterized by severe and serious disorders of self-perception of their body and the determined pursuit of thinness.<sup>5</sup> It was described for the first time by Morton in 1689, and was a subject of study in the middle of last century, as a form of hysteria. At first the disorder was described as a hereditary abnormality of the central neurological system that appears only to young females<sup>6</sup>. In 1883 Huchard established the term "anorexia nervosa" and Freud (1895) suggested that anorexia is associated with

melancholy and usually appears to sexual immature females.<sup>7</sup>

Anorexia nervosa is more commonly appeared during the recent decades comparing with former ones, and reported in females in preadolescence age and males. Epidemiological data report that eating disorders climb up to 4% in adolescent females and anorexia nervosa is estimated that appears at 0.5-1% in the same group. It occurs 10-20 times more in females than in males and mainly at developed countries, (western countries).<sup>8</sup>

Study results show that anorectic children come from families that have lost a member, they have been abused.<sup>9</sup> Respective studies reach the conclusion that the 1/3 of the anorectic patients have been sexual abused during childhood and they seem to have common characteristics with sexual abused victims, like low self-esteem, feelings of shame and a negative attitude towards their body and the opposite sex.<sup>4</sup>

Although the mental, social and physical consequences are particular serious, the scientific studies are few and there is a considerable delay in elaboration of proof based approaches, especially for children and adolescents, in spite the fact that eating disorders occur to this age groups.<sup>10-12</sup>

The social conventions and the emphasis to external appearance, that influences mainly young people, are factors associated with eating disorders in addition with advertisement and the contribution of mass media projecting anorectic models as the only way to success, the non-acceptance of other values like educational, cultural, social enlarge the problem. The modern society enervates family bonds and reduces the time spent between parents and children, setting new priorities, altered from those of previous generations.

Purpose of this study is to highlight the complex issues concerning the treatment, the early intervention and the prevention of the anorexia nervosa.

### *Etiology of anorexia nervosa and associated factors*

The causes of anorexia nervosa are multi factored and there are many relative theories from the scientific community. It is supported that the disorder is caused by a coalescence of biological, social-cultural and psychological - psychical factors. There also the view that the causes of anorexia nervosa are only psychical or that there is no clear evidence regarding the exact pathogenesis that induces the disorder. But all scientists agree at the significant role of the family and particularly the

mother associated with the occurrence of the disorder to children and especially to adolescent females.<sup>13</sup>

### *Psychical theory*

According to Bruch (1982) the psychical factors associated with the appearance of the disorder are:

1. Adolescent crisis and new experiences, as inclinatory factors
2. Raising a child that is only ostensibly "normal". They usually hide behaviors with lack of recognition, enhancement and confirmation of child's abilities.
3. The preponderant psychological mechanism, which is the complete control of the body, as an effort to maintain a level the dominance over their selves.<sup>14</sup>

### *Social-Psychological factors*

Many scientists ascribe the disorder to psychological and social mechanisms. They believe that anorexia nervosa seems to be a reaction to the demands of adolescence for more independence and increased social and sexual activity. In a way, patients through the disorder replace the normal adolescent quests with the constant concern of food and control of their body weight. They report that there are troubled relationships between parents and the anorectic children try to draw their attention. In patients' family history are mentioned

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cases of depression, alcoholism, and eating disorders.<sup>15</sup>

### *Biological factors*

1. Heredity: Anorexia nervosa is reported in significantly higher frequency among individuals that are biological related to anorectic patients and in genetic level there are evidence that it is occurred at a rate of 50% between identical twins and, at rate of 10% in fraternal twins or twin sisters.

2. Neurochemical factors. Biological theories are focused in the function of hypothalamus, where, based on observations and clinical results, there is a protogenic dysfunction. Over-secretion of cortisol is detected to malnutrition and depression. There are increased corticotropin CRG levels and it is released to cerebrospinal fluid of these patients. Also amenorrhea is reported before the occurrence of weight loss. An increased level of ceretonin in brain reduces the appetite, and leptin seems to have an important roll in regulation of fat sites in the body, and as a result to the regulation of appetite. Anorexics have lower leptin levels in blood that are increased with the temperature rise.<sup>16,17</sup>

### *Theory of unknown etiology*

Group of scientists support the view that anorexia nervosa is an open question in medicine and there is no psychiatric theory to support sufficiently by its own

the causes of anorexia nervosa. They believe that the importance of psychological, social and biological factors varies to each individual. Biological factors may be associated with hormonal changes that occur during adolescence. Psychological mechanisms may be involved in the changes in personality and behavior during the human life and social factors may be related with the idealization of thinness, that plays a powerful role in our culture.<sup>18,19</sup>

### **Beginning and probability of prognosis of anorexia nervosa**

Few data are available by researchers regarding the onset of the disorder. 85% of the incidence is detected between 13-20 years of age, with adolescence being the most critical period of lifetime, and the probability of developing the disorder after the age of 40 almost non-existent, also the beginning of the disorder is often associated with a stressful event. The prognosis of the disorder is extremely difficult to be defined, as it is influenced by the structure of personality. Persons that are hysteric, with intense obsessions, and a bad background of maternal relationship, are very likely to develop the disorder in future. Also individuals with family history of anorexia nervosa,

or with medical history of serious diseases are at the same risk.<sup>20,21</sup>

## **Progress and prognosis of anorexia nervosa**

Anorexic patients ask for medical advice long after the appearance of very serious symptoms, many of them unwillingly, after their family encouragement. The progress of the disease varies, from immediate recovery after the treatment, to unsteady progress of weight recovery with recurrences, and to constant fatal aggravation. Studies report that the 1/3 of the patients is cured, at the 1/3 there health condition is improved and at 1/3 the disorder becomes chronic.<sup>22</sup>

Generally the prognosis is not good. The extended duration of the disease, depression, frequent vomits and the excess weight loss are negative prognostic points, including hospitalized treatment, sensitivity to various diseases, and family with intense psychopathology.<sup>23</sup> As positive prognostic points are considered the reduction of stress, a strongly supportive family and friendly environment, and also strongly structured personality.<sup>3</sup>

The mortality of the hospitalized patients is more 10% due to either excess weight loss or inanition or to suicide attempts.<sup>24</sup>

The causes of death in patients with

anorexia nervosa are discriminated to medical complications of the disorder, including hypokalemia, bronchopneumonia, cardiac arrhythmia, coronary disease, pancreatitis, necrotic colitis and suicides.<sup>25</sup>

## **Symptoms and behavior characteristics**

The self-enforcement starvation of the patients, who are not having disorders in appetite, and are visibly obvious, causes the symptoms of the disorder by behavioral and physical changes.

### *Behavior of anorexic*

Anorexic persons have a disorder image of the normal weight and shape of the body and they consciously chose ways for weight loss that gradually lead to dying. They seem to have obsessive characteristics, high sense of duty and morality and an inclination to independence. At the beginning they are intensively busy preparing their meals, and they avoid high calorie foods, weight at least four times daily, and follow strict exhausting diets.<sup>26</sup> After a while they are entering the second phase, where their behavior constantly changes, the family begin to realize the problem, although patients still deny it and refuse any conversation about it, as a result there are daily conflicts within family members, and gradually they become

isolated. Their interest for any kind of activity is lost and reduced, their ability to concentrate is reduced as well as their sexual activity. The patients adopt a contrary behavior, obstinacy, laziness, emotional instability and detachedness.<sup>27</sup>

#### *Physical symptoms*

Abrupt weight loss at a rate of 25% of the normal body weight, initially in males causes delay in stature and pubescence and in female's amenorrhea, and in both sexes reduced thyroid metabolism. In continue occurs the deterioration of body's shape, depression, intense xeroderma, intolerance of high and low temperature. Gradually head's hairs are getting thinner and the presence of lanugo (hair that looks like neonatal lint) becomes obvious on face, shoulder blade and hands as well as inflammation and inflammation of salivary glands. As organism tries to adapt with low intake of energy, appears a variety of organic disorders, such as bradycardia, arrhythmias and decrease of arterial blood pressure having as result periods of hypotension. It exceeds anemia, dental problems, hands' and legs' formicary, inflexibility, stress and upheaval, insomnia and early awakening. During laboratory testing the endocrine disorders become obvious by disorders at hormonal prices (Table 1).<sup>30-32</sup>

#### **Diagnosis of anorexia nervosa**

The patents with anorexia nervosa seem to have a certain behavior regarding the shape and weight of their body. Diagnosis of anorexia nervosa is based on diagnostic criteria established by American Psychiatric Association (DSM-IV) that are in valid worldwide and are referred to psychopathological symptoms and signs and to evidence of endocrinologic disorders (Table 2).<sup>33</sup>

#### **Treatment approaches of anorexia nervosa**

There are two main aims in the treatment of anorexia nervosa. The first is to rehabilitate the state of nutrition. For anorexic patients this means to regain the body weight to normal levels. The second aim is to alter the pathological behavior of eating, so that the body weight is preserved to normal limits and to control the use of laxatives and other pathological behaviours.<sup>34</sup>

Usually anorexia is treated in an outpatient setting. Evidence for hospitalization is a severe weight loss and emaciation, hypotension, hypothermia, electrolyte disorders, presence of suicidal ideation or psychosis, and the failure outpatient treatment.

The treatment approach is a

combination of behavior therapy and supportive psychotherapy.<sup>35,36</sup> It is very important the approaching way of the person, in order to develop positive behavior. This includes the learning of behavior, and then follows de learning and relearning, without seeking the causes of the previous pathologic behavior. The aim of this behavior treatment is to restore the normal way of eating.<sup>37</sup>

In hospitalized treatment a strict protocol is followed to anorectic patients in order to gain a certain weigh daily, regarding the intakes and outtakes of calories, and there is a close monitoring till 2 hour after the meal, to avoid induced vomiting to patients with excess weight loss.

## Conclusions

Although there is a significant progress in treatment of anorexia nervosa, the conclusions, of the few studies during the last decade, have showed a wackiness in research, as it seems that the ways of developing prevention and treatment programs of anorexia nervosa are not connected with the risk factors and the necessity of finding a treatment approach that combines the traditional methods of therapy with new ones, and this due to limited knowledge.

The modern social models idealize women with low body weight, with result the increasing number of incidents of anorexia nervosa, especially among adolescents. Long-term aim should be the reducing effects of eating disorders and the associated risk factors.

Scientists emphasize the need of encouraging the patients to seek therapy and to treat them with understanding, while the goals and limits of treatment are attainable. Also, they suggest specific instructions regarding the level of the needed treatment to psychological and behavioral issues that characterize anorexia nervosa. All the medical professionals should realize that the recovery of the disorder is a slow procedure.

The financial cost for this kind of disorders is high and onerous for the families of the patients. Beside the long period of time, there are many variations in the force of the disease, and many times hospitalization is necessary and treatment is common to engage a multidisciplinary team of professionals for the patients and their families.

Anorexia nervosa is a psychiatric disease with high mortality rates in young patients. It is need the state to organize units for patients with eating disorders and to fully cover treatment and

hospitalization. The public information is essential and especially to parents with adolescent children, as we believe that prevention and early recognition of the problem are better than treatment.

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ANNEX

Table 1: Abnormalities in Anorexia Nervosa

FUNCTIONAL SYSTEM	FINDINGS
Endocrine - metabolic	Normal thyroid gland
	Normal TSH*
	Decreased T <sub>3</sub> and BMR
	Increased serum cholesterol
	Normal pelvic examination results
	Decreased FSH, LH, response to LHRH
	Decreased estrogen production
	Increased cortisol and urine free cortisol
	ACTH normal or increased
	Decreased suppressibility by dexamethasone
	Decreased serum insulin and RBC insulin binding GTT flat or diabetic
	Salt and water balance maybe abnormal
	Deficient ADH
	Normal or increased serum GH
	Decreased GH response to glucagon, propranolol, TRH and levodopa
Decreased, increased or normal serum Ca <sup>++</sup> and PTH	
Hematologic	Anemias
	Leucopenia
	Thrombocytopenia
Miscellaneous	Increased ESR (mild)
	Decreased serum albumin
	Changes in serum globulins

**Table 2. Diagnostic criteria DSM-IV for anorexia nervosa (APA, 1996)**

DIAGNOSTIC CRITERIA	DETERMINATION
<p>The refusal to maintain body weight at or above a though the person is underweight</p> <p>Excessive fear of weight's increase or fear of fat although the individual is thin</p> <p>Grossly distorted self-perception regarding the weight or the shape of the body.</p> <p>Amenorrhea, for at least three consecutive periods.</p>	<p>A) Restrictive type</p> <p>B) Hyper-appetite/ Purgative type</p>