ORIGINAL RESEARCH PAPER

Family relations and eating disorders. The effectiveness of an integrated approach in the treatment of anorexia and bulimia in teenagers: Results of a case-control systemic research

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ABSTRACT. *This article presents the results of a broader clinical research into the effectiveness of integrated treatments in teenage eating disorders, carried out at the Complex Operative Unit of Psychotherapy (Unità Operativa Complessa or U.O.C.) of the Department of Psychiatric Sciences and Psychological Medicine in collaboration with the Department of Neuropsychiatric Science for Child Development (Dipartimento di Scienze Neuropsichiatriche dell'Età Evolutiva), both at the "La Sapienza" University of Rome. The hypothesis of this research project is that in diagnosticable situations such as anorexia or bulimia, an integrated and multidisciplinary treatment, which combines medical-nutritional interventions and family psychotherapy, allows better results than a single kind of treatment, which is the usual medical-nutritional intervention supported by psychiatric counselling. Twenty-eight cases (16 of bulimia and 12 of anorexia) were selected and then subdivided, with a randomized distribution, into two* (experimental and control) *homogeneous groups of 14 patients. The grouping variables were the diagnosis, the disorder's seriousness and duration, BMI, gender, age, family composition and social status. The variables which have been examined in this article are the clinical parameters, which were valuated in accordance with the DSM IV-TR criteria, and relational parameters which were explored through the use of the W.F.T. Test (Wiltwyck Family Tasks). These parameters were tested at beginning as well as at the end of the therapies, in both the* experimental *group and the* control *group. Statistical analysis has shown that the experimental group, which was followed with the integrated treatment, experienced a significant improvement of the parameters as related to dysfunctional family interaction modalities, and that this improvement was correlated to the positive evolution of the clinical parameters. This improvement was not present or not of the same degree in the control group. The results, moreover, demonstrate the effectiveness of an integrated systemic treatment based on a complex approach compared to a reductionist approach.*

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Key words:
Anorexia, bulimia, family therapy, integrated systemic approach, W.F.T. Test (Wyltwick Family tasks), relational dynamics.

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EPIDEMIOLOGY

Recent years have witnessed a notable increase in Eating Disorders in Western countries, so much as to progressively delineate the characteristics of a real and genuine "social epidemic" (1). Epidemiological studies show that eating disorders in Italy involve approximately two million young people: 10 out of 100 teenagers; and of these, 1-2 present full-blown and more serious forms such as Anorexia and Bulimia while the others displayed transitory and incomplete clinical manifestations (2). According to data updated as of November 2006, the prevalence of Anorexia and Bulimia in Italy stands respectively at 0.2-0.8% and 1-5%, in line with that found in many other countries (National Centre of Epidemiology, Surveillance and Promotion of Health, 2006). Indeed, according to the studies conducted by Hoek and Van Hoeken (3), the prevalence rate of Anorexia in the feminine population is equal to 0.3% and has an incidence rate which should be considered as rising among women between 15

and 24 years of age, compared to young women in the previous century, of at least 8 per 100,000 people per year. The prevalence of Bulimia among young females instead, stands at a rate of 1% while the incidence is equal to 12 per 100,000 people per year. The epidemiological rates provided by Hoek and Van Hoeken (3) have proved to be fairly consistent with those provided by the APA concerning the situation in the United States, with the prevalence of anorexia between 0.5 and 3.7% in the female population and between 1.1 and 4.2% for Bulimia (4). Notwithstanding an increase of the incidence in a prepubertal age, the age of onset of Anorexia ranges between 15 and 25 years (5), while at same time older age brackets are becoming increasingly affected by bulimia (6). All of the international research concerning the prevalence by age and sex of the population affected by the disorder unanimously indicate a female-male ratio of 9 to 1, with a trend towards an increasing number of male cases combined with an underestimation of the latter (4). As is the case of females, for males as well the age of the onset of anorexia is generally that of the pubertal-adolescent ranging from 12 to 25 years, with a bimodal distribution which displays two very large frequency peaks: the first is at 14.5 years of age and the second at 18 years. These two ages represent two important child development periods: the moment which immediately follows pubertal development and the moment when teenagers need to progressively become autonomous. As regards the two subtypes, no significant differences concerning the onset age have been noted (7-9).

The studies moreover indicate a rise in the incidence of bulimic pathology compared to that of anorexia (10-14) which, together with the frequent symptomatological switching from anorexia into bulimia represents an alarming phenomenon, in as much as the lesser visibility of this eating disorder often entails a serious delay in the diagnosis and its treatment, which favours its chronicity.

The incidence of anorexia, in recent years, seems to have stabilized around the values of 4-8 new cases yearly per 100,000 individuals, whilst that of bulimia appears to be rising and is estimated to be 9-12 new cases a year (15, 16). Mortality from anorexia ranges between 5 and 15% of the cases and represents one of the leading cases of mortality in young females and those suffering from psychiatric illnesses. According to a meta-analysis conducted by Harris and Barraclough (17), Anorexia is the mental disorder which has the highest mortality rate; data coming from the National Center for Epidemiology, Surveillance and Health Promotion and various scientific studies (18) confirm that eating disorders today are the leading cause of death stemming from mental illness in the USA. In the aforementioned study, the SMR (standardized mortality ratio) calculated in their 954 patient sample is equal to 10.5 where the normal population's SMR is equal to 0.71. Moreover, the percentage of patients requiring a treatment which is specifically for an eating disorder still remains very low: 56% for Anorexia cases and only 29% for Bulimia cases. We are likewise witnessing an increase of the tendency toward chronicity (approximately 50%). The difficulty in precisely grasping the spread of eating disorders compared to other illnesses, be they mental or not, lies in the difficulty in standardizing the studies. A further obstacle consists both in the particularity of a disorder whose prevalence in the general population is very low (but which may reach very high rates in specific subpopulations) as well as the tendency of affected people to hide their own disturbance and to avoid, at least for a long initial period, the help of professionals and the possibility of a timely treatment project.

AETIOPATHOGENESIS OF EATING DISORDERS

The scientific community generally agrees upon the interpretation of Eating Disorders as multifactorial aetiology pathologies, i.e. the result of biological, psychological, relational and social influences, which find the "place" and "form" of their appearance in the body: where they converge and integrate in a complex manner (19). Selvini Palazzoli (20) shows how none of the aforementioned components are in and of themselves sufficient to determine the onset of anorexia or bulimia, connoting the Eating Disorders as complex phenomena in which the various components mutually influence each other in a circular way.

Within this epistemological framework we have developed a kind of research based on various observation levels: the *individual* level, in the psychological and somatic dimension and also the *relational* level, through the study of the patients' family systems in their affective, mythic, and interactional dimensions (21-23).

In this article we shall deal with interactional dynamics, which characterize the family as "an interpersonal system governed by relationship rules" (24) which tend to repeat with particular stability, reciprocally influencing family member behaviours. Some family organizations

appear as a matter of fact to be closely linked to the development and maintenance of the anorexic and bulimic symptoms, which may be viewed, therefore, as homeostatic mechanisms carried out to attempt to maintain the family *status quo* in the face of physiological child developmental processes which are however perceived as menacing (25-27).

The best known studies on dysfunctional interactive models are those carried out by Salvador Minuchin et al. in Philadelphia (25) on several families which all shared a psychosomatic symptom. Through the administration of the Wiltwyck Family Tasks Test (28), an instrument which he himself developed in order to be able to investigate the link which exists between symptom and the dysfunctional organization of the family, Minuchin observed a specificity of the family organization, in a specific way vis-à-vis the symptom, in the families of patients affected by psychosomatic pathologies. Again Minuchin defines the family structure, as the "invisible set of functional demands, which organizes the ways in which family members interact" (29). It is therefore within the family structure, and thanks to it, that the functions, roles, and competences of the various members of the family are established and, consequently the relationship rules among them are defined. This holds true also for the "identified patient" role. In these families, as we have also seen in our clinical work, there would appear to be a rigid system of alliances, structured around highly redundant interactive models, which exercises a powerful developmental block.

Minuchin describes four interactive modalities which characterize the "psychosomatic families": enmeshment, overproectiveness, avoidance of conflict, and rigidity, which we shall speak about extensively later on.

FAMILY THERAPY IN THE TREATMENT OF EATING DISORDERS IN TEENAGERS: THE CURRENT STATE OF RESEARCH

Several non controlled observational studies, further confirmed by randomized controlled studies, have for many years now demonstrated the effectiveness of Family Therapy as an elective intervention in the treatment of anorexia in teenagers (30, 31).

In particular, Dare et al. in 1985 elaborated and developed the Maudsley Approach at the Maudsley Institute of London (32-34). During the studies conducted by the Maudsley Hospital team, Family Therapy emerged as the most effective therapy compared to the other individual-oriented psychotherapeutic methods for anorexic teenagers with a recent onset of the illness (less than 3 years duration of chronicity) and who are under 18 years of age, or for anorexic adults whose pathology emerged in their teen years. Individual therapy has shown itself to be more effective for adult patients who suffer from greater chronicity. Other studies in this sense (35) compared the effectiveness of one form of behavioural family systems therapy vs ego-oriented individual therapy, observing that both produced improvements in eating behaviours, humour and introspective capacity, but in the case of family-based therapy, there was a quicker remission of symptoms associated with a greater reduction of family conflicts connected to the sphere of food.

Crisp et al. (36) observed that patients in combined family and individual therapy achieved a greater weight gain and a more stable resolution of the disorder. Lock et al. (37) emphasized the effectiveness of family based therapy in the treatment of prepubertal anorexic patients between 9 and 12 years of age, confirming, in our opinion, the opportunity of intervening in the patients' relationships and family context in order to obtain the resolution of the problem.

The status of research on Bulimia is quite different. The guidelines currently give individual behavioural and cognitive oriented therapy as an elective treatment, although a small number of cases has suggested that Family Therapy can also be a valid treatment in Bulimia situations (38). La Grange et al. (38) presented a case of effectiveness of family-based therapy applied to a bulimic patient, raising the question of the scarcity of the randomized controlled studies on this topic. More recently, La Grange et al. (39) compared the results of treatment of bulimic adolescents with the individual support therapy and with the family therapy, demonstrating a greater effectiveness of the latter from the clinical point of view and a greater rapidity in the remission of bulimic behaviours. Perkins et al. (40), in an exploratory study on which bulimic patients tended to exclude their own parents from the therapeutic process, observed that this occurred in the case of older patients, who had more chronic eating disorder symptoms. These patients exhibited more co-morbid and impulsive behaviours and rated their own mothers as more critical and tending to make them feel guilty. They also displayed a negative approach to the pathology. In our clinical research experience, the integrated systemic approach employed, showed a significant

homogeneity of the results obtained with the anorexic and bulimic patients in relation to the improvement of the clinical parameters correlated with relational ones.

WHICH FAMILY THERAPY AND WHY FAMILY THERAPY?

While all of the studies that we have cited agree upon the usefulness of a therapeutic treatment which involves the family, there are however differences on which types of family-based therapy to adopt.

The Maudsley Team compared the family therapy conducted with the anorexic patient's entire family and those situations in which the parental subsystem and that of the children which includes the anorexic adolescent patients, are seen separately, by the same therapist. In the latter case, the objective was that of guiding the parents in the management of the eating disorder and helping the patients to give a meaning to their own symptom as well as to resolve the difficulties of separation/identification. The team observed a notable improvement of the nutritional and psychological parameters in both the therapeutic modalities; however, it was found that there was a greater effectiveness of the therapy with the entire family as regards psychological change, and on the other hand better results from a symptomatological point of view in the case of the subdivision in subsystems. One exception is represented by the families with high expressed emotions, which gain greater benefits from separate settings.

Some pilot studies have concentrated on the evaluation of Multiple Family Therapy.

Doyen et al. (41) and Cook-Darzens et al. (42, 43) observed that the multi-family approach would appear to have a greater effectiveness compared to that of the single family, when it can be hard to involve families in the therapeutic settings and when there are patients with a high risk of relapse and/or a chronicized pathology. These results would seem rather encouraging and worth delving into more thoroughly. The preliminary results of another two studies (44, 45) indicate that the Multiple Family Therapy entails a lesser risk of relapse in patients who have already had several hospitalizations. Geist et al. (46) observed an analogous efficacy of the two treatments, concluding in favour of the Multiple Family Therapy in virtue of a lesser outlay of economic resources.

Lock et al. (47, 48) conducted studies which focused on the optimal duration of family therapy. These demonstrated a fundamentally equal effectiveness of therapies with a 6 month duration (10 sessions) and therapies with a 12 month duration (20 sessions), which was further confirmed by the follow-up at 3 and a half years from the end of the therapies.

In our clinical experience, we have had the opportunity to observe the therapeutic effectiveness of a systemic-relational approach with the families of patients with anorexic and bulimic disorders, in which the entire household has been taken on, but in some specific phases of therapeutic work, a division into subsystems has been performed, with the aim of promoting and developing differentiation and identification processes in all members and specifically in the patient.

A final question, and certainly not the least important one, is raised in the literature: why the choice of family therapy?

What meaning can be attributed to the family's involvement in the treatment?

The Maudsley Team, for example, criticises Minuchin's concept of "psychosomatic family", deeming that this overly emphasizes the influence of the family as the "cause" of the patient's illness; they on the contrary assert that the dysfunctional interactive patterns that Minuchin describes in the families, rather than influencing the onset of the disturbance, are the consequence of the family's organization around the patient and his/her illness.

It may be supposed that Minuchin and the supporters of his position object to the criticism levelled by the Maudsley Team that it is limited to switching the punctuation, proposing that it is the illness that is the "cause" of the dysfunctional organization of the family.

We think that by overly focussing on this issue, we run the risk of falling into a logic of "linear causality" and hence of losing a systemic vision, which on the contrary is a vision of "circularity" and "correlation" (49).

Our research has, for this reason, sought to keep the focus of attention precisely on this correlation between family organization and the patient's illness, avoiding any cause-effect imposition; being, therefore, very careful to act in such a way that the family does not end up by feeling criticized and "guilty", but on the contrary perceives itself as an irreplaceable aid for the therapy, an extraordinary therapeutic resource.

It is precisely because we have emphasized this circular correlation between interactive family dynamics and the patient's symptom, that the aim of our research has been that of verifying if the developmental changes of the former are accompanied by the patient's psychological and clinical improvements and *vice versa*.

The research study, which we shall now describe, was developed and implemented in order to carry out this verification.

OUR RESEARCH: HYPOTHESIS

This research, whose general protocol we presented in previous works (21, 23), was conducted in the public services of the University "La Sapienza" of Rome: Complex Operative Unit of Psychotherapy (Unità Operativa Complessa or U.O.C.) of the Department of Psychiatric Sciences and Psychological Medicine, directed by L. Onnis, and the Outpatient Service for Eating Disorders of the Department of Neuropsychiatric Sciences for Child Development, coordinated by M. Cuzzolaro (21-23, 50).

On the basis of the stated theoretical-clinical premises and of the existing literature on the subject (see the previous paragraphs), the hypothesis of our research is that, in situations which have been diagnosed such as anorexia and bulimia (in accordance with DSM IV-TR criteria), an integrated and multidisciplary treatment, which combines family psychotherapy with medical-nutritional interventions, allows the achievement of clinical results which are better than those possible with the usual exclusively medical-nutritional treatment.

The objective, therefore, is that of verifying the correlation between family organization and the patient's psychological, relational, and clinical situation (23).

MATERIALS AND METHODS

Selection of the samples

On the basis of the diagnostic criteria for anorexia and bulimia set out by the DSM IV-TR, a sample of 28 cases was selected (16 of Bulimia and 12 of Anorexia), subdivided, with a randomized distribution, into two homogeneous, *experimental* and *control*, groups of 14 patients each: a) the patients of the *experimental* group were followed with the integrated treatment: medical-nutritional therapy associated with family psycotherapy; b) the patients of the *control* group were treated solely with the medical-nutritional therapy possibly supported by psychiatric counselling.

The entire sample was recruited from non hospitalized patients connected to the Service for Eating Disorders of the Department of Neuropsychiatric Sciences for Child Development coordinated by M. Cuzzolaro.

The *homogeneity criteria* utilized in the selection of the groups for the case-control matching are: diagnosis, seriousness and duration of the disorder, BMI, gender and age of the patient, family composition and social status (see Tables 1 and 2).

TABLE 1
Homogeneity criteria for anorexia control-case matching.

	Experimental	Control
Average age	18	19.3
Gender	F	F
BMI (average)	14.5	14.2
Duration of the disorder (years)	1.8	2.1
Family Composition	4 members	4 members
Social Status	1 upper-middle 3 middle 2 lower-middle	1 upper-middle 3 middle 2 lower-middle

Treatment characteristics

The family therapy model adopted included:
- Minuchin's structural techniques (25);
- The intergenerational perspective, in accordance with the hypothesis of the six phases of Anorexia defined by Selvini Palazzoli (20, 51);
- The exploration of family myths, through the therapeutical use of analogical language, according to the "Family Time Sculptures" model of Onnis et al. (22, 52, 53).

From the medical-nutritional standpoint, the integrated intervention took advantage of several kinds of expertise:
- Internal medicine assessments (in particular gastroenterological and endocrinological);
- Laboratory and instrumental surveys;
- Dietary consultancy, integrated if necessary, by nutritional intervention;
- Psycho/pharmacological treatment (if deemed necessary).

TABLE 2
Homogeneity criteria for bulimia control-case matching.

	Experimental	Control
Average age	20	20.1
Gender	F	F
BMI (average)	19.9	20.2
Duration of the disorder (years)	2.4	2.8
Family Composition	4 members	4 members
Social Status	8 middle	8 middle

Methodology

The evaluation of the results, or the measurement of the changes obtained over the therapeutic process, was performed in accordance with three orders of parameters: *clinical, individual* and *relational*.

a) The *clinical parameters* use the criteria set out by the DSM IV-TR (4) for the diagnosis of anorexia and bulimia. These parameters which are necessary for the inclusion in the two homogeneous experimental and control groups, are more strictly linked to the anorexic and bulimic symptom characteristics.

b) The *individual parameters* refer to patients' eating behaviors characteristics and personality features. The following have been evaluated in this work by means of semistructured interviews and self-administered tests: *E.A.T. (Eating Attitude Test)* which investigates the characteristics of eating behavior (54); *E.D.I. (Eating Disorders Inventory)* which explores the attitude toward food and the psychological profile (55); *S.C.L. 90 (The Symptom Check List)* which investigates the possible presence of psychopathological characteristics in patients (56); *B.U.T. (Body Uneasiness Test)* which studies the relationship with the body image (57).

These instruments have been chosen, first of all, because they are most commonly used at the international level and, obviously, on the basis of their specificity in the exploration of the characteristics of the anorexic and bulimic symptom, as confirmed by literature, as well as by the greater coding simplicity.

In order to assess the individual psychopathological dimensions, two projective tests have been utilized: 1) *Human Figure Drawing Test* by Machover (58); 2) *Draw the Family Test* by Corman (59). Both allow investigating dimensions concerning the personality profile, body image and gender identity.

c) The *relational parameters* refer to the interaction and affective organizational modalities in the family setting. They were evaluated in this work through two tests:

1) A modified Wiltwyck Family Tasks Test designed and employed by Salvador Minuchin in the research referred to in the book "Families of the Slums" (28) and in the study of "psychosomatic families" (25), which, as shall be explained later on, was widely used by the research group coordinated by L. Onnis in a study on families with children affected by intractable or chronic asthma (60-63), by Szapocznik and his team at the Department of Psychiatry and Clinical Psychology of University of Miami (64), by Kopelowicz et al. (65), for the purpose of evaluating the transactional dynamics of families with schizophrenic patients, and, finally, again by Szapocznik in order to study the relationship between patients affected by senile dementia and their caregivers (66). This instrument allows the investigation of dysfunctional interaction patterns and provides them with a quantitive coding.

2) A modified version of Mostwin's Family Life Space (67), which is able to explore the family affective organization as well as the emotional bonds between family members.

These instruments have been chosen because they are able to explore family dynamics both from the standpoint of interactions as well as emotional bonds.

All of the parameters considered, *clinical, individual* and *relational*, were tested at the beginning and at the end of the therapeutic process both in the experimental and in the control group.

The research protocol has foreseen the following operative procedure: the aforesaid battery of self-administered tests and interviews was administered to the whole sample, recruited at the Eating Disorders outpatient Service. Then, at the Complex Operative Unit of Psychotherapy, the drawings tests (Human Figure Drawing Test by Machover and Draw the Family Test by Corman), the modified Wiltwyck Family Tasks Test and the Family Life Space by Mostwin were administrated. After this, the patients were randomly assigned to the two experimental and control groups.

The *experimental* group, again at the Complex Operative Unit of Psychotherapy, was treated with a family therapy process while it was at the same time monitored from a medical-nutritional viewpoint at the Eating Disorder outpatient Service. The family therapy process, which had a frequency of one session every two weeks, lasted for approximately one year (twenty, twenty-five sessions).

The *control* group, instead, was exclusively treated with the medical-nutritional intervention together with psychiatric counseling.

At the end of the treatment, the same tests were administered by the same researchers who had conducted the pre-therapy assessments on both the experimental as well as the control group, but without knowing which of the two groups the patients and their families had been assigned to.

Three follow-ups were foreseen: the first at 6 months, the second at 1 year and the third at 4 years from the end of the treatment.

Given the multiplicity of research aspects, we shall limit ourselves in this paper to presenting

the definitive results concerning the assessment of the developmental changes between *pre-* and *post*-treatment of family interactive modalities (measured through the modified Wiltwyck Family Tasks Test) and to note that these changes correlate with the improvement of the clinical parameters in the experimental sample. We shall evaluate how these data become important in the comparison with the control sample.

The Family Tasks Test (modified W.F.T. Test)

The resolution to investigate the link which exists between the symptom and the dysfunctional organization of the family calls into question complex problems regarding method. This reconceptualization of human behavior in accordance with the systemic perspective renders traditional investigation techniques founded on an inadequate "linear" logic. The same holds true for instruments derived from sociology, whose interview method allows the collection of many "facts" and opinions from family components, but which do not allow researchers to know their relationship experience.

Given these premises, the Wiltwyck Family Task Test (W.F.T), used for the first time by Minuchin in the research referred to in the book "Families of the Slums" (28), and reutilized, in a modified form, in the study on "psychosomatic families" (25), constitutes a fundamental instrument of analysis of the structural characteristics and of the relational dynamics in "psychosomatic families". This test as a matter of fact allows the activation of the family interactions around a concrete problem providing the possibility of observing the family in a rather "natural" situation without the presence/influence of the examiner, thanks to a audio/video registration system which has proved to be of great help in observations, ensuring greater accuracy in the registration of the data for measurement purposes. Minuchin, more precisely, studied a sample of eleven families with anorexic patients, nine families with diabetic children in which a psychosomatic component has been documented, and eleven families with asthmatic children. This study allowed the documentation of the fact that, independently of the psychosomatic symptom presented, on which biological vulnerability evidently has an influence, the family system reveals organizational and interactive patterns in which four typical dysfunctional characteristics were recognizable:

- Enmeshment: the tendency among members to intrude on each other's thoughts, activities and emotions. There is an instability in the boundaries between the generational subsystems, with subsequent confusion of functions and roles. Difficulty in identifying and defining spaces of personal autonomy. All of this makes the development of individuation process painful and difficult.
- Overprotectiveness: the marked tendency of mutual worry, concern and care that the members display especially as regards physical wellbeing. Protective behavior is constantly requested and offered. It is focused on the drama of symptoms, which are often exhibited by patients with "protective" aims.
- Conflict Avoidance: the tendency to not tolerate and to not face conflictual tensions, nor to solve them, with incessant attempts to shift the attention away from conflicts perceived as threatening family integrity. It is often the patient who concentrates all of the deviated tension on himself and his symptomatology. The interactions which develop are aimed at not making the conflict emerge or to keep it under control once it has emerged or finally, to not permit its resolution.
- Rigidity: stereotype or redundant repetition, of the same interaction patterns and relation rules in the difficulty of accepting transformation needed in the life cycle transitions as well as in the attempt to protect an equilibrium which is too fragile to be able to flexibly cope with the requirements of change in the system, and in the individuals over time.

In its original formulation, the use of the Family Tasks (W.F.T.) in scientific areas is rather limited. Currently its adaptions are used, i.e. "The Structural Family Systems Ratings" created by Szapocznik and his team (64), at the Department of Psychiatry and Clinical Psychology of the University of Miami. In this case as well there are three tasks, compared to the five in the work of Minuchin et al., and all three are of a verbal kind. An interesting element of novelty of this work is the substitution of the previous parameters with six new dimensions: Structure, Resonance, Developmental Stage, Identified Patienthood, and Conflict Resolution, deemed to be better able to adjust the instrument to the subjects to whom it has been administered (adolescents with behavior problems).

Another re-elaboration of the Wiltwyck Family Task (W.F.T.) is that used by Kopelowicz et al. (65) for the purpose of evaluating the transactions of families with schizophrenic patients. A later revision (66), is distinguished by a further change of the items for the purpose of studying the relationship between patients affected by dementia and their caregivers.

TABLE 3
Instructions for the execution of the test.

First task: "Suppose you need to prepare, all of you together, a menu for this evening's dinner: a first course, the main course with vegetables, a drink and to finish a dessert. I would like you to talk about it now and decide on this dinner in such a way that everyone will be happy with it".
Second task: "In every family there are grounds for discussion. Now, I would like you to reconstruct together a discussion or an argument, that has, more or less, remained in everyone's mind. You should remember together: who began it, "how" and "where", what was said in this argument, as it went on and how it ended".
Third task: "I would like everyone of you to say what you like and dislike about everyone else's behavior".

A re-elaboration of the Wiltwyck Family Task Test (WFT) was already used by the research group always coordinated by L. Onnis at the Family Therapy Service of the Department of Psychiatry of the University "La Sapienza" of Rome, in collaboration with the Pediatric Clinic of the same university in a study on the families with children suffering from chronic and intractable asthma. In that case, three standardized tasks were given to the case-control sample, compared with the five in the work of Minuchin et al., and all three were of the verbal type, preceded by an interview, which was also standardized (60-63).

The test was used with the same modalities in our most recent research on eating disorders. Indeed, we modified the original family tasks, as it was used by Minuchin et al., in an attempt to adapt them to our culture. In our work, the family is given a precise timing of ten minutes for each task and is directly instructed by the experimenter. The choice of a precise time was considered by us in function of standardization and not as a dependent variable quality, as it instead appears in the work of Minuchin et al. After conducting a brief interview which allows some information on the family to be collected, a series of standardized rules is provided concerning the performance of three tasks. The first task (see Table 3) allows negotiation capacity, rigidity and tolerance of conflict to be assessed; the second task (see Table 3) mainly permits the exploration of the conflict tolerance and the possible presence of triangulation[1]; the third task mainly grasps the redundancy with which alliances within the family are forged (see Table 3). A final aspect to be considered is precisely that of the temporal dimension of the family tasks: the first task is based on a future time, the second is lived in the time which has passed, and the third is experienced at the present time, also proposing an experience of family time which is more open and less linear.

The interviewer explains that he will leave the room while the family performs the task and that the presence of the audio-video recording equipment makes it unnecessary to report the contents of the task done upon his return. As far as the evaluation of the test is concerned, the contents of the video recordings are faithfully transcribed. After having recorded the verbal content of the tasks performed, taking into account the analogical level that accompanies, highlights, and reinforces the digital one, each interaction is numbered, indicating each time "Who is addressing whom".

The coding of the tasks takes place signing all the interactions which define the parameters for the evaluation of family transactions. These evaluation parameters are the general categories which characterize the Minuchin's Psychosomatic Model and are made operational, i.e. translatable into terms which are accessible to quantification, breaking down each one of these into further subcategories and these into more subclasses, in such a way as to obtain the indices which allow, on the one hand, the transposition into appropriate codes and, on the other, measurement (see Table 4).

Processing of the materials

As it has already been stated, the materials obtained by the performance of the three tasks were videorecorded throughout and later coded by raters who were not present when they were carried out, and therefore not aware if the materials in question corresponded to a family belonging to the experimental group or to the control group. The interactive sequences were re-examined in their entirety, transcribed and analyzed through a standard grid, which includes indicators for each one of the dysfunctionality parameters considered. Furthermore, the analogical, non-verbal level, which accompanies, highlights and strengthens the verbal level is also evaluated. The evaluation that this instrument allows, therefore, is of the combined qualitative and quantitative type. It allows the highlighting of dysfunctional family interactions, and the implications and correlations that these may have vis-à-vis to the patient's symptomatic behavior as well as its severity.

[1]An unresolved and non-stated conflict, concerning the marital relationship leads to a "stalemate of the couple". The involvement of the daughter, the future patient, in a preferential relationship with one or the other of the parents transforms the marital dyad into a rigid triad: this has been defined a "Triangulation" process (51).

TABLE 4
Disfunctionality indices and sub-parameters.

ENMESHMENT INDICES	1 - MIND READINGS (Mr): - Mr. A addressed to the one concerned - Mr. B addressed to a third party
	2 - CONTROL OF THE PERSON (CP)
	3 - MEDIATION (Med): - Med 1 mediation is requested to a member - Med 2 a member offers himself as a mediator
OVERPROTECTIVENESS INDICES	1 - OFFER OF PROTECTIVENESS 2 - REQUEST OF PROTECTIVENESS
CONFLICT AVOIDANCE INDICES	1- TYPE A: The conflict does not emerge
	2- TYPE B: The conflict emerges but is suddenly controlled
	3- TYPE C: The conflict is expressed but not resolved
RIGIDITY INDICES	1- SUPPORT (S)
	2- OPPOSITION (O)
	3- RECRUITMENT: - R positive - R negative
	4- REQUEST (A)
	5- COALITION (C)

RESULTS

Statistical analysis of the data

The data were statistically analyzed using the SPSS/Windows program.

- As regards the *relational parameters* measured by the modified Wiltwyck Family Tasks Test, as it can be seen by looking at Table 5, the average scores obtained by families belonging to the experimental group in the post-treatment, all pointed to a reduction in the dysfunction indices compared to the pre-treatment phase. This improvement was not seen in the control group, in which, on the contrary, there was a slight worsening of the dysfunction indices (Table 6).

Both in the experimental group as well as the control group the comparison between pre-and post-treatment was performed using the Wilcoxon test for paired samples.

Table 5 shows that there was a statistically significant decrease ($p<0.05$) in the experimental group for all indicators, except for the conflict avoidance indicator B ($p>0.05$).

As far as the control group is concerned, as it is evident in Table 6, there were no statistically significant differences between the pre-and post-treatment measurements, except for the rigidity indicator, for which a statistically significant increase in the second evaluation was witnessed.

- As regards the possible modification of the *clinical parameters*, this has been obtained following the criteria for the anorexia and bulimia referred to in the DSM IV-TR.

The comparison between the pre- and post-treatment scores was carried out by using the Student's t-test, in order to compare the average of the scores of the pre-test of each group (experimental and control) with the averages recorded in the post-test.

Concerning patients with *anorexia*, the comparison between pre-test and post-test scores in the experimental group highlights the clear change achieved by this group concerning weight ($t=8.81$, $p<0.05$), BMI ($t=9.92$, $p<0.05$) and amenorrhea (Table 7). On the contrary, in the control group, the diagnostic criteria for

TABLE 5
Experimental group.

Indicators	Pre	Post	Z	p
Enmeshment	13.12	5.34	-3.18	<0.05
Offer of protectiveness	4.54	2.17	-2.77	<0.05
Request for protectiveness	3.39	1.66	-2.17	<0.05
Conflict Avoidance A	9.73	3.21	-2.54	<0.05
Conflict Avoidance B	3.04	2.30	-1.38	NS
Conflict Avoidance C	7.27	2.58	-2.06	<0.05
Rigidity	13.99	7.92	-2.04	<0.05

TABLE 6
Control group.

Indicators	Pre	Post	Z	p
Enmeshment	12.18	13.00	-0.38	NS
Offer of protectiveness	3.89	5.09	-1.45	NS
Request for protectiveness	2.43	3.78	-1.82	NS
Conflict Avoidance A	4.76	4.87	-0.43	NS
Conflict Avoidance B	3.92	4.06	-0.54	NS
Conflict Avoidance C	6.91	8.09	-1.84	NS
Rigidity	14.67	17.85	-2.34	<0.05

TABLE 7
Experimental group with anorexia.

	Pre	Post	t-test	p
Weight	39.7	47.7	8.81	<0.05
Body Mass Index	14.5	17.4	9.92	<0.05
Amenorrhea	100%	0%		

TABLE 8
Control group with anorexia.

	Pre	Post	t-test	p
Weight	36.4	35.7	2.22	NS
Body Mass Index	14.2	14.1	0.83	NS
Amenorrhea	100%	100%		

TABLE 9
Experimental group with bulimia.

	Pre	Post
Eating binges	100%	0
Compensatory behaviors	100%	0
The eating binges and compensatory behaviors occur at least twice a week for three months		

TABLE 10
Control group with bulimia.

	Pre	Post
Eating binges	100%	100%
Compensatory behaviors	100%	100%

anorexia remain almost unchanged in the post evaluation (Table 8).

Concerning patients with *bulimia*, the comparison between the two groups underscores extremely different performances between the experimental and the control groups for all diagnostic aspects (Tables 9 and 10). Below the diagnostic characteristics of the DSM IV-TR for bulimia have been set forth: a) recurring eating binges with sensations of losing control during the episode; b) recurring compensatory behaviors in order to avoid the increase of weight; c) the eating binges and the behaviors are verified at least twice a week for three months; d) the levels of self-esteem are unduly influenced by body shape and weight.

The symptomatic manifestations appear to be completely normalized in the experimental group. On the contrary, in the control group, the eating binges and the compensatory behaviors continue to occur with a diagnostically significant frequency and self-esteem levels unduly influenced by body shape and weight.

DISCUSSION OF THE RESULTS

The research results lend themselves to several considerations. First of all they underscore the correlation between family interaction patterns and clinical manifestations of the anorexic or bulimic symptoms. In this sense, these confirm the usefulness and efficiency of family therapy in the treatment of eating disorders previously pointed out by other studies in the literature, but with an additional innovative element: these demonstrate, from a quantitive standpoint, the correlation between family relation dynamics and the patient's psychological and symptomatical aspects, in such a way that an evolutionary modification of the first ones is corresponded by an improvement of the second ones. From a theoretical standpoint, in highlighting this correlation, we have always distanced ourselves from those linear interpretations which see in the family "pathology" the "cause" of the patient's disease or in the latter, following the opposite punctuation, the "cause" of the dysfunctional organization of the family. We want once more to stress that we were inspired by a specifically systemic vision which proposes concepts of "circular causality" and interdependence of family dynamics and clinical manifestations. The therapeutic model chosen is therefore directed at unlocking the interblocks and homeostatic reinforcements between one and the others and restart developmental and change processes: we shall not tire of emphasizing how in these processes the resources put into play by the family are of essential utility for the effectiveness of therapeutic work. Another important aspect which emerged from the results of our research is that the therapeutic work with families has revealed itself to be useful both in situations of anorexia as well as those of bulimia. If, as regards the effectiveness of family therapy in anorexia, there is now a great deal of literature, there are far fewer randomized and controlled studies of family therapy regarding bulimia. Our research seeks to give a contribution in order to try to fill in this gap. The therapeutic model used with the families of bulimic patients was substantially analogous to that adopted with the families of anorexic patients. We have, however, encountered some differences in the evaluation of relational parameters concerning the conflict avoidance interaction models: while in families with anorexia Type A conflict avoidance prevails (the conflict tends not to emerge at all), in families with bulimia Type C conflict avoidance prevails: the apparent conflict is expressed and developed, but never reaches a clear solution (68). This difference appeared interesting to us because we think it can be connected with the quality of the eating disorder: characteristics of bulimic symptoms, far

more compromising compared to the radicalness exhibited by the anorexic refusal, seem as a matter of fact to agree better with an "apparently" less rigid and more functional family organization (69). Surely it would be important to study the matter in greater depth in order to better highlight, including with the utilization of other methodologies, the analogies and differences in the relational dynamics of families with anorexia and bulimia.

We are obviously aware that our study has unavoidable limitations.

One is the limited amounts of the samples, owing to the fact that clinical research is based on a long series of sessions which are not always standardized as regards duration, and consequently requires long execution times. A second limit, for similar reasons, is related to the difficulty of including follow-ups over long periods of time (e.g. 4 years) after the conclusion of the treatments in the research. Further research is consequently desirable which allows these limitations to be overcome.

However, we believe that the need to delve in greater depth through other studies also arises from some new perspectives that have been opened from our research: among these, there are in particular the reciprocal influence of interpersonal relationships at the family level, and emotional experiences and psychological structures at the level of the individual patient. While our therapeutic work has essentially focused on the family, and the areas reserved solely to the patient were rarer and less planned, we were also able to verify important changes in the patients, not only as concerns symptomatic manifestations but also in the psychological experiences of the patient, as regards body image, gender identity, and identification processes. (Owing to space limitations we have not been able to describe these research aspects here. This data can be found in other works - 70-72). Clearly this indicates the importance of the links between relational contexts (especially when it concerns a primary and significant system such as the family) and intrapsychic organization of the individual, between the outer world and inner world. This opens up a fascinating area that requires further investigations and research.

Finally we wish to consider the therapeutic implications that emerge from our research (73). It appears to us that the data which emerge are significant enough to affirm that the family's involvement in the therapeutic work is an essential resource which allows the adolescence's prognosis of anorexia and bulimia to be improved as well as the tendency to chronicity to be prevented.

CONCLUSION

A further question arises however in this concluding section. Once we have evaluated the undeniable effectiveness of family therapy in the treatment of anorexia and bulimia, should we believe that this is the only key to the positive results which have been achieved? We hold that, if we should think this, we shall once again fall into a reductionist view, which enhances the value of only one of the many components involved. The thing that in our opinion has allowed the attainment of these encouraging results is the integration of family psychotherapy and nutritional intervention, the multidisciplinary treatment strategy, articulated at many levels, in order to deal with multifactorial and complex disorders such as anorexia and bulimia.

Bateson (74) defined as a "pattern which connects" that network of circular interinfluences which link together the multiple components of a complex phenomenon. This same connection between the various professionals in the health care system would be desirable in order to ensure that the answers are equally complex and effective. This essential cooperation around shared projects is certainly not an easy target when it involves passing from the restricted and controlled dimensions of clinical research into a broader perspective of health care planning. But it is also one of the unavoidable conditions if we wish to create therapy and prevention projects, able to deal with and defeat one of the most widespread disorders in which the discomfort of our younger generations is expressed.

REFERENCES

1. Gordon RA. Anorexia and Bulimia: The Anatomy of a Social Epidemic. New York, Blackwell, 1990.
2. Dalla Ragione L. La casa delle bambine che non mangiano. Identità e nuovi disturbi del comportamento alimentare. Roma, Il Pensiero Scientifico Editore, 2005.
3. Hoek HW, van Hoeken D. Review of the prevalence and incidence of eating disorders. Int J Eat Disord 2003; 34: 383-96.
4. American Psychiatric Association DSM-IV-TR. Manuale diagnostico e statistico dei disturbi mentali. Text Revision. Milano, Masson, 2001.
5. Lucas AR, Beard CM, O'Fallon WM, et al. 50-year trends in the incidence of anorexia nervosa in Rochester, Minn.: a population-based study. Am J Psychiatry 1991; 148: 917-22.
6. Kohn M, Golden NH. Eating disorders in children and adolescents: epidemiology, diagnosis and treatment. Paediatric Drugs 2001; 3: 91-9.
7. Jeammet P. Le devenir de l'anorexie mentale: une étude prospective de 129 patients evalués au moins 4 ans après leur prèmiere admission. Psychiatrie de l'enfant 1991; 34: 381-442.

8. Jeammet P. Anorexie Boulimie. Les paradoxes de l'adolescence. Paris, Hachette Littératures, 2005.
9. Speranza AM. Aspetti diagnostici e caratteristiche psicopatologiche nei disturbi alimentari: un contributo di ricerca. In: Recalcati M (Ed) Il corpo ostaggio. Teoria e clinica dell'anoressia-bulimia. Roma, Ed. Borla, 1998.
10. Willi J, Giacometti G, Limacher B. Update on the epidemiology of anorexia nervosa in a defined region of Switzerland. Am J Psychiatry 1990; 147: 1514-7.
11. Hall A, Hay P. Eating disorder patient referrals from a population region 1977-1986. Psychol Med 1991; 21: 697-701.
12. Hoek HW, Bartelds AIM, et al. lmpact of urbanization on detection rates of eating disorders. Am J Psychiatry 1995; 152: 1272-8.
13. Turnbull S, Ward A, Treasure J, et al. The demand for eating disorder care: An epidemiological study using the General Practice Research Database. Br J Psychiatry 1996; 169: 705-12.
14. Fairburn CG, Harrison PJ. Eating Disorders. Lancet 2003; 361: 407-16.
15. Cuzzolaro M. Epidemiology of eating disorders. Some remarks of long term trends in incidence and prevalence in western countries. Adv Biosci 1995; 90: 105.
16. Cuzzolaro M. Anoressie e bulimie. Bologna, Ed. Il Mulino, 2004.
17. Harris EC, Barraclough B. Excess mortality of mental disorder. Br J Psychiatry 1998; 173: 11-53.
18. Birmingham CL, Su J, Hlynsky JA, et al. The mortality rate from anorexia nervosa. Int J Eat Disord 2005; 38: 143-6.
19. Onnis L. L'anoressia mentale nell'ottica della complessità: aspetti socio-culturali, psicodinamici, familiari. Attualità in Psicologia 1994; 9: 17-9.
20. Selvini Palazzoli M, Cirillo S, Selvini M, et al. Ragazze anoressiche e bulimiche. Milano, Ed. Raffaello Cortina, 1998.
21. Onnis L, Belcastro M, Benedetti P, et al. Research project on the treatment of anorexia and bulimia: An integrative, multidimensional approach. Eat Weight Disord 1997; 2: 164-8.
22. Onnis L, et al. Il Tempo Sospeso – Anoressia e Bulimia tra Individuo, Famiglia e Società. Milano, Ed. Franco Angeli, 2004.
23. Onnis L, Barbara E, Bernardini M, et al. La terapia sistemica integrata dell'anoressia e bulimia. Un'esperienza in un Servizio Universitario. Psicobiettivo 2005; 3: 85-7.
24. Jackson D. The study of the family. Family Process 1965; 4: 1-20.
25. Minuchin S, Rosman B, Baker C. Psychosomatic Families. Cambridge, MA, Harvard University Press, 1978.
26. Stierlin H, Weber G. Unlocking the family door: a systemic approach to the understanding and treatment of anorexia nervosa. New York, Brunner/Mazel, 1989.
27. Selvini Palazzoli M. Anoressia-bulimia: un'epidemia sociale. Lo schiacciante numero di ruoli nella donna contemporanea. Terapia Familiare 1997; 53: 47-51.
28. Minuchin S, Montalvo B, Guerney B, et al. Families of the Slums. New York, Ed. Basic Books, 1967.
29. Minuchin S. Families and Family Therapy. Cambridge, MA, Harvard University Press, 1976.
30. Hodes M, Eisler I, Dare C. Family therapy for anorexia nervosa in adolescence: a review. J Res Soc Med 1991; 84: 359-62.
31. Le Grange D, Eisler I, Dare C, et al. Evaluation of family treatments in adolescent anorexia nervosa: A pilot study. Int J Eat Disord 1992; 12: 347-57.
32. Russell GF, Szmulker G, Dare C, et al. An evaluation of family therapy in anorexia nervosa and bulimia nervosa. Arch Gen Psychiatry 1987; 44: 1047-56
33. Eisler I, Dare C, Russell GFM, et al. Family and individual therapy in anorexia nervosa. A 5-year follow-up. Arch Gen Psychiatry 1997; 54: 1025-30.
34. Eisler I, Dare C, Hodes M, et al. Family therapy for adolescent anorexia nervosa: The results of a controlled comparison of two family interventions. J Child Psychol Psychiatry 2000; 41: 727-36.
35. Arthur L, Robin D, Siegel PT, et al. Family versus individual therapy for anorexia: Impact on family conflict. Int J Eat Disor 1994; 17: 313-22.
36. Crisp AH, Norton K, Gowers S, et al. A controlled study of the effect of family and individual therapy in anorexia nervosa - a five-year follow-up. Arch Gen Psychiatry 2002; 54: 1025-30.
37. Lock J, Le Grange D, Forsberg S, et al. Is family therapy useful for treating children with anorexia nervosa? Results of a case series. J Am Acad Child Adolesc Psychiatry 2006; 11: 1323-8.
38. Le Grange D, Lock J, Dymek M. Family-based therapy for adolescents with bulimia nervosa. Am J Psychother 2003; 2: 237-51.
39. Le Grange D, Crosby RD, Rathouz PJ, et al. A randomized controlled comparison of family-based treatment and supportive psychotherapy for adolescent bulimia nervosa. Arch Gen Psychiatry 2007; 64: 1049-56.
40. Perkins S, Schmidt U, Eisler I, et al. Why do adolescents with bulimia nervosa choose not to involve their parents in treatment? Eur Child Adolesc Psychiatry 2005; 14: 376-85.
41. Doyen C, Le Heuzey MF, Cook S, et al. Anorexie mentale de l'enfant et de l'adolescente: nouvelles approches thérapeutiques. Archives de Pédiatrie 1999; 6: 1217-23.
42. Cook-Darzens S, Doyen C, Mouren-Siméoni MC. A joint family consultation approach to the initial treatment of early-onset anorexia nervosa in a French pediatric hospital. J Fam Psychother 2001; 12: 55-77.
43. Cook-Darzens S. Thérapie familiale de l'adolescent anorexique. Paris, Ed. Dunod, 2002.
44. Eisler I. The empirical and theoretical base of family therapy and multiple family day therapy for adolescent anorexia nervosa. J Fam Ther 2005; 27: 104-31.
45. Scholz M, Rix M, Scholz K, et al. Multiple family therapy for anorexia nervosa: concepts, experiences and results. J Fam Ther 2005; 27: 132-41.
46. Geist R, Heineman M, Stephens D, et al. Comparison of family therapy and family group psychoeducation in adolescents with anorexia nervosa. Can J Psychiatry 2000; 45: 173-8.
47. Lock J, Agras WS, Bryson S, et al. A comparison of short-and long-term family therapy for adolescent anorexia nervosa. J Am Acad Child Adolesc Psychiatry 2005; 7: 632-9.
48. Lock J, Couturier J, Agras WS. Comparison of long-term outcomes in adolescents with anorexia nervosa treated with family therapy. J Am Acad Child Adolesc Psychiatry 2006; 45: 666-72.
49. Onnis L. Psychosomatic Medicine: toward a new epistemology. Fam Syst Med 1993; 11: 137-48.
50. Onnis L, Mulè AM, Vietri A. Anoressia e bulimia: nuovi indirizzi nell'ottica sistemica. Psicobiettivo 2001; 3: 31-46.

51. Selvini Palazzoli M, Cirillo S, Selvini M, et al. I giochi psicotici nella famiglia. Milano, Ed. Raffaello Cortina, 1988.
52. Onnis L, Di Gennaro A, Cespa G, et al. Le sculture del 'presente' e del 'futuro': un modello di lavoro terapeutico nelle situazioni psicosomatiche. Ecologia della mente 1990; 10: 21-46.
53. Onnis L, Di Gennaro A, Cespa G, et al. Sculpting Present and Future: a Systemic Intervention Model applied to Psychosomatic Families. Fam Process 1994; 33: 341-55.
54. Garner DM, Garfinkel PE. The eating attitudes test: an index of the symptoms of anorexia nervosa. Psychol Med 1979; 2: 273-9.
55. Garner DM, Olmstead M, Polivy J. Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. Int J Eat Disord 1983; 2: 15-34.
56. Derogatis LR. Manual of the SCL-90-R. Baltimore Clinical Psychometric Research, 1983.
57. Cuzzolaro M, Vetrone G, Marano GF, et al. BUT: una nuova scala per la valutazione del disagio relativo all'immagine del corpo. Psichiatria dell'Infanzia e dell'Adolescenza 1999; 66: 417-28.
58. Machover K. Drawing of the Human Figure: A Method of Personality Investigation. In: Anderson HH, Anderson GL (Eds) An Introduction to Projective Techniques and Other Devices for Understanding the Dynamics of Human Behavior. Englewood Cliffs, NJ, Prentice-Hall, 1951.
59. Corman L. The Double in the "Draw a Family" Test. L'Evolution Psychiatrique 1967; 1: 117-47.
60. Onnis L, Tortolani D, Di Gennaro A, et al. Il bambino con disturbi psicosomatici. La famiglia, la domanda, il servizio. Quaderni del CNR n. 19. Roma, Ed. NIS, 1985.
61. Onnis L, Tortolani D, Cancrini L. Systemic research on chronicity factors in infantile asthma. Fam Process 1986; 25: 107-22.
62. Onnis L, Tortolani D, Di Gennaro A, et al. Il bambino asmatico, la famiglia, l'intervento medico: revisione del concetto d'intrattabilità della malattia in una prospettiva sistemica. Ecologia della Mente 1986; 1: 15-36.
63. Onnis L, Di Gennaro A, Cespa G, et al. Prevention of chronicity in psychosomatic illness: a systemic research study into the treatment of childhood asthma. Fam Syst Health 2001; 19: 237-50.
64. Szapocznik J, Rio AT, Hervis OE, et al. Assessing change in family functioning as a result of treatment: The Structural Family Systems Rating Scale (SFSR). J Marital Fam Ther 1991; 17: 295-310.
65. Kopelowicz A, López SR, Zarate R, et al. Expressed emotion and family interactions in Mexican Americans with schizophrenia. J Nerv Mental Dis 2006; 194: 330-4.
66. Szapocznik J, Mitrani VB, Lewis JE, et al. The role of family functioning in the stress process of dementia caregivers: a structural family framework. Gerontologist 2006; 46; 97-105.
67. Mostwin D. Life Space Approach to the Study and Treatment of a Family. Washington DC, The Catholic University of America Press, 1980.
68. Onnis L, Barbara E, Di Giacomo S, et al. Dinamiche relazionali in famiglie con pazienti anoressiche e bulimiche adolescenti: risultati di una ricerca clinica. Ecologia della mente 2009; 2: 169-86.
69. Onnis L. Family and individual in adolescent mental anorexia. An experience of a "suspended time". Human Systems 2011 (in press).
70. Onnis L, Cafagna D, Cherubini R, et al. Il disturbo dell'immagine corporea nell'anoressia e bulimia: risultati di una ricerca. Psicobiettivo 2006; 26: 135-50.
71. Onnis L, Bernardini M, Cafagna D, et al. Identità di genere e processi di identificazione nell'anoressia e bulimia dell'adolescenza. Dati dei tests proiettivi, utilizzati nel quadro di una ricerca sistemica. Infanzia e Adolescenza 2008; 2: 77-86.
72. Onnis L, Bernardini M, D'Onofrio C, et al. L'organizzazione dei legami familiari nell'anoressia e bulimia. Efficacia di un trattamento integrato. Psicobiettivo 2010; 30: 137-57.
73. Onnis L, Barbara E, Bernardini M, et al. L'approccio integrato in anoressia e bulimia: risultati preliminari di una ricerca sistemica. Medicina Psicosomatica 2010; 55: 13-25.
74. Bateson G. Mind and Nature: A Necessary Unity. New York, Dutton, 1979.