Clinical versus Normal Italian Families using FACES IV[1]

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Abstract
A new version of the questionnaire based on his Circumplex Model, the FACES IV has been recently formulated by D.H. Olson. After the Italian version validation, we conducted a study to compare a sample (n = 50) of normal families (families without a current clinical disorder) and a clinical sample (n = 60) of families with a member who has a psychiatric disorder. The clinical sample included families with a person presenting a first psychotic disorder, bulimia and anorexia nervosa. In order to get a comprehensive picture of family functioning, we considered five indicators: a) mean values on six FACES IV scales and communication and satisfaction; b) the percentage of subjects with a ratio score > 1; c) the percentage of families with a mean ratio score > 1; d) the ratio distribution of each family member (father, mother, sons); e) the Parental Agreement.
The comparison between the family profiles the ratio distribution of each family member and the parental agreements show significative differences while the ratios in normal and in all clinical families highlighted little differences In normal families, we found a balance between cohesion and flexibility while, in clinical families, the flexibility dimension and a presence of negative agreements on family functioning appears critical.

Key Words
Faces IV, Family Research, Family Therapy, Normal Family, Eating Disorders, First Psychotic Disorders,

Research has extensively shown the importance of family's influence on health, disease (medical, psychological and psychiatric) and treatment (Bray, Campbell, 2007; Reblin, Uchino, 2008; Craft Rosenberg, Ray Peheler, 2011; National Collaborating Centre for Mental Health, 2011; Scottish Intercollegiate Guidelines Network, 2013; Mc Daniel, Doherty, Hepworth, 2014; National Collaborating Centre for Mental Health, 2014; Galician Health Technology Assessment Agency, 2014).

Together with the view of the family as a balanced system between protective and risk factors, in systemic-relational therapy is increasingly emerging the importance of family resources and the relevance of collaborative, recovery-oriented practices (Loriedo, 2005; Gabbard, 2009; Madsen, 2011; Gehart, 2012; Falloon, 2013; Walsh, 2015; Visani, 2014). Family-focused research can provide greater accountability by attempting to empirically validate the treatment, as well as improving its clinical efficacy and evaluating its outcome effectiveness. The Circumplex Model of Marital and Family Systems, drawn to connect clinical practice with research, is one of the most commonly used models to depict and to describe the family functioning (Olson, Portner, Lavee, 1985; Kouneski, 2000). In fact, the

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Circumplex Model (Olson et al., 1979) represents a framework of particular relevance be-because it can offer: a) a clear and communicable way of thinking the family; b) operational tools to assess and to describe families in research and in clinical settings; c) a guide for the therapist to negotiate goals and to plan treatments. The model identifies the dimensions of *Cohesion*, *Flexibility* and *Communication* as main categories to describe families. As Olson (2008) states: "*Cohesion* is defined as the emotional bonding that family members have toward one another. *Flexibility* is described as the quality and the expression of the leadership and of organization, role relationship, rules of relationships and negotiations in the family. *Communication* is identified as the positive communication skills used in the system of couples and families". Communication, therefore, is a dimension that facilitates cohesion and flexibility.

A core concept of the Circumplex Model is *balance*: each dimension moves in opposite polarities, and the best condition is when there is a balance between them. Specifically, the balance for Cohesion is between separation and connection, while for Flexibility the balance is between stability and change.

The central hypothesis of the model, also called the curvilinear hypothesis, is that balanced levels of Cohesion and Flexibility characterize healthy functioning families, while unhealthy functioning may be due to unbalanced levels of Cohesion and Flexibility.

Over the years, while the basic assumptions remained essentially unchanged, the model has undergone several transformations. In fact, the implementation of the Circumplex Model and its major research instrument, the Family Adaptability and Cohesion Evaluation Scales (FACES), have raised various concerns.

Two main issues represented the major concerns. The linear relationship between Cohesion and Flexibility, suggested to occur since previous versions of the FACES didn't seem to measure extreme values of cohesion and flexibility, and the conceptual definition of cohesion and flexibility (Doherty, Hovander, 1990; Green, Harris, Forte, Robinson, 1991; Barber, Bueller, 1996; Green, Werner, 1996; Werner, Green, Greenberg, Browne, McKenna, 2001).

In order to overcome these issues, the model and its research tool have undergone a number of revisions (Olson et al., 2004; 2008; 2011), of which the FACES IV represents the latest improved version. First, there is a new definition for Flexibility that describes this dimension as "the quality and expression of leadership and organization, role relationships, and relationships rules and negotiations" (Olson, Gorall, 2006). Regarding the FACES IV, the introduction of six new scales (two balanced scales and four unbalanced scales) has made possible to better tap low and high Cohesion (disengaged and enmeshed) and the respective extreme of Flexibility (rigid and chaotic).

A new indicator, the Ratio score, has also been created to test the main hypotheses of the model, assessing how balanced or unbalanced the family system is in terms of cohesion and flexibility. The Ratio score, in fact, compares the relative amount of balanced versus unbalanced characteristics in a family system, using the two balanced scales (cohesion and flexibility) and the four unbalanced scales (disengagement, enmeshment, rigidity and chaotic). Specifically, a Total Ratio was calculated by dividing the average of the two balanced scales (cohesion and flexibility) by the average of the four unbalanced scales (disengagement, enmeshment, rigidity and chaotic). This Total Ratio provides a score of family balanced (healthy) and unbalanced (problematic) factors.

The Cohesion Ratio score is calculated by dividing the balanced cohesion score by the average of the two unbalanced scales (disengaged and enmeshed).

The Flexibility Ratio is calculated by dividing the balanced flexibility score by the average of the two unbalanced scales (rigid and chaotic).

Generally, healthy families will show ratio scores above 1, while problematic families will show ratio scores below 1.

In order to represent the six scales of the FACES-IV as a family pattern, a family profile was developed and the score obtained in the six scales has enabled to develop a new familiar family typology. In this manner, six family types, ranging from the most healthy and happy to the least healthy and most problematic, have been identified: Balanced, Rigidly Cohesive, Midrange, Flexibly Unbalanced, Chaotically Disengaged and Unbalanced. In this context, families can be assessed by the presence of protective factors (balanced cohesion and flexibility) and risk factors (disengagement, enmeshment, rigidity and chaotic). "While the ratio scores are good for research, they tend to hide specific details in the separate scales. Also, the separate scores are more useful for clinical work since they provide more detailed information that can be used clinically" (Olson 2017).

The new scales and the relationship between protective and risk factors, thus, represent a more comprehensive way to assess the family functioning and a guide for the clinical work.

The study

The present study aimed to evaluate the differences in family functioning between normal families and families in which a son presents a psychiatric disorder (clinical families). We wanted to evaluate possible differences, in the functioning style, among clinical families divided according to the diagnostic category. In this regard, we considered three different disorders, a first psychotic disorder, anorexia nervosa and bulimia nervosa and their respective family context.

The study aimed to test the hypotheses that:

- Normal (non-clinical) families will score higher on Balanced cohesion and Balanced flexibility than clinical families.
- Clinical families will score higher on the four Unbalanced scales (disengaged, enmeshed, rigid and chaotic) than Normal families.
- Normal families will higher cohesion ratio, flexibility ratio and total ratio scores compared with clinical families.
- Normal families will have higher scores on communication and satisfaction than clinical families.
- Normal families have higher values in total ratio, in mean total ratio, in cohesion and in flexibility ratio.
- There are differences among clinical families (families with anorexia nervosa, with bulimia nervosa, with first episode of psychosis) compared to normal families and among them in the total ratio, in mean total ratio, in cohesion ratio, in flexibility ratio, in mean values of Faces IV six scales, in communication and satisfaction, in parental agreements.

Method

Participants and data collection

Data for the normal population were collected from students of the Italian Institute for Relational Psychotherapy (IIPR). The Institute is a post-graduate school of systemic-relational psychotherapy and the sample included different Italian socio-cultural realities.

Questionnaires were administered both to the students and their parents. From a total number of 280 questionnaires referring to 117 students, we selected only those including data of both parents and in which the son where unmarried and did not live together with their partner obtaining 150 sheets (50 families). No instructions were given for collecting sheets from any siblings

In all the selected families none of the member had a clinical disorder.

The clinical sample was collected in the Department of Mental Health for young adults with the first episode of psychosis of Rome (Health Agency RM/3) and in the Day Hospital for Eating Disorders of the University of Rome "La Sapienza". The clinical sample included only families in which the son/daughter manifested the clinical disorder, and the questionnaire was administered to patients and to their parents. In this case, we collected 223 questionnaires but we considered only those in which parents were both available (n = 180).

The study of patients with first-episode of psychosis included both individuals who had psychotic symptoms and those who were diagnosed as schizophrenic or with mood disorders.

According to DSM IV-TR, we divided the participants affected by eating disorders in two groups: patients diagnosed with anorexia nervosa and patients with bulimia nervosa.

Composition of the normal and clinical samples

The normal family sample consisted of 50 families (see Table I), where the mean age of the members was respectively: fathers = 62 years, mothers = 58 years and sons = 29 years (see table I). As regards the sex, the sons were predominantly female (F 94% versus M 6%).

Fathers were usually retired (60%), 42% of mothers were still employed while the other 38% were housewives and the remaining 20% were retired. The 40% of sons were employees and the 36% were looking for their first job.

The main level of education among parents was the middle school (56% fathers and 62% mothers), whereas the 98% of sons had a professional/degree course.

Overall, the 88% of mothers and the 82% of fathers lived together with their sons. The 68 % of sons lived with their parents. The 96%
of fathers and the 98% of mothers were married, while the 90% of sons never got married.

The clinical sample was constituted of 60 families with a total number of 180 subjects who participated in the study. In all cases, the person who presented the psychiatric disorder was the son/daughter. In particular, clinical subjects were divided according to the diagnosed disease, in three groups, resulting in 36.7% with first-episode psychosis (FEP), 33.3% anorexia nervosa (AN) and 30% bulimia nervosa (BN).

In the clinical sample, the mean age of the members was: fathers = 55 years, mothers = 52 years and sons = 22 years. As the normal sample, females were prevalent (F 66.7% versus M 31.7%). The 73.3% of fathers and the 48.3% of mothers were employed, while the 56.7% of sons were students. The prevailing level of education of parents, also in this sample, was the middle school (50% fathers, 46.7% mothers). The 90% of sons had also middle school level. The 63.3% of mothers and the 68.3% of fathers together lived with their spouse and sons, while the 90% of sons lived with their parents. Finally, the 83.3% of fathers and mothers were married and the 90% of sons never got married.

Table I Socio-demographics characteristics of Normal and Clinical Families

	Normal Family N 50 (subjects 150)			Clinical Family N 60 (subjects 180)		
	Father	Mother	Son/daughter	Father	Mother	Son/daughter
Sex			M 6% F 94%			M 31.7% F 66.7%
Age (means)	62	58	29	55	52	22
Employement status	38% employee	42% employee	40% employee	73.3% employee	48.3% employee	56.7% students
Education	56 % middle school	62% middle school	98% post-graduate course	50% middle school	46.7% middle school	90% middle school
Relationship	96% married	98% married	90% never get married	83.3% married	81.7% married	95% never get married
Living	82% live with spouse and child	88% lived with spouse and child	68% children live with parents	68.3% live with s pouse and child	63.3% lived with spouse and son	90% children live with parents

Instruments

The Italian adaptation (Loriedo, Di Nuovo, Visani, 2013) of FACES-IV by David H. Olson was used in the present study.

The FACES-IV includes:

- Six scales (two balanced scales and four unbalanced scales) designed to depict both Cohesion and Flexibility at their respective balanced and unbalanced extremes (42 items);

- A Family Communication Scale, developed to measure communication in families (10 items);

- A Family Satisfaction Scale to assess the level of family member's satisfaction with the aspects related to family cohesion and flexibility (10 items).

For the clinical population, the researchers also compiled a sheet with basic clinical information (DSM-IV-TR diagnosis, age onset, disease duration)

Measures and Statistical analysis

Following Olson's suggestions (2010), we considered the Total Ratio score, the Cohesion Ratio and Flexibility Ratio as indicators of the global family functioning.

We assumed a health-oriented family functioning when values were > 1 (i.e. values on balanced scales higher than those on unbalanced ones) and a problematic family functioning when values were ≤ 1 (i.e. values of balanced scales equal to or lower than unbalanced ones).

One of the novelties of Faces IV in the evaluation of family functioning is the introduction of balanced and unbalanced scales and their representation into a family profile through the values of each of the 8 scales (Balanced Cohesion and Flexibility, Disengagement, Enmeshment, Rigidity, Chaotic, Communication and Satisfaction) and we have considered mean values on six FACES IV scales and communication and satisfaction.

To better understand the functioning style of families we introduced a novel indicator, the Parental Agreement (PA): a measure of the agreement between parents. A positive agreement was assigned when both parents evaluated positively the family functioning (ratio > 1); a disagreement when one parent reported a prevalence of dysfunctional aspects (ratio ≤ 1)

while the other evaluated positively the family functioning; a negative agreement was as-assigned when both parents conveyed a dysfunctional family functioning.

In summary, we considered five measures:

- Mean values on six FACES IV scales and communication and satisfaction.
- The percentage of subjects with a Ratio > 1, respectively in Total Ratio, Cohesion Ratio and Flexibility Ratio.
- The presence of families with a Mean Total Ratio (MTR) > 1 across members.
- The distribution of Total Ratio in each family member (father, mother, son).
- The distribution of Parental Agreement.

Data were analyzed using the Statistical Packages for the Social Sciences (SPSS Statistics version 21.0). First, a descriptive analysis was conducted. Then, considering different tests of hypotheses, the chi-square test has been computed for comparison across ratio, t-test has been used to compare scores of normal and clinical sample, while ANOVA was performed for between-groups comparisons. As usual, a type I error (alpha) has been set to 0.05, thus a test is considered significant for $p < 0.05$.

Results

The family profiles

With the introduction of eight rating scales, the Faces IV provides an comprehensive picture of family functioning that can be displayed in family profiles and the profiles obtained from the four samples showed that each sample exhibit a typical singularity (See Figure 1) .

In order to study the differences in the clinical sample, we divided families according to the patient's diagnosis in families with anorexia nervosa (ANF), bulimia nervosa (BNF) and first-episode of psychosis (FEPF).

Figure 1 Family Normal and Clinical Profiles
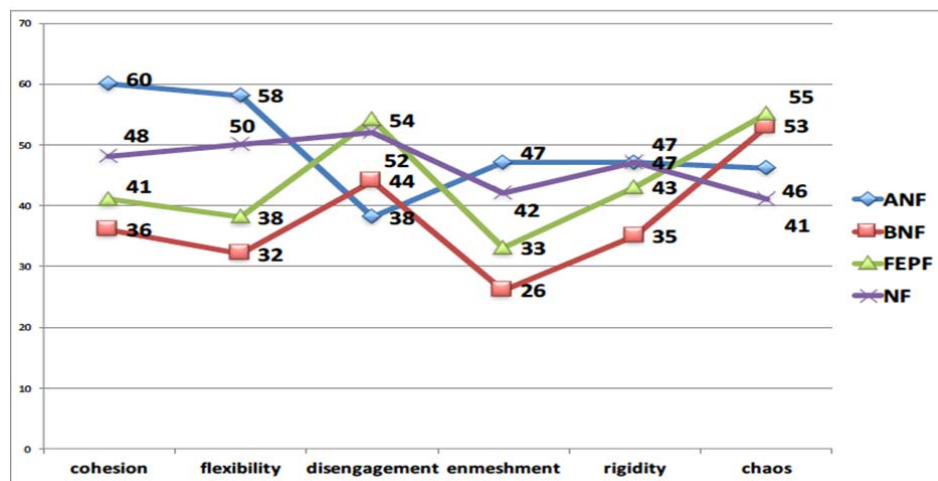
ANF Family with Anorexia Nervosa, BNF family with Bulimia Nervosa, FEPS Family with first episode psychosis, NF Normal family

Normal families demonstrated intermediate values in balanced and unbalanced scales; we could define them as "*intermediate families*". In particular, these families would seem to be

able to provide enough internal unity and an adequate daily-life management; these families appear as balanced that, however, may be vulnerable under distress situations.

Families with AN showed higher values compared to other groups in balanced scales and high values in Rigidity and Enmeshment and chaos; they could be described as "*intermediate balanciated*".

These families have as main characteristic a high degree of emotional closeness but at the same time are unbalanced in the flexibility. They can show a good functioning although they could also have difficulties in rethinking the family organization when occurs situational or developmental changes.

Families with BN e le FEPF showed a *"chaotically disengaged"* profile since they have low values in the balanced scales and high values in Chaotic and Disengagement scales .

The presence of lack of closeness, indicated by high level of Disengagement, combined with the difficulty to change, indicated high degree of Disorganization, would keep in tension such families even under normal conditions. These families can be assumed as problematic.

Assuming the main assumptions of the circumplex model, normal families have in the scales balanced higher values than families with bulimia and at risk of psychosis and lower values than those with anorexia nervosa while in unbalanced scales clinical families show lower values except families with bulimia and at first episode of psychosis in chaotic scale and families with anorexia nervosa in enmeshement and chaotic scale.

In the communication and satisfaction scale the normal families show lower satisfaction values of families with anorexia nervosa and higher than the families with bulimia nervosa and at first episode of psychosis.

Statistically, compared with NF, families with AN show greater cohesion and a lower disengagement, those with BN less cohesion, flexibility, enmeshment and rigidity and greater chaos, while those on FEPF less flexibility and enmeshment and greater chaos. Families BN show significantly lower levels in communication and satisfaction while those with AN and those FEPS do not show major differences (see table II).

Table II Mean values and standard deviation (s.d.) for Cohesion, Flexibility, Disengagement, Enmeshment, Rigidity, Chaos, Communication and Satisfaction scales between normal families and those with anorexia nervosa, bulimia nervosa, and first-episode psychosis

Scale	Normal Family n = 50 (subjects =150)		Family with Anorexia nervosa n = 20 (subjects = 60)		Sig*	Families with Bulimia nervosa n = 18 (subjects = 54)		Sig*	Families with first-episode of psychosis n = 22 (subjects = 66)		Sig*
	Mean	s.d.	Mean	s.d.		Mean	s.d.		Mean	s.d.	
Balanced Cohesion	47.6	27.6	60.4	26.3	0.002	36.3	26.0	0.008	40.9	26.2	0.094
Balanced Flexibility	49.9	30.1	57.9	31.5	0.093	32.3	20.5	<0.001	37.9	23.8	0.002
Disengagement	51.9	28.5	38.4	25.9	0.001	44.2	24.6	0.059	54.0	29.6	0.634
Enmeshment	42.5	27.6	47.0	28.2	0.297	25.6	19.4	<0.001	33.2	26.9	0.021
Rigidity	46.8	28.0	47.2	30.7	0.941	35.2	25.1	0.006	43.5	26.9	0.411
Chaos	41.3	29.5	46.0	24.4	0.237	53.0	27.9	0.011	54.8	28.9	0.002
Communication	33.1	8.6	34.1	7.7	0.429	29.0	5.8	<0.001	32.2	8.5	0.444
Satisfaction	32.5	6.9	33.9	7.9	0.239	30.0	5.9	0.013	30.7	7.3	0.092

* *p* value in t-test computed on percentile scores (significant differences are highlighted in bold.)

Comparing clinical samples among them (see Table III), the families with AN show significant differences with those with BN in cohesion, flexibility, enmeshment, rigidity and in cohesion, flexibility, disengagement and enmeshment with those FEPS while the family with BN and those FEPS appear quite similar showing differences only in the disengagement.

BN families show lower levels of communication and satisfaction than families with AN and communication with those of FEPS, while FEPS families have lower satisfaction values than AN families.

Table III Mean values and standard deviation (s.d.) for Cohesion, Flexibility, Disengagement, Enmeshment, Rigidity, Chaos, Communication and Satisfaction scales between clinical families

Scale	Family with Anorexia nervosa n = 20 (subjects = 60)		Families with Bulimia nervosa n = 18 (subjects = 54)		Sig*	Family with Anorexia nervosa n = 20 (subjects = 60)		Families with risk psychosis n = 22 (subjects = 66)		Sig*	Families with Bulimia nervosa n = 18 (subjects = 54)		Families with first-episode of psychosis n = 22 (subjects = 66)		Sig*
	Mean	s.d.	Mean	s.d.		Mean	s.d.	Mean	s.d.		Mean	s.d.	Mean	s.d.	
Balanced Cohesion	60.4	26.3	36.3	26.0	**<0.001**	60.4	26.3	40.9	26.2	**<0.001**	36.3	26.0	40.9	26.2	0.328
Balanced Flexibility	57.9	31.5	32.3	20.5	**<0.001**	57.9	31.5	37.9	23.8	**<0.001**	32.3	20.5	37.9	23.8	0.170
Disengagement	38.4	25.9	44.2	24.6	0.226	38.4	25.9	54.0	29.6	**0.002**	44.2	24.6	54.0	29.6	**0.049**
Enmeshment	47.0	28.2	25.6	19.4	**<0.001**	47.0	28.2	33.2	26.9	**0.006**	25.6	19.4	33.2	26.9	0.077
Rigidity	47.2	30.7	35.2	25.1	**0.024**	47.2	30.7	43.5	26.9	0.479	35.2	25.1	43.5	26.9	0.084
Chaos	46.0	24.4	53.0	27.9	0.160	46.0	24.4	54.8	28.9	0.068	53.0	27.9	54.8	28.9	0.737
Communication	34.1	7.7	29.0	5.8	**<0.001**	34.1	7.7	32.2	8.5	0.183	29.0	5.8	32.2	8.5	**0.017**
Satisfaction	33.9	7.9	30.0	5.9	**0.004**	33.9	7.9	30.7	7.3	**0.021**	30.0	5.9	30.7	7.3	0.582

* p value in t-test computed on percentile scores (significant differences are highlighted in bold)

Families with anorexia nervosa show significant differences with those with bulimia nervosa and the first psychotic episode while the latter appear quite similar.

The Ratio and the Parental Agreements in the normal and clinical families

When we examined (see table IV) the Total Ratio for every participant in each sample, we observed values > 1 in the 52% of normal families, in the 63.3% of those with anorexia nervosa (ANF), in the 38.9% of those with bulimia nervosa (BNF) and in the 42.4% of those with first-episode of psychosis (FEPF) while when we considered the Mean Total Ratio (MTR) for each family we reported values > 1 in the 64% of normal families, in the 70% in those with anorexia nervosa and in the 50% of cases in those with bulimia and with first-episode of psychosis.

In families with bulimia nervosa and in those with first-episode of psychosis we had a prevalence of family members who presented a problematic position while in families with anorexia nervosa there was a prevalence of positive orientations. In comparison, we observed a substantial balance between positive and problematic evaluations (RT ≤ 1) in normal families.

When we considered the Mean Total Ratio for each family, we noted a greater health orientation in all families indicating how family balance could be modified by the interaction of all members with each other.

From a statistical point of view, however, there are no significant differences between any clinical groups compared to normal families.

Ratio values for Cohesion (Cohesion Ratio > 1; NF = 48,7%, ANF = 63%, BNF = 53%, FEPF = 43,9%); Flexibility Ratio > 1; NF = 59%, ANF = 58%, BNF = 29%, FEPF = 33%) suggested that in normal families, there were a good flexibility and balanced values in cohesion, in those with anorexia nervosa positive values for both scales were observed, in those with bulimia nervosa lower values in flexibility and balanced values in cohesion and in those with first-episode of psychosis there were lower values on average in both scales, especially in the flexibility one.

Statistical analyses reported significant differences in comparison with the normal sample for Flexibility Ratios in bulimia nervosa sample ($p < 0.001$ by chi-square) and in first-episode of psychosis sample ($p < 0.001$ by chi-square).

The distribution of ratio among individual members (Fathers, Mothers, Sons) and the distribution of agreements/disagreements showed a different type of balance s in each clinical sample and in comparison with the normal one.

In normal families, we noted a problematic evaluation of family life of sons and a positive evaluations that proceed from fathers to mothers ($TR > 1$; Fathers = 46%, Mothers = 72%, Sons= 38%). In families with anorexia nervosa all the members had in common a positive evaluation of family life ($TR > 1$; Fathers = 75%, Mothers = 55%, Sons= 60%). In families with bulimia nervosa, fathers maintained a positive evaluation compared to mothers, who expressed a more critical position and sons who reported an intermediate position between those of the parents. ($TR > 1$; Fathers = 50%, Mothers = 27, 8%, Sons = 38,9%). In families with first-episode of psychosis, we observed an increasing trend in problematic evaluations, moving from fathers to sons in this case ($TR > 1$ Fathers = 54%, Mothers = 45%, Sons = 27,3%).

In sum, fathers showed more positive evaluations on family functioning in each clinical sample, whereas mothers reported health-oriented positions in normal family. On their side, the sons appeared to be satisfied with the family functioning in the ANF sample, while they felt a problematic functioning both in the NF and BNF sample and especially in the FEPF.

Statistically, we have found significant differences between normal and clinical families regarding the evaluations of fathers in the ANF sample and regarding those of mothers in the BNF sample ($p < 0.001$ chi-square) as well as in the FEPF sample ($p = 0.031$ chi-square). The evaluations of sons did not show significant differences across the different samples.

All the considered families showed different balance of positive and negative agreements and of disagreements between parents.

Normal families showed a prevalence of disagreements, in ANF there was a dominance of positive agreement, in BNF there was a dominance of negative agreement while in FEPF there was a "U distribution".

In normal families, there was a trend moving from disagreements to negative agreements, where the latter showed the lowest values among all samples. In ANF families, the trend moved from positive agreements to negative ones (PA 45%, D 35%, NA 20%). In BNF families, there was a large number of negative agreements with the lowest values in positive agreements (PA 22%, D 33%, NA 44%). In FEPF families, there was a "U distribution" (PA 45%, D 10% and NA 45%).

We have tested differences between parental agreements in clinical families obtaining significant differences in BNF ones ($p < 0.001$ by chi-square) and FEPF ($p < 0.001$ by chi-square) compared to normal families. On the contrary, there was no statistical difference between the normal and the ANF sample.

Further, we have found significant differences within the three clinical samples: between ANF and BNF ($p = 0.039$ by chi-square), between ANF and FEPF ($p = 0.005$ by chi-square), between BNF and FEPF ($p = 0.012$ by chi-square).

Table IV Total Ratio, Choesion Ratio ,Flexibility Ratio and Agreements between normal families and those with anorexia nervosa, bulimia nervosa, and first-episode psychosis

	Normal Family N 50 (subjects 150)	Family with Anorexia nervosa N 20 (subjects 60)	Sig*	Families with Bulimia nervosa N 18 (subjects 54)	Sig*	Families with first-episode of psychosis N 22 (subjects 66)	Sig*
Total Ratio > 1	52.0%	63.3%	0.136	38.9%	0.098	42.4%	0.195
Total Ratio ≤ 1	48.0%	36.7%		61.1%		57.6%	
Mean Total Ratio > 1	64.0%	70.0%	0.408	50.0%	0.071	50.0%	0.053
Mean Total Ratio ≤ 1	36.0%	30.0%		50.0%		50.0%	
Cohesion Ratio > 1	48.7%	63.3%	0.054	53.7%	0.526	43.9%	0.521
Cohesion Ratio ≤ 1	51.3%	36.7%		46.3%		56.1%	
Flexibility Ratio > 1	59.3%	58.3%	0.894	29.6%	**<0.001**	33.3%	**<0.001**
Flexibility Ratio ≤ 1	40.7%	41.7%		70.4%		66.7%	
Total Father >1	46.0%	75.0%	**0.028**	50.0%	0.771	54.5%	0.504
Total Ratio Father ≤ 1	54.0%	25.0%		50.0%		45.5%	
Total Ratio Mother >1	72.0%	55.0%	0.171	27.8%	**<0.001**	45.5%	**0.031**
Total Ratio Mother ≤ 1	28.0%	45.0%		72.2%		54.5%	
Total Ratio Sons > 1	38.0%	60.0%	0.094	38.9%	0.947	27.3%	0.378
Total Ratio Sons ≤ 1	62.0%	40.0%		61.1%		72.7%	
Positive Agreements	38%	45%		22,2%		45,5%	
Disagreements	48%	35%	0.351	33,3%	**<0.001**	9.1%	**<0.001**
Negative Agreements	14%	20%		44,4%		45,5%	

p of chi-square (significant differences are highlighted in bold)

Looking at the data, in general, we can suggest that we have found greater similarities between normal families and those with anorexia nervosa, while families with the first episode of psychosis or bulimia have shown greater differences.

Discussion

The FACES IV showed its sensitivity by returning specific results both in the family profiles, in the ratio and in the parental agreements.

To the hypotheses of the study, the values in ratios in normal and in all clinical families show lower differences than expected while the data comparing the family profiles, the communication and satisfaction scales, the total ratio in family members and the parental agreements in according to different clinical disorders indicate how there could be significant differences (Koutra, Triliva, Roumeliotaki, Stefanakis, Basta, Lionis, Vgontzas, 2014; Welsh, Tiffin, 2015; Fisher, Bushlow, 2015).

In normal families and in family with anorexia nervosa we can notice a prevalence of positive evaluations on their functioning while those with bulimia nervosa and those with first-episode of psychosis mostly expressed the emergence of problematic aspects.

Normal families appeared with a more precarious balance than expected, those with anorexia nervosa show a particular balance between protective and risk factor, thoses with bulimia nervosa were the most problematic and those with psychotic were problematic as expected.

In general, our results returned a realistic description of normal families in a life cycle of launching, whereas clinical families, appeared more resilient than expected.

The sons, a part those in family with anorexia nervosa, maintained a critical position and the development of a disorder and could destabilize the family balance as well as arouse positive responses. In the clinical sample, the area of emotional bonds seemed balanced, while the flexibility in the negotiations, and the way in which the daily life develops,

appeared more vulnerable. In a similar way, the prevalence of disagreements o the polariza-polarization between positive and negative agreements may point out the presence of a request for a transformation, or alternatively the presence of an impasse in parents as well as the predominance of a critical attitude.

A large percentage of health-oriented members, in normal and clinical population, underlined the family's ability to respond to difficulties and painful situations such as the presence of a disorder in one of its member and suggest evoiding the direct association between the presence of a disorder and the presence of dysfunction in the family.

The differences in the mean values on six FACES IV scales and communication and satisfaction, the distribution of the ratios between the family members, the balance in the agreements suggest different paths to development and different equilibrium between risk and protective factors depending on the emerging clinical problems. All this data, therefore, offer suggestions for treatment and for future studies.

Thinking about the results comes to mind Tolstoj who wrote: "All happy families resemble one another, each unhappy family is unhappy in its own way" we can say that every family lives in its own singularity their strengths and weaknesses

Limitations

Despite our study presents some limitations regarding the distribution of age and sex across the normal sample, in general, all the participants were at the same stage of the lifecycle of the clinical population. Nonetheless, previous studies (unpublished) of our team demonstrated no significant influence of sex. Another limitation could be represented by the small sample of each clinical subgroup but the present study represents a preliminary work.

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