

Marital status and eating disorders An analysis of its relevance

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Abstract

Objectives: This study attempts to understand the clinical impact of marital status on the psychopathology and symptomatology of anorexia (AN) and bulimia nervosa (BN) patients. **Method:** Eating disorder (ED) patients ($n=332$, 198 BN and 134 AN) consecutively admitted to our unit participated in the study. All subjects met DSM-IV criteria for those pathologies and were female. Our sample was divided retrospectively into three subgroups based on their marital status. For the assessment, commonly applied questionnaires in the field of ED were used [Eating Attitudes Test (EAT-40), Eating Disorder Inventory (EDI), Bulimic Investigatory Test Edinburgh (BITE), Body Shape Questionnaire (BSQ), Beck Depression Inventory (BDI) and Social Avoidance and Distress Scale (SAD)].

Results: 2×3 (Diagnostic \times Marital status) ANOVA and ANCOVA (with age as covariance) designs were applied in the current study. Our results suggested that ED patients who lived with a partner were significantly different with respect to the other ED patients in the following variables: higher age ($P<.0001$), higher motivation for change ($P<.004$), perfectionism ($P<.03$) and purging behavior ($P<.04$). **Discussion:** The main finding in this study is that ED patients who live with a partner are those who presented greater eating symptomatology and psychopathology but even higher motivation for change. Interpersonal functionality has to be considered in the development and maintenance of ED. © 2002 Elsevier Science Inc. All rights reserved.

Keywords: Marital status; Bulimia nervosa; Anorexia nervosa; Eating disorders

Introduction

Eating disorders (ED) in general and anorexia (AN) and bulimia nervosa (BN) in particular are complex disorders, in which problems are linked on a behavioral, cognitive and emotional level [1,2]. Several factors are implicated in the development and maintenance of those pathologies. Furthermore, as in other psychiatric disorders [3–5], some studies have demonstrated the relevance of interpersonal relationships as maintaining factor in EDs [6].

This topic has been considered in the ED literature from different theoretical frameworks: from psychoanalyt-

ical [7] and systemic approach [8–11] to behavioral-cognitive point of view [12–14].

The relationship between marital functioning and psychiatric disorders has been examined in several recent studies in general terms [15,16] and referred to specific pathologies such as affective disorders [17], anxiety disorders [18], obsessive-compulsive disorders [19] and addictive behaviors [20,21]. Even some authors suggested the high relevance of marital stability on the long-term recovery in general mental health disorders [22]. Nevertheless, this topic has surely received insufficient attention in the ED literature, as other authors suggested [23,24], mainly due to the fact that adult married women or those in long-term relationships were underrepresented in the ED clinical samples used [25,26].

The few studies where this topic was specifically examined evidenced that married patients with an ED may exhibit longer duration of the illness and were older [27] and even

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presented higher severity of the disorder [11]. Nevertheless, when the variable age was controlled, married ED patients did not present higher severity of the disorder [24], whereas it did when a general non-ED population was considered [23]. Furthermore, those married ED patients were commonly those who presented major dissatisfaction with their interpersonal relationships and higher deficits in conflict resolution skills [28] even when compared with controls [29].

Besides the methodological problems involved in this type of research, as mentioned above, few studies have been done about the impact of marital relationships in ED. In those studies, where this topic has been specifically assessed, important methodological limitations were present: lack of control of variables that may have an influence (i.e., age of the patients) or introduction of biases when selecting the samples (i.e., considering only married vs. unmarried patients, not giving enough importance to other subcategories).

In view of this criticism, the present study had the following objectives: (1) to check the hypothesis that married ED patients have more severe eating psychopathology even after controlling the variable age, (2) to assess the effect of the different subgroups of the category “marital status” on the severity of the disorder and (3) to ascertain whether there are differences with regard to this category between AN and BN patients.

Method

Sample

ED patients ($n=332$, 198 BN and 134 AN) consecutively admitted to our unit between January 1998 and October 2000 participated in the study. All patients fulfilled the criteria for those pathologies according to DSM-IV [30] and all were female: 67.2% ($n=223$) of the sample were of purging type (12.7% AN vs. 54.5% BN), 14.1% ($n=46$) were unemployed, 34.9% ($n=116$) employed and 41.3% ($n=154$) were students. Furthermore, 74.6% ($n=244$) lived

with their parents and 87% ($n=289$) were single. No divorced patients were included in the current study.

Assessment

The patients were assessed on several self-report measures: the Eating Attitudes Test (EAT-40) [31], the Eating Disorder Inventory (EDI) [32], the Bulimic Investigatory Test Edinburgh (BITE) [32], the Beck Depression Inventory (BDI) [33], the Body Shape Questionnaire (BSQ) [34] and the Social Avoidance and Distress Scale (SAD) [35], validated with Spanish samples. Demographic-clinical information, including age, weight, height, clinical-psychopathological variables and marital status, were also obtained. Thereby, the motivational stage was assessed through an analogical scale (see Appendix) that evaluates, through four different type of questions, the subjective wish of the ED patients to receive treatment (scale ranged between 0 and 8) [36]. This scale has been previously described and applied in a broader sample of EDs elsewhere [37].

Procedure

All the subjects were assessed by a face-to-face structured interview at the beginning of the treatment, before any psychological or pharmacological treatment, including specific questions about their current and past sentimental relationships. All interviews were carried out by experienced psychologists. Further psychometrical data were obtained from patients by the above mentioned self-report questionnaires.

Our sample was divided retrospectively into three categories based on their marital status (during at least the previous 6 months): (a) PA-L: living with a stable partner ($n=41$), (b) PA-NL: having a stable partner but not living with him ($n=129$) and (c) NPA: having no partner ($n=162$). For further analysis, the sample of PA-L group was divided into patients who had the onset of their disorders before or after marriage.

Table 1
Sociodemographic and clinical characteristics in our sample of AN ($n=134$) and BN ($n=198$) patients

	AN ($n=134$)			BN ($n=198$)			Student's <i>t</i>	<i>P</i>
	Mean	S.D.	CI 95%	Mean	S.D.	CI 95%		
Age	22.4	5.3	21.5–23.3	23.3	5.7	22.5–24.0	–1.39	ns
Weight (kg)	44.4	5.8	43.0–45.8	57.7	11.4	55.7–59.7	–9.15	<.0001
Height (m)	1.63	0.6	1.62–1.65	1.63	0.7	1.61–1.63	0.78	ns
BMI	16.4	1.8	16.0–16.8	21.8	3.8	21.1–22.5	–10.6	<.0001
Age of onset	17.8	3.7	17.1–18.7	18.3	4.8	17.6–19.1	–0.76	ns
Duration of illness	4.3	4.7	3.3–5.3	4.9	4.4	4.3–5.6	–1.15	ns
<i>n</i> of treatments	1.0	2.1	0.6–1.5	1.0	1.5	0.8–1.2	0.12	ns
Weekly frequency of bingeing	1.6	4.6	0.6–2.6	8.1	8.1	6.6–9.5	–6.67	<.0001
Weekly frequency of vomiting	3.7	8.1	1.9–5.4	8.3	9.6	6.6–10.0	–3.63	<.0001
Motivational stage	6.4	2.2	6.0–6.8	7.0	1.6	6.8–7.2	–2.91	<.004

Homogeneity of variance tested using Levene's test between groups when necessary. BMI = body mass index [weight (kg)/height² (m²)].

Table 2
Psychometrical mean scores in our sample of AN ($n = 134$) and BN ($n = 198$) patients

	AN ($n = 134$)			BN ($n = 198$)			Student's t	P
	Mean	S.D.	CI 95%	Mean	S.D.	CI 95%		
BDI	23.7	12.6	21.0–26.3	25.2	11.1	23.4–27.1	– 1.00	ns
EAT	50.7	25.1	45.4–55.9	50.5	20.3	47.0–54.1	.05	ns
BSQ	109.8	50.8	99.0–120.6	130.8	45.1	123.0–138.6	– 3.2	< .002
BITE	14.1	8.0	12.3–15.9	23.6	4.9	22.7–24.4	– 10.7	< .0001
SAD	14.5	8.3	12.6–16.4	8.8	0.8	13.4–16.6	– 0.39	ns
EDI-Total	69.0	34.2	61.8–76.2	88.8	29.2	83.9–93.7	– 4.04	< .0001
EDI-DT	9.8	6.5	8.5–11.2	14.7	4.9	13.9–15.5	– 6.5	< .0001
EDI-BUL	2.8	4.5	1.8–3.7	10.2	5.8	9.2–11.1	– 10.18	< .0001
EDI-BD	12.6	7.4	11.0–14.1	17.7	7.3	16.5–18.9	– 5.14	< .0001
EDI-LSE	10.9	7.3	9.4–12.5	11.5	6.6	10.4–12.6	– 0.55	ns
EDI-P	7.3	4.5	6.3–8.2	7.6	4.4	6.9–8.3	– 0.55	ns
EDI-ID	6.5	5.1	5.4–7.6	6.2	4.5	5.5–7.0	0.45	ns
EDI-IA	10.9	6.6	9.5–12.3	13.3	6.6	12.2–14.4	– 2.71	< .007
EDI-MF	7.7	5.3	6.6–8.8	7.6	4.7	6.9–8.4	0.04	ns

EDI-BD = EDI Body dissatisfaction, EDI-ID = EDI Interpersonal distrust, EDI-MF = EDI Maturity fears. Rosenberg's Self-Esteem Scale.

Statistical analysis

Using the SPSS-PC+ Advanced Statistical Programme [38], a multifactorial univariate variance analysis was applied using the ANOVA and ANCOVA (age as covariance). Those procedures were used to determine the relationship between marital status (PA-L vs. PA-NL vs. NPA) and the factor diagnosis (AN vs. BN) regarding all the quantitative dependent variables. When significant differences were found, a post hoc comparisons test was performed (Scheffé test). Chi-square tests were used for comparison of discrete variables

and nonparametrical tests (Mann–Whitney U) when the sample size of the compared subgroups was small.

Results

Description of the sample

As shown in Table 1, on comparing both diagnostic groups (AN vs. BN), there were no significant differences in any of the main general features. Nevertheless, as expected,

Table 3

Mean scores on sociodemographical and clinical variables concerning the factor marital status (NPA vs. PA-NL vs. PA-L) using a 2×3 ANOVA (Diagnostic \times Marital status)

	AN ($n = 134$)			BN ($n = 198$)			$F(a) = \text{diagnostic},$ $F(b) = \text{marital status}$	P
	NPA ($n = 78$)	PA-NL ($n = 39$)	PA-L ($n = 17$)	NPA ($n = 84$)	PA-NL ($n = 90$)	PA-L ($n = 24$)		
Age	21.1	21.8	29.3	21.8	23.6	27.2	0.01	ns
Weight	43.8	45.2	45.6	58.3	55.6	66.3	27.8	< .0001
							68.8	< .0001
Height	1.63	1.64	1.63	1.64	1.62	1.62	2.45	ns
							0.35	ns
BMI	16.2	16.5	17.2	21.8	21.1	25.2	94.0	< .0001
							4.08	< .02
Duration of illness	3.4	4.0	11.2	4.2	5.1	6.8	1.23	ns
							14.4	< .0001
Age of onset	17.5	17.5	21.2	17.5	18.4	20.6	0.02	ns
							5.78	< .004
n of treatments	0.8	0.7	3.9	1.2	0.9	0.7	9.11	< .003
							7.1	< .001
Weekly frequency of bingeing	1.1	1.8	4.6	8.1	7.5	11.6	26.0	< .0001
							2.2	ns
Weekly frequency of vomiting	2.6	2.8	14.6	7.3	9.2	7.4	0.6	ns
							3.4	< .03
Motivational stage	6.4	6.2	6.9	7.0	6.8	7.8	7.82	< .005
							3.29	< .04

One-way ANOVA (Homogeneity of variance tested using Levene's test between groups when necessary). $F(a)$: "diagnostic" main effect, $F(b)$: "marital status" main effect. BAT = Body Attitudes Test. Marital status: PA-L, PA-NL or NPA.

due to their differential psychopathological aspects, the following features were significantly different between the two diagnostic groups: body weight, body mass index, weekly frequency of bingeing and vomiting. Furthermore, there were significant differences on the motivational stage between groups. The BN patients presented higher motivation to change.

Questionnaires

As shown in Table 2, when the mean psychometrical values of both main diagnostic groups (AN vs. BN) were considered, we found significant differences on bulimic symptomatology (BITE scores) and body dissatisfaction (BSQ scores). Furthermore, there were significant differences between the groups with respect to the total EDI values ($t = -4.04, P < .0001$) and with regard to the following EDI subscales: drive for thinness, bulimia, body dissatisfaction and interoceptive awareness.

Effects of marital status

As shown in Tables 3 and 4, an ANOVA (2×3) was applied for the different dependent variables using the

following factors: marital status (NPA vs. PA-NL vs. PA-L) and diagnosis (AN vs. BN). Considering the whole sample, the results showed that 162 patients (48.8%) have no current partner (NPA), 129 (38.9%) have a partner but were not living with him (PA-NL) and 41 (12.3%) lived with the partner (PA-L).

In the sociodemographic and clinical variables (see Table 3), ANOVA detected a significant main effect for the factor “marital status” in the following variables: age, body mass index, duration of illness, age of onset, number of treatments and weekly frequency of vomiting. Furthermore, a significant interaction effect was observed between “marital status” and “diagnostic group” in the variables duration of illness [$F(a \times b) = 4.01, P < .02$], number of treatments [$F(a \times b) = 11.2, P < .0001$] and weekly frequency of vomiting ($F = 4.13, P < .02$).

Concerning the psychometrical scores (see Table 4), ANOVA detected a significant main effect for the factor “marital status” in the following variables: depression (BDI scores), eating psychopathology (EDI-total scores), bulimic symptoms (EDI-BUL), low self-esteem (EDI-LSE), perfectionism (EDI-P) and interoceptive awareness (EDI-IA), without any significant interaction effects being observed.

Table 4
Mean scores on psychometrical and clinical variables concerning the factor marital status (NPA vs. PA-NL vs. PA-L) using an ANOVA procedure

	AN ($n = 134$)			BN ($n = 198$)			$F(a) = \text{diagnostic},$ $F(b) = \text{marital status}$	P
	NPA ($n = 78$)	PA-NL ($n = 39$)	PA-L ($n = 17$)	NPA ($n = 84$)	PA-NL ($n = 90$)	PA-L ($n = 24$)		
BDI	22.9	22.5	30.9	25.0	24.5	30.0	0.3 3.5	ns < .04
EAT	51.3	44.7	61.6	47.3	51.6	58.9	0.01 2.6	ns ns
BSQ	108.0	111.0	116.7	134.6	124.5	145.8	7.6 0.7	< .006 ns
BITE	13.9	13.7	17.3	23.8	22.8	26.5	64.8 2.5	< .0001 ns
SAD	14.8	13.1	18.2	16.9	13.1	16.9	0.02 2.5	ns ns
EDI-Total	66.9	64.1	91.7	88.5	85.3	107.5	13.8 6.0	< .0001 < .003
EDI-DT	9.4	10.5	10.5	14.0	14.7	17.6	31.2 1.96	< .0001 ns
EDI-BUL	2.1	3.3	5.0	10.6	9.1	13.9	72.9 3.8	< .0001 < .03
EDI-BD	12.2	11.9	15.9	18.1	16.7	20.6	16.8 2.5	< .0001 ns
EDI-LSE	10.7	9.7	15.3	11.5	10.9	13.6	0.01 3.2	ns < .04
EDI-P	7.5	5.5	10.5	7.3	7.6	9.1	0.04 4.9	ns < .008
EDI-ID	6.4	5.4	9.5	6.2	6.0	7.5	0.5 3.0	ns ns
EDI-IA	10.8	9.1	15.5	12.8	13.1	16.4	4.2 5.0	< .05 < .007
EDI-MF	7.4	7.4	9.5	8.0	7.1	8.7	0.04 1.18	ns ns

One-way ANOVA (Homogeneity of variance tested using Levene's test between groups when necessary). $F(a)$: “diagnostic” main effect, $F(b)$: “marital status” main effect. Marital status: PA-L, PA-NL or NPA.

Table 5
Group differences analyzed by ANCOVA (Diagnostic \times Marital status) using age as covariance

	$F(a)$ =diagnostic	P	$F(b)$ =marital status	P	$F(a \times b)$	P
BMI	96.4	<.0001	–		–	
n of treatments	8.9	<.003	3.9	<.02	9.9	<.0001
EAT	–		3.3	<.04	–	
BSQ	7.6	<.006	–		–	
BITE	63.3	<.0001	–		–	
EDI-Total	13.7	<.0001	5.4	<.005	–	
EDI-DT	31.0	<.0001	–		–	
EDI-BUL	73.6	<.0001	–		–	
EDI-P	–		4.8	<.009	–	
EDI-IA	4.2	<.05	4.9	<.009	–	
Motivational stage	8.5	<.004	–		–	

2 \times 3 (Diagnostic \times Marital status) ANCOVA. $F(a)$: “diagnostic” main effect, $F(b)$: “marital status” main effect, $F(a \times b)$: interactions effect. This table shows only the variables that presented significant differences by comparing the three subgroups of patients (PA-L, PA-NL or NPA).

Effects of marital status by controlling the variable age

As shown in Table 5, an ANCOVA (2 \times 3) was applied using the variable age as covariance. In the sociodemographic and clinical variables, ANCOVA detected a significant main effect for the factor “diagnosis” in the variables body mass index, number of treatments and motivational stage. A significant interaction effect between “marital status” and “diagnostic group” in the variable number of treatments [$F(a \times b) = 9.9$, $P < .0001$] was observed. Nevertheless, there was only a significant main effect for the factor “marital status” in the variable number of treatments ($F = 3.9$, $P < .02$).

With regard to psychometrical and psychopathological values, ANCOVA also detected a significant main effect for the factor “diagnosis” in the variables body dissatisfaction (BSQ scores), bulimic symptomatology (BITE scores and EDI-BUL), eating psychopathology (EDI total scores), drive for thinness (EDI-DT subscale) and interoceptive awareness (EDI-IA), while there were no significant interaction effects. Nevertheless, there was a significant main effect for the factor “marital status” in the variables eating psychopathology (EDI-total scores, $F = 5.4$, $P < .005$), perfectionism (EDI-P, $F = 4.8$, $P < .009$) and interoceptive awareness (EDI-IA, $F = 4.9$, $P < .009$).

Effect of the onset of the ED disorder (before or after marriage)

In our study, the PA-L group, with ED patients both pre- and post-marriage, was further analyzed by comparing both subgroups. The percentage of patients with postmarital onset (23%, $n = 9$) was similar to the observed values in the literature. Furthermore, it was found that those patients have a higher mean age of onset (mean 24.8 years, S.D. 6.0) than those with premarital onset (mean 17.2 years, S.D. 2.8), resulting in significantly different effect ($U = 19.0$, $P < .01$). Therefore, according to these results, the postmarital onset subgroup presented a

shorter duration of the disorder (mean 4.5 years, S.D. 3.1) than those with premarital onset (mean 10.2 years, S.D. 6.5), although those values were not significantly different ($U = 10.5$, $P > .05$). Furthermore, there were no significant differences between subgroups concerning age at marriage ($P > .05$), duration of the relationship ($P > .05$) or any eating symptomatology.

Discussion

The main finding in this study is that ED patients who lived in a partnership presented greater eating symptomatology and psychopathology than those who did not even when the variable age was controlled. When comparing this result with the literature, the major relevant problem is the fact that an important associated variable, such as the current age of the patients, has rarely been controlled in many studies. In the few reports where the influence of age was taken into account [23,24], our findings appear to be in agreement with those studies where a more general population was considered [23] but not with those where ED clinical samples were used [24]. The discrepancy between our study and Wiederman's may be due to the differential conceptualization of the factor marital status.

On the other hand, in those studies where the age was not specifically controlled, their results were also in concordance with our study [11,38]. Furthermore, our study also suggested that patients who lived with a partner showed not only more severe symptomatology but also higher perfectionism and greater weekly frequency of purging behavior. As other authors suggested [39], these traits may be an indirect indicator of higher severity of the ED. From a clinical point of view, this result may suggest that in married ED women not only individual functionalities take place but also many other interpersonal functionalities, e.g., discussions and conflicts with the partner, may act as an additional triggering and maintaining factor of the disorder. In those married

patients, many of their perfectionist personality traits and behaviors that frequently act as maintaining factor of the disorder will be reinforced trying to please the partner expectations.

Secondly, our results suggest that ED patients who lived with a partner (an underrepresented subgroup, 12.3%), as other authors suggested [40], are those who are older [24]. This fact was also associated with the result that these patients were those who presented longer duration of illness and higher number of previous treatments. These findings confirm again that for further research age is an important factor that needs to be controlled. Furthermore, it is important to point out the finding that patients who were living with a partner (PA-L group) were those who even presented later average age at onset. As some authors suggested [41], in those cases, it seems to be of relevance to differentiate between patients who presented pre- vs. postmarital onset of the ED. In our study, after comparing ED patients with pre- and postmarital onset, the former have a higher mean age of onset and shorter duration of the disorder. This result was in concordance with those obtained in other studies in the literature [41]. The reasons behind postmarital EDs may be the stress of married life and/ or the birth of children. Obviously, the reasons and functionalities are different from those of other ED patients.

Thirdly, our findings confirm that ED patients who had a partnership were also those who were more motivated to change. The fact that ED patients who were older displayed also higher motivation to change has been reported in some previous studies [42] and specifically in AN [37]. The fact that those patients may present a higher stage of motivation, as other authors suggested [12,36], may be a reason. Furthermore, the role that interpersonal functionality may have in the development and maintenance of ED must be taken into account.

Appendix. Motivational scale

(1) Estimate in which grade you would value the severity of your eating disorder.

It is not a problem at all

0	1	2	3	4	5	6	7	8
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It is a big problem

(2) Estimate in which grade you would value your wish for receiving treatment (for your eating disorder).

I am not interested at all

0	1	2	3	4	5	6	7	8
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I am very interested

(3) Indicate in which grade you think it would be necessary for you to receive treatment.

I do not need any treatment

0	1	2	3	4	5	6	7	8
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It is absolutely necessary for me to receive a treatment

(4) Estimate in which grade you think your eating disorder is an impediment to carry on with your normal life.

Not at all

0	1	2	3	4	5	6	7	8
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Very much

Limitations of the present study are threefold: (a) the discordant sample size, which was not large enough, specifically in the PA-L subgroup, to separate the diagnosis groups into some of the categories (e.g., prior vs. later onset, diagnostic subtypes), (b) not to have taken into account the variable lifetime (e.g., onset of the ED and the partnership) and (c) the lack of structured assessment of the interpersonal functionality and secondary benefits.

By way of conclusion, it must be remarked that our findings suggest that ED patients who live with a partner are those who presented major severity of the disorder. These patients are those who are also older and presented higher motivation to change. An explanation for these results must be sought on an interpersonal and interactional level where the role that interpersonal functionality and secondary benefits may have in the development and maintenance of an ED must be taken into account. As other authors suggested [8], further research should continue investigating not only what specific function a partner relationship in the development of the eating and weight symptomatology of the patients (primary or secondary?) may have, but also what is its prognostic relevance. After the statistical analysis of our study, the subcategories PANL and NPA had no reason, so they presented more common than differing factors from each other. For further research, they both may be contemplated together as the same category.

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