

Is There a Family Profile of Addictive Behaviors? Family Functioning in Anorexia Nervosa and Drug Dependence Disorder

Karyn Doba,^{1,2} Jean-Louis Nandrino,^{1,2} Vicent Dodin,³ and Pascal Antoine^{1,3}

¹ *Research Unit on Cognitive and Affective Sciences, Department of Psychology, University of North of France*

² *Medical and Psychological Clinic, Foundation Health Students from France*

³ *Medical Hospital of Saint-Vincent (GHICL)*

Objectives: The objective of the study was to determine whether family profiles differ between patients with anorexia nervosa or drug dependence disorder. **Method:** 25 families of patients with anorexia nervosa and 26 families of patients with drug dependence disorder responded to a battery of self-reports (Interpersonal Dependence Inventory, Family Adaptability and Cohesion Evaluation Scales, and Family Questionnaire). **Results:** A lack of social self-confidence was observed in patients with anorexia nervosa or drug dependence disorder and their parents. Family disturbances characterized by low cohesion and emotional reliance on another person were observed in the families of patients with anorexia nervosa or drug dependence disorder. **Conclusions:** The present study suggests that there are differing levels of severity of family disturbances among fathers, mothers, and patients in both anorexia nervosa and drug dependence disorder. © 2013 Wiley Periodicals, Inc. *J. Clin. Psychol.* 70:107–117, 2014.

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Several authors have begun to consider anorexia nervosa to be an addictive behavior (Bulik, Sullivan, Kee, Wehzin, & Kaye, 1992; Holderness, Brooks-Gunn, & Warren, 1994) and to suggest that anorexia nervosa and drug dependence disorder display numerous clinical similarities and shared psychopathologic mechanisms (Davis & Claridge, 1998; Gabbard, 2002). The term “addictive behaviors” is an extension of the term normally used to describe drug dependencies to other behaviors that Fenichel (1945) called “dependences without drugs.” An addictive behavior may be defined as a process whereby a behavior is employed in a pattern characterized by recurrent failure to control the behavior and continuation of the behavior despite significant negative consequences (Goodman, 1990).

Several findings show that drug dependence and anorexia nervosa share common processes regarding loss of control and repetitive and compulsive actions (Davis, Katzman, & Kirsh, 1999; Speranza et al., 2012). If anorexia nervosa and drug dependence are different forms of a common, underlying addictive process, there should be a shared etiology concerning family functioning (Doba & Nandrino, 2010; Hodson, Newcomb, Locke, & Goodyear, 2006). Although studies show that anorexia nervosa and drug dependence disorder display numerous psychopathologic similarities, knowledge about their mutually predisposing factors or shared family profiles is scarce.

Recent findings highlight the presence of similarities as well as differences between anorexia nervosa and drug dependence disorder with regard to family functioning during childhood. Mangweth et al. (2005) showed that disturbances in family intimacy differ between individuals with anorexia nervosa and drug dependence disorder. Anorexia nervosa is associated with a more rigid family climate (e.g., family taboos regarding nudity and sexuality) during childhood as compared with drug dependence disorder. Some researchers have observed that sexual or physical abuse predicted anorexia nervosa and drug dependence, and these associations are mediated by impaired, insecure parental bonding (Hodson et al., 2006; Mangweth et al., 2005).

Please address correspondence to: Karyn Doba, Université de Lille 3, Département de Psychologie, Domaine du Pont de Bois, 59653 Villeneuve d'Ascq, France. E-mail: Karyn.doba@univ-lille3.fr

From a family psychology perspective, addictive behaviors are related to an intense fear of separation experienced by the family in response to a lack of interpersonal differentiation in the family system (Doba, Nandrino, Lesne, Leroy, & Pezard, 2008; Knauth, Skowron, & Escobar, 2006). Interpersonal differentiation in the family system refers to the ability to experience intimacy with others and to preserve autonomy in family relationships (Bowen, 1978; Kerr & Bowen, 1988). Accordingly, interpersonal differentiation in the family system reflects the capacity to differentiate the self from others within a close relationship at the level of perceptions, motives, emotions, opinions, and values. A lack of interpersonal differentiation is associated with a high level of emotional reactivity in family relationships, a low level of emotional intimacy and autonomy in the family, and a low level of control of individual behavior in adulthood (Skowron & Dendy, 2004; Skowron & Friedlander, 1998).

Family disturbances in levels of interpersonal differentiation (at both the level of family cohesion and the level of family emotional interactions) have been observed in families of patients with anorexia nervosa (Rowa, Kering, & Geller, 2001) and in families of patients with drug dependence (Lee & Bell, 2003; Pinheiro et al., 2006). These family disturbances in interpersonal differentiation may be common in families with patients suffering from different addictive behaviors. Although some studies have shown different types of functioning in families of patients with anorexia nervosa or bulimia (Dare, LeGrange, Eisler, & Rutherford, 1994; Wisotsky et al., 2003), no studies have examined whether family disturbances in interpersonal differentiation differ between anorexia nervosa and drug dependence disorder.

Studies of the families of patients with anorexia nervosa have examined global constructs of family functioning, such as family organization, emotional expression, conflict behaviours, and interpersonal dependency (Dancyger, Fornari, Scionti, Wisotsky, & Sunday, 2005). These studies have supported the idea that family relationships may delay patients' autonomy development (Karwautz et al., 2003; Wechselblatt, Gurnick, & Simon, 2000).

Researchers have most frequently used the "Parental Bonding Inventory" to assess patients' perceptions of parental care and protection (Bulik, Sullivan, Fear, & Pickering, 2000) and the "Family Adaptability and Cohesion Evaluation Scales" to measure perceptions of cohesion and adaptability in the family (Dare et al., 1994). Most of the studies have revealed that patients with anorexia nervosa perceive a high level of parental overprotection and a low level of parental care (Canetti, Kanyas, Lerer, Latzer, & Bachar, 2008; Turner, Rose, & Cooper, 2005). These studies show that patients with anorexia nervosa perceive rejection and parental control, corresponding to a perception of affectionless control (Rhodes & Kroger, 1992; Swanson et al., 2010).

Concerning the cohesive and adaptive abilities of the family system, studies have indicated that there is a low level of cohesion and adaptability in the families of patients with anorexia nervosa (Cook-Darzens, Doyen, Falissard, & Mouren, 2005; Latzer, Hochdorf, Bachar, & Canetti, 2002). In the case of expressed emotion (EE), several factors including critical comments (CC), emotional overinvolvement (EOI), and hostility have been used to assess relatives' emotions with respect to a symptomatic family member: these factors have typically been assessed using a standardized semistructured interview (Vaughn & Leff, 1976). The results have shown that parents express low levels of CC and hostility towards patients with anorexia nervosa (Hodes, Dare, Dodge, & Eisler, 1999; LeGrange, Hoste, Lock, & Bryson, 2011).

Studies of the families of patients with drug dependence disorders have indicated a low level of parental social support (Godley, Kahn, Dennis, Godley, & Funk, 2005; Wills, Resko, AINETTE, & Mendoza, 2004), low parental monitoring (Chassin, Curran, Hussong, & Colder, 1996; Eitle, 2005), and a high level of conflict (Godley et al., 2005; Jacob, Leonard, & Randolph-Haber, 2001; Wills, Sandy, Yaeger, & Shinar, 2001). Interpersonal conflicts with the family have been associated with drug dependence disorders (Karow, Verthein, Krausz, & Schafer, 2008), and a high level of EE in parents has been found to be a major factor in the potential for relapse in patients with drug dependence disorder (Watts, 2007). Empirical studies have shown that the parents of patients with drug dependence disorders underestimate their children's drug use and overestimate how much parental control they have over their children (Green et al., 2011; Yang et al., 2006).

A poor parent-offspring relationship associated with maternal overprotectiveness and paternal distancing has also been correlated with drug dependence among adolescents (Anderson &

Eiseman, 2003; Wills et al., 2004). Nevertheless, most research has focused on patients' perceptions of family disturbances without integrating parents' perceptions. Toressani (2000) studied parents' perceptions and showed that patients with drug dependence and their parents perceived high levels of maternal and paternal control, corresponding to a family model of affectionless control.

Altogether, these studies suggest that family disturbances in interpersonal differentiation display similarities between anorexia nervosa and drug dependence disorder, specifically, concerning the level of cohesion and interpersonal dependence in the family. Moreover, these studies suggest that EE represents an underlying mechanism that distinguishes the families of patients with anorexia nervosa from the families of patients with drug dependence disorder. Because these findings suggest the presence of interpersonal differentiation disturbances in both addictive pathologies, our study aims to determine whether family profiles differ between anorexia nervosa and drug dependence disorder. Such a comparison between disturbances in the interpersonal differentiation of families of patients with anorexia nervosa and families of patients with drug dependence disorder represents an important step in the understanding of familial predisposing factors for addictive behaviors.

The present study assesses the perceptions of families' dependence relationships (assessed by the Inventory of Interpersonal Dependence [IDI]; Hirschfeld, Klerman, Keller, Andreasen, & Clayton, 1983), cohesion and adaptability (assessed with the Family Adaptability and Cohesion Evaluation Scales [FACES-III]; Olson, 1986), and EE (assessed with the Family Questionnaire [FQ]) (Wiedemann, Rayki, Feinstein, & Hahlwey, 2002) by mothers, fathers, and patients with anorexia nervosa or drug dependence disorder.

We hypothesize that the families of patients with anorexia nervosa or drug dependence disorder differ from the families of a nonclinical population (through comparisons to the nonclinical norms of the IDI, FACES-III and FQ). We also hypothesize that a low level of cohesion and a high level of interpersonal dependency characterize the families of patients with anorexia nervosa and the families of patients with drug dependence disorder. Finally, we speculate that the level of EE is higher among parents of patients with drug dependence disorders than among parents of patients with anorexia nervosa.

Method

Participants

Participants in this study were patients with anorexia nervosa, patients with drug dependence disorder and the parents of both groups of patients. Outpatients were recruited in the Department of Addictology at the hospital of Lille (France) where the patients were treated with supportive psychotherapy. The patients and their parents were informed about this study by a psychiatrist from the Department of Addictology. The parents were all aware of their children's difficulties prior to their participation in the study. A general practitioner also examined all the patients. Parents and patients provided written, informed consent after the procedure was explained. An ethics committee from the University of Lille validated the participation of the patients in the study.

There were 51 families who fully participated in this study: 25 families with a patient with restrictive-type anorexia nervosa and 26 families with a patient with drug dependence disorder. After obtaining consent, the evaluations (self-reports) were administered to the parents and patients in the outpatient Department of Addictology. During a private session, participants were tested individually (by a psychologist) in an isolated room using self-reports. All patients lived with their parents. The families came from the middle social classes (Institut National de la Statistique et des Etudes Economiques, 1983). All parents were employed, with the exception of two mothers.

The 25 female outpatients were selected according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) criteria for anorexia nervosa restrictive-type (i.e., without the binge-eating and vomiting or laxative abuse common to bulimics). Exclusion criteria were neurological disorders, intellectual deficits, and a recent

history of drug or alcohol abuse. Each diagnosis was determined by the consensual judgment of two professionals (a psychiatrist and a clinical psychologist), and the assessment of eating disorders was performed using the Eating Attitudes Test (EAT-40; Button, Loan, Davies, & Sonuga-Barke, 1997). The anorexia group had total EAT-40 scores ranging from 31 to 73 (mean: 48.78, standard deviation [SD]: 14.01). The body mass index of the patients (mean: 15.18, *SD*: 1.53) and the duration of their eating disorders (mean: 3.63 years, *SD*: 2.52) were evaluated in the anorexia group.

In addition, 26 outpatients (females = 43%; males = 57%) were selected according to the DSM-IV criteria for substance dependence disorder. Each diagnosis was determined by the consensual judgment of two professionals (a psychiatrist and a clinical psychologist). Exclusion criteria were neurological disorders, intellectual deficits, and eating disorders. The 26 outpatients reported using both cannabis and heroin. Urine analyses were conducted to verify the drugs used. A minimum dependence period of 12 months was required to enter the study (mean: 3.42 years, *SD*: 1.57).

Both patient groups were paired for age. The mean age did not differ significantly between the anorexia group and the drug dependence group (anorexia group: mean age: 20.6, *SD*: 2.7; Drug dependence group: mean age: 20.8, *SD*: 3.8; Student's *t* test, $t = 0.17$, $p = .86$). The mean age of fathers did not differ significantly between the anorexia group and the drug dependence group (anorexia group: mean age: 49.23, *SD*: 4.22; drug dependence group: mean age: 51.92, *SD*: 4.76; Student's *t* test, $t = 1.38$, $p = .19$). The mean age of mothers did not differ significantly between the anorexia group and the drug dependence group (anorexia group: mean age: 49.38, *SD*: 3.66; drug dependence group: mean age: 49.01, *SD*: 6.55; Student's *t* test, $t = 0.13$, $p = .89$). Both patient groups were also paired for disorder duration. The mean duration of anorexia nervosa and drug dependence disorder did not differ significantly between the groups (anorexia group: mean: 3.63 years, *SD*: 2.52; drug dependence group: mean: 3.42 years, *SD*: 1.57; Student's *t* test, $t = 1.49$, $p = .157$). Finally, both patient groups were paired for sibship size (anorexia group: mean: 1.63 years, *SD*: 1.25; drug dependence group: mean: 1.46 years, *SD*: 1.03; Student's *t* test, $t = 0.34$, $p = .72$).

Assessments

The EAT-40 is a self-report measure (Button et al., 1997; Garner & Garfinkel, 1979) that indicates the presence of eating disorders. The EAT-40 is a scale comprising 40 questions relating to three factors (dieting, bulimia, and food preoccupation, and oral control) and is useful for identifying women with abnormal weight and eating concerns. The cutoff point of the scale has been set at 30. A high score indicates impairment in eating attitudes and behaviors. Cronbach's alpha coefficient was 0.87 (Garner & Garfinkel, 1979).

The IDI is a self-report questionnaire (Hirschfeld et al., 1983; Loas et al., 2002). Its authors define interpersonal dependency as a set of thoughts, beliefs, feelings, and behaviors resulting in the need to attend socialize narrowly, and to interact with and count on loved or esteemed people. This tool is a 48-item scale comprising three subscales: emotional reliance on another person (ER), lack of social self-confidence (LSS), and assertion of autonomy (AUT). Each IDI item corresponds to a 4-point Likert-type scale ranging from 1 (*not characteristic of me*) to 4 (*characteristic of me*). High scores indicate a high level of ER, LSS, and AUT. The nonclinical norms for ER, LSS, and AUT are presented in Table 1 (Loas, Borgne, Gerard, & Delahousse, 1993). Cronbach's alpha coefficients were 0.87 (ER), 0.72 (LSS), and 0.76 (AUT; Loas et al., 1993).

The FACES-III is a self-report questionnaire (Olson, 1986; Tubiana-Rufi et al., 1991) measuring the cohesion and adaptability of a family. Cohesion corresponds to the emotional bonding that family members and couples have toward one another, and adaptability corresponds to the amount of change in leadership, role relationships, and relationship rules. This tool is a 40-item scale utilizing a 5-point Likert-type scale ranging from 1 (*almost never*) to 5 (*almost always*).

The first 20 items evaluate the degree of familial cohesion and adaptability perceived by the participants. The same 20 items are presented a second time to evaluate the participant's idealized perceptions of these two dimensions. This dichotomy informs us about the distance

Table 1

Comparison of the Interpersonal Dependence Inventory (IDI), the Family Adaptability and Cohesion Evaluation Scales (FACES-III) and the Family Questionnaire (FQ) in mothers, fathers and patients with anorexia nervosa (AN) or with Drug dependence disorders (DRUG)

Measure		Norms	AN				DRUG				Inter-group Test
			Descriptive Statistic		d	Norm Test	Descriptive Statistic		Norm Test		
			M	SD			M	SD			
IDI											
ER	Mother	44	42.5	11.3	1.5	0.51	46.2	10.3	2.2	1.99	—
	Father	39.5	37.6	8.5	1.9	0.86	41.9	11.3	2.4	0.81	—
	Patient	40	51.8	9.4	11.8	5.43**	48.3	9.7	8.3	4.51**	0.17
LSS	Mother	30	36.1	7.7	6.1	2.21*	35.3	6.2	5.3	3.08*	—
	Father	30.5	34.9	5.2	4.4	2.35*	35.5	7.7	5	2.49*	—
	Patient	30	40.6	8.6	10.6	5.37**	33.8	6.1	3.8	2.16*	3.71**
AUT	Mother	28.5	25.7	7.3	2.8	1.81	29.7	6.7	1.2	1.09	—
	Father	28.5	29.5	5.9	1	2.35	28.1	5.7	0.4	0.29	—
	Patient	28	27.6	4.7	0.4	0.38	30.3	6.7	2.3	1.81	1.5
FACES-III											
COH-P	Mother	38	33.5	7.1	4.5	2.97**	32.2	5.1	5.8	5.89**	—
	Father	33	27.5	10.1	5.5	2.16*	34.4	5.9	1.4	1.31	2.53*
	Patient	38	32.1	7.2	5.9	3.53**	27.7	5.9	10.3	5.5**	1.67
COH-I	Mother	39	35.2	5.9	3.8	2.96**	37.2	11.4	1.8	0.80	—
	Father	39	30.2	5.4	8.8	5.9**	37.6	5.8	1.4	0.57	3.64*
	Patient	39	33.6	6.5	5.4	3.59**	35.6	7.1	3.4	1.5	1.63
ADA-P	Mother	24	25.1	5.8	1.1	0.88	28	5.6	4	1.95	—
	Father	24	25	4.5	1	0.48	27.7	4.8	3.7	1.92	1.02
	Patient	24	22.9	5.1	1.1	0.90	24.5	6.9	0.5	0.38	0.84
ADA-I	Mother	28	28.7	5.1	0.7	0.67	30.5	7.4	2.5	0.13	—
	Father	28	27.3	4.1	0.7	1.06	29.1	4.9	1.1	0.89	1.37
	Patient	28	26.6	5.9	1.4	1.1	30.1	8.9	2.1	1.51	3.9*
FQ											
CC	Mother	23	21.6	5.2	1.4	1.19	27.8	6.2	4	6.55**	3.71*
	Father	23	21.7	4.2	1.3	1.22	25.5	6.2	2	1.57	—
EOI	Mother	27	27.5	4.9	0.5	0.47	30.4	5.8	3	3.04*	1.87
	Father	27	25.3	3.5	1.7	1.88	26.3	6.2	0.7	0.45	—

Note. M = Means, SD = Standard deviations. Norms = Non-clinical norms for IDI (Loas et al., 1993), FACES-III (Tubiana-Rufi et al., 1991) and FQ (Wiedemann et al., 2002). *d* = Mean differences to the norms of the IDI, FACES-III and FQ in mothers, fathers and patients with anorexia nervosa (AN) or with drug dependence disorders (DRUG). **p* < .05, ***p* < .01. Norm Test = Univariate Student's *t*-tests; Inter-group Test = post-hoc pairwise comparison (Bonferroni Test).

between the current perception of the actual family and the desired perception of the ideal family (Olson, 1986). Therefore, this tool evaluates four dimensions: perceived cohesion (COH-P), ideal cohesion (COH-I), perceived adaptability (ADA-P) and ideal adaptability (ADA-I). FACES-III identifies four levels of increasing cohesion—burst, separated, linked, and fusional relationships—and divides family adaptability into four additional levels of increasing adaptability: rigid, structured, flexible, and chaotic. High scores indicate high levels of cohesion (COH-P, COH-I) and adaptability (ADA-P, ADA-I). The nonclinical norms for cohesion (COH-P, COH-I) and adaptability (ADA-P, ADA-I) are presented in Table 1 (Tubiana-Rufi et al., 1991). Cronbach's alpha coefficients were 0.84 (COH-P, COH-I) and 0.79 (ADA-P, ADA-I) (Olson, 1986).

The FQ is a self-report questionnaire (Wiedemann et al., 2002) that assesses the emotions, feelings and attitudes expressed by patients' relatives. The FQ was chosen because of its ease of application in clinical situations, and it was filled out by the parents. The FQ is a brief,

20-item scale that uses a 4-point Likert-type scale with responses ranging from 1 (*very rarely*) to 4 (*very often*). This questionnaire measures EE along two major dimensions: CC and EOI by the patients' relatives. CC corresponds to the level of criticism directed towards the patient, and EOI describes the family's reactions to the problems generated by the patient and/or the disease. High scores indicate high levels of CC and EOI. The nonclinical norms for CC and EOI are presented in Table 1 (Wiedemann et al., 2002). Cronbach's alpha coefficients were 0.90 (CC) and 0.82 (EOI; Wiedemann et al., 2002).

Statistical Analyses

We first compared the nonclinical norms of the IDI, the FACES-III, and the FQ with the scores of the fathers, mothers, and patients with anorexia nervosa or drug dependence disorder using univariate Student's *t* tests. Second, we conducted a series of multivariate analyses of variance (MANOVA) to examine the differences between the fathers, the mothers, and the two groups of patients for the three dimensions (ER, LSS, AUT) of the IDI, the four dimensions (COH-P, COH-I, ADA-P, ADA-I) of the FACES-III, and the two dimensions (CC, EOI) of the FQ. Then we conducted post hoc pairwise comparison (Bonferroni test) using MANOVA. Analyses were performed using SPSS, version 19.

Results

Comparisons With the Nonclinical Norms

Univariate Student's *t* tests were performed to determine if there were differences between the nonclinical norms of the IDI, the FACES-III, and the FQ and the scores of the fathers, mothers, and patients with anorexia nervosa or drug dependence disorder (Table 1). The results showed high scores for ER in patients with anorexia nervosa and drug dependence disorder. High scores on the LSS dimension were observed for parents and patients in both groups. With the exception of the fathers of patients with drug dependence disorder, COH-P was low for parents and patients in both groups. COH-I was low for parents and patients with anorexia nervosa. The mothers of patients with drug dependence disorder exhibited high scores for CC and EOI.

Intergroup Comparisons

IDI. A MANOVA was performed to determine whether there were differences between the mothers, fathers, and patients in both Anorexia group and Drug dependence group for the three dimensions (ER, LSS, AUT) of the IDI. Globally, there was no significant difference between the mothers in both groups for the three dimensions of the IDI, Wilk's $F(3,45) = 1.76$, $p > .10$. There was also no significant difference between the fathers in both groups for the three dimensions of the IDI, Wilk's $F(3, 26) = 0.64$, $p > .10$. A significant difference was observed between the patients in both groups for the three dimensions of the IDI, Wilk's $F(3,43) = 5.98$, $p < .001$. A post hoc pairwise comparison revealed that patients with anorexia nervosa showed a greater LSS than patients with drug dependence disorder (Table 1).

FACES-III. A MANOVA was performed to determine if there were differences between the mothers, fathers, and patients in both Anorexia group and Drug dependence group for the four dimensions (COH-P, COH-I, ADA-P, ADA-I) of the FACES-III. There was no significant difference between the mothers in both groups for the four dimensions of the FACES-III, Wilk's $F(4,44) = 0.86$, $p > .10$. A significant difference was observed between the fathers in both groups for the four dimensions of the FACES-III, Wilk's $F(4,25) = 3.10$, $p < .005$. A post hoc pairwise comparison showed that the fathers of patients with anorexia nervosa reported a lower level of perceived or COH-I than the fathers of patients with drug dependence disorder (Table 1). A significant difference was observed between the patients in both groups for the four dimensions of the FACES-III, Wilk's $F(4,42) = 5.87$, $p < .001$. A post hoc pairwise comparison showed that patients with drug dependence disorder reported a higher level of ADA-I than the patients with anorexia nervosa (Table 1).

FQ. A MANOVA was performed to determine if there were differences between the mothers and fathers in both groups for the two dimensions (CC, EOI) of the FQ. A significant difference was observed between the mothers in both groups for the two dimensions of the FQ, Wilk's $F(2,46) = 2.01$, $p < .005$. A post hoc pairwise comparison showed that the mothers of patients with drug dependence disorder reported a higher level of CC than the mothers of patients with anorexia nervosa (Table 1). There was no significant difference between the fathers in both groups for the two dimensions of the FQ, Wilk's $F(2,27) = 2.01$, $p > .10$.

Discussion

One of the primary purposes of this investigation was to assess whether the families of patients with anorexia nervosa or drug dependence disorder differ from the families of the nonclinical population (through comparisons with the norms of the IDI, the FACES-III, and the FQ). The findings reported in the present study revealed a high level of ER among patients with anorexia nervosa and patients with drug dependence disorder as compared to the nonclinical norms of the IDI. A greater LSS was also observed in patients with anorexia nervosa, patients with drug dependence disorder, and the parents of both. We showed that a LSS is a family disturbance that presents in patients with anorexia nervosa and drug dependence disorder as well as in their parents. Studies have shown that mothers with a high level of self-esteem display adaptive parental skills, such as the ability to respond to the infant's signals and to interpret their child's difficulties (Donovan, Leavitt, & Walsh, 1990; Spielman & Taubman, 2009).

Moreover, high levels of EOI and CC were observed in the mothers of patients with drug dependence disorder in comparison with the norms of the FQ. In drug dependence disorder, the mothers had a high level of emotional reactivity to the problems generated by the patient and the disease (Godley et al., 2005; Latzer & Gaber, 1998; Wills et al., 2001).

The findings from this study also revealed a perception of low family cohesion (COH-P) in patients with anorexia nervosa and in both groups of parents as compared to the nonclinical norms of the FACES-III. Moreover, patients with drug dependence disorder and their mothers also reported a perception of low family cohesion. Such a link between a low level of family cohesion and anorexia nervosa or drug dependence disorder has already been reported by Cook-Darzens et al. (2005) and Tafa and Baiocco (2009). Our results also showed that patients with anorexia nervosa and their parents have a low ideal level of family cohesion. These findings are not consistent with the study of Cook-Darzens et al., who reported that the families of patients with anorexia nervosa and the families of a nonclinical population shared similar levels of COH-I. In the study of the Cook-Darzens et al., the patients with anorexia nervosa were younger and the duration of the disease was less important than in our study. Treatment differences also exist between studies: both inpatients and outpatients were included in Cook-Darzens et al.'s study, while only outpatients were included in our study. Levels of COH-I could change according to age, the duration of the disease, and the type of treatment.

These results, as well as previous research, contradict the psychosomatic model (Minuchin, Rosman, & Baker, 1978) of an enmeshment family system. The explanation for these contradictory results may lie with problems in the measurement of family cohesion. The measurement is mainly due to confusion over the original definitions of cohesion and enmeshment (Minuchin et al., 1978). Enmeshment and family cohesion are often confused in studies using self-administered questionnaires (FACES-III), although they represent two different processes (Rowa et al., 2001). Indeed, enmeshment corresponds to the presence of intergenerational alliances, boundary problems, and intrusiveness (including coercive control, possessiveness, and emotional reactivity), while family cohesion corresponds to the presence of closeness-caregiving (including warmth, time together, nurturance, physical intimacy, and consistency; Green & Werner, 1996). Altogether, these results suggest the presence of an abnormal distance in the families of patients with anorexia nervosa or drug dependence disorder, corresponding to family profiles with high levels of emotional reliance on other people and low levels of closeness-caregiving and a LSS.

In the present study, the second central goal was to determine whether the family disturbances would be different between anorexia nervosa and drug dependence disorder. The results revealed two important findings. First, patients with anorexia nervosa reported a greater LSS than patients

with drug dependence disorder. The results also revealed that the patients with drug dependence disorder reported a higher ideal perception of family adaptability than the patients with anorexia nervosa. This high level of ADA-I among patients with drug dependence disorder highlights their dissatisfaction with adaptation to daily rules and family functioning. These findings show that the LSS and the disturbances in ADA-I in patients differ in severity for both addictive disorders.

Second, our results demonstrate the existence of different profiles in mothers and fathers for both addictive disorders. The mothers of patients with drug dependence disorder have expressed more criticism than the mothers of patients with anorexia nervosa. In addition, the fathers of patients with anorexia nervosa have reported lower levels of COH-P and COH-I than the fathers of patients with drug dependence disorder. Such a distinction between criticism in mothers and cohesion (COH-P, COH-I) in fathers could represent one of the underlying family mechanisms for subdividing drug dependence disorder and anorexia nervosa.

The present study suggests that certain family interaction patterns are not specific to anorexic families and that family disturbances display different levels of severity among fathers, mothers, and patients for both addictive disorders. However, this study has several limitations. Our sample is small and the cross-sectional nature of this study does not allow for the examination causal factors. In addition, our study might have benefited from the inclusion of groups with others addictive disorders such as nicotine/tobacco dependence, pathological gambling, and bulimia. This inclusion might have been important for understanding the similarities and differences in the family interactions of patients with addictive disorders and for identifying the mutually predisposing factors.

Finally, the findings of our study support the value of a multidimensional examination of family interactions. The clinical implications of this study underline the importance of examining the different levels of severity of family disturbances to adapt therapeutic strategies to the addictive disorders and to develop the resources of the family system. A multidimensional perspective, the Double ABCX Model of family stress and adaptation (Lavee, McCubbin, & Patterson, 1985), suggests that family resources may include personal resources (characteristics of individual family members such as self-esteem, knowledge, and skills), family system resources (internal attributes of the family unit such as cohesion, adaptability, and communication), and social support (supportive social network). In the nonclinical population, the study of Lavee et al. (1985) has shown that families who are more cohesive, who communicate support to their members better, and whose systems are more flexible are better able to adapt to a pile-up of stressors and strains

Future research should also examine the relationships among stressors and family resources in addictive disorders. The family dimensions measure needs to be improved through the assessment of other family dimensions such as social support, quality of attachment, family values, and rearing models. These other family dimensions could be moderating variables of levels of family cohesion and social self-confidence.

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