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Young Women at Risk for Eating Disorders:

Perceived Family Dysfunction and Parental Psychological Problems

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Abstract

When 27 young women at risk for eating disorders who scored above the clinical cut–off score on the EDI-II were compared with age and SES matched controls, they were found to obtain more dysfunctional scores on the Family Assessment Device and on ratings of perceived maternal and paternal symptomatology on the SCL-90-R. These results are consistent with theories of eating disorders that highlight the role of family factors in the aetiology and maintenance of eating disorders.

Introduction

Anorexia and bulimia are prevalent among female adolescents (APA, 1994; Bryant-Waugh and Lask, 1995), with up to 4% suffering from an eating disorder. Anorexia and bulimia are thought to affect 1% and 3% of teenage girls respectively. Family systems theories of anorexia point to a number of organisational features that may be predisposing or maintaining factors for eating disorders. For example Minuchin et al (1978) characterized the families of teenagers with anorexia as enmeshed and rigid with a strongly overprotective attitude towards the child. He also argued that there was a lack of conflict resolution and an involvement of children in parental conflicts. Selvini Palazzoli (1974) pinpointed the following features as typical of the anorexic family: an ethic of self-sacrifice, the rejection of personal leadership by the parents, blame-shifting since everything is done for the good of others, unclear communication and secret alliances between parents and the child which go hand in hand with covert marital dissatisfaction.

Empirical studies of families have been conducted to test these theories and to explore the role of family factors in the aetiology of eating disorders. Some of the more promising studies have used psychometrically robust assessment instruments such as the Family Assessment Device (FAD, Epstein, Baldwin and Bishop, 1983). In two important family studies differences between women with eating disorders and controls have been found on the FAD. Steiger, Liquornik, Chapman and Hussein (1991) found that compared with controls families of eating disordered patients reported poorer functioning on the communication and affective responsiveness of the FAD subscales. Waller, Calam and Slade's (1989) found that on the FAD compared with controls, women with anorexia rated their families as having more problems with affective involvement and behaviour control while bulimics rated their families as having difficulties in both of these domains and also on the family problem solving FAD subscale.

Another research strategy to test family theories of eating disorders has been to evaluate parental psychopathology which may contribute to parental involvement in dysfunctional patterns of family interaction. For example, Lilenfeld et al (1998) found that compared with controls families of patients with anorexia or bulimics had higher rates of major depressive disorder, generalised anxiety disorder and obsessive-compulsive disorders. Gershon, Hamovitz and Schreiber (1983) found that the rates of affective disorders in families of women with eating disorders (22%) were three times higher that that of a normal control group (7%).

In the present study we aimed to answer two main questions.

1. Do young women at risk for eating disorders report more problems with family functioning than normal controls?
2. Do young women at risk for eating disorders perceive their mothers and fathers to have more psychological problems than normal controls?

Method

Participants

Twenty-seven cases at risk for eating disorder and 27 controls participated in this study. Cases at risk for eating disorder scored above the clinical cut-off score on the Eating Disorder Inventory. Profiles of the two groups on the EDI-II are presented in Table 1. The mean height of both groups was 5 feet 6 inches (SD=2 inches) and the Body Mass index for both groups was 21 (SD=1.7). While, the mean weight of participants at risk for eating disorders was 123 pounds (SD=25.6) compared with a mean weight of 129 (SD=13.9) pounds for the control group, this difference was not statistically significant ($t(56)=1.14$, $p>05$). Participants ranged in age from 17-21 with a mean age of 18 years seven months. Participants ranged in socio-economic status from social class 1 (professional workers) to

social class 3 (non-manual). Participants' Socio-Economic Status was determined using the Irish census-based social class scale (O'Hare, Whelan, & Commins, 1991).

Instruments

The Eating Disorder Inventory-II (EDI-II, Garner, 1991). This 91 item inventory yields scores on scales that evaluate drive for thinness (DT), bulimia (B), body dissatisfaction (BD), ineffectiveness (I), perfectionism (P), interpersonal distrust (ID), interoceptive awareness (IA), maturity fears (MF), asceticism (A), impulse regulation (IR), and social insecurity (SI). For each item six point response formats are used ranging from 'always' to 'never'. Internal consistency reliability coefficients and test-retest reliability over a three-week period for the various scales range from 0.8 to 0.9. With regard to the validity of the EDI, questions in all but the last three scales distinguish between anorexic and control groups; anorexic patients' subscale scores and clinicians' ratings of the same individuals on dimensions measured by the EDI correlate; and EDI scale means for a recovered anorexic group are similar to those of a normal control group and significantly lower than those of unrecovered cases. In the present study, a cut-off score of 14 on the drive for thinness subscale was used for selecting cases at risk for eating disorders and controls.

The Family Assessment Device (FAD, Epstein, Baldwin and Bishop, 1983; Kabacoff, Miller, Bishop, Epstein & Keitner, 1990). This 60-item inventory evaluates perceived family functioning and yields scores on the following seven subscales: problem solving, communication, roles, affective responsiveness, affective involvement, behaviour control and general functioning. A four point Likert response format is used for responding to each item with responses ranging from strongly agree to strongly disagree. Subscale scores are based on subscale item totals divided by the number of items to which responses were

given with higher scores indicating greater pathology. Internal consistency reliability coefficients for the various scales range from 0.7 to 0.9. The FAD has been shown to discriminate between clinical and non-clinical families and clinically a cut-off score of 2 on the general functioning scale may be used to identify families with significant adjustment difficulties.

The Symptom Checklist-90 (SCL-90, Derogatis, Lipman and Covi, 1973) This 90 item psychiatric symptom rating checklist yield s scores for somatization (SOM), obsessive-compulsive (O-C), interpersonal sensitivity (INT), depression (DEP), anxiety (ANX), anger-hostility (HOS), phobic anxiety (PHOB), paranoid ideation (PAR), and psychoticism (PSY). Five point response formats are used for all items ranging from 0=Nota at all to 4=extremely. Item scores are summed to yield subscale scores with higher scores indicating greater pathology. . Internal consistency reliability coefficients for the various scales range from 0.7 to 0.9. With regard to validity, Derogatis, Rickels and Rock (1976) found that subscale were most highly correlated with one of the Minnesota Multiphasic Inventory (MMPI) scales considered to measure a corresponding symptom.

Procedure

At University College Dublin, female students in first and second year psychology, first year history, first year medicine and second year social policy were invited to participate in a research study on eating disorders. Confidentiality of individual responses was guaranteed. Participants singed a consent form, and completed a package of questionnaires which included a demographics sheet, the EDI-II, the FAD and 2 copies of the SCL-90. Written instructions were given so that one copy of the SCL-90 was used to give participants' perceptions of their mothers' health and the other gave their perceptions

of their fathers' health. In the Results sections the different versions of the SCL-90 are referred to as the maternal and paternal SCL-90 rating scales respectively. 500 questionnaires were distributed. From these 27 cases at risk for eating disorders were identified. Members of this group obtained a score of 14 or greater on the EDI-II Drive for Thinness subscale. From the remaining questionnaires a control group of 27 cases, with the lowest Drive for Thinness scores and matched for age and socio-economic status was selected.

Results

The significance of intergroup differences between cases and controls on the dependent variables was assessed using t-tests for independent samples. To deal with the problem of Type 1 error associated with making multiple comparisons, cases and controls were first compared on total FAD and SCL-90 scores, and only if these results were significant were t-tests on subscale scores conducted. From Tables 2 and 3 it may be seen that cases and controls differed significantly on total FAD and SCL-90 scores. For t-tests on subscale scores, a cautious p-value of .01 was set as the significance level for inferring intergroup differences on each variable, to further guard against Type 1 errors.

When cases and controls were compared on the subscales of the FAD they were found to differ significantly ($p < 0.01$) on the following dimensions: problem solving, roles, affective responsiveness, and general functioning.

When cases and controls were compared on the subscales of the maternal SCL-90 rating scale, they were found to differ significantly ($p < 0.01$) on the somatization, interpersonal sensitivity, depression, anxiety, anger-hostility, and paranoid ideation dimensions.

When cases and controls were compared on the subscales of the paternal SCL-90 rating scale they were found to differ significantly ($p < 0.01$) on the dimensions of depression, and anger-hostility.

Discussion

In answer to the first question addressed in this study it may be concluded that young women at risk for eating disorders reported greater family difficulties in the areas of problem solving, roles, affective responsiveness, and general functioning. In answer to the second question it may be concluded that young women at risk for eating disorders reported that their mothers showed significant problems in the areas of somatization, interpersonal sensitivity, depression, anxiety, anger-hostility, and paranoid ideation. In addition they also reported that their fathers showed significant problems in the areas of depression, and anger-hostility.

Although we studied a small convenience sample of at-risk cases and only used self-report instruments, we place considerable confidence in our results because we used reliable and valid instruments, a stringent cut-off score on the EDI-II for identifying at risk cases, and an experimental method that minimized the possibility of response-set affecting the validity of participants responses.

Our finding that young women at risk for eating disorders perceive their parents to have significant psychological problems is consistent with Lilenfeld et al, (1998) and Gershon, et al's (1983) finding of high rates of psychopathology in the families of that young women with eating disorders. The findings of our study are also consistent with those of Steiger et al (1991) and Waller et al (1989) insofar as all three studies showed that young women with, or at-risk for eating disorders reported difficulties with family functioning as evaluated by the FAD. However, there were differences between studies in

the precise areas of difficulty. In the present study the problematic areas were of problem-solving, roles, affective responsiveness, and general functioning. In Steiger et al's (1991) study the problematic areas were communication and affective responsiveness. Waller et al (1989) found that women with anorexia rated their families as having more problems with affective involvement and behaviour control while bulimics rated their families as having difficulties in both of these domains and also on the family problem-solving. It may be that different types of difficulties in family functioning are associated with different stages in the development of eating disorders and different types of eating disorders. This hypotheses deserves testing in future research.

Our results highlight the importance of conceptualizing eating disorders from a family systems perspecitve when working with young women at risk for eating disorders. Such therapy should take account of the difficulties such families are perceived by young women to have in the areas of problem-solving, roles, affective responsiveness, and general functioning. Family therapy with these families should also take account of young women's perceptions of their parents' psychological vulnerabilities: their mothers somatization, interpersonal sensitivity, depression, anxiety, anger-hostility, and paranoid ideation and their fathers' depression and anger-hostility. There is good evidence from the Maudsley study that family therapy is particularly effective with non-chronic anorexia nervosa in tennage anorexic girls, but that with adult women who have chronic anorexia, an individually oriented approach may be more effective (Russell,Szmukler, Dare et al 1987; Eisler, Dare, Russell, et al, 1997).

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Table 1. Eating Disorder Inventory mean scale scores

Variable		Eating Disorder Group (n=27)	Control Group (n=27)	t
EDI-II total	Mean	102.22	26.04	8.98**
	SD	42.20	12.78	
Drive for Thinness	Mean	15.00	1.37	19.81**
	SD	3.39	1.15	
Bulimia	Mean	6.15	0.67	4.44**
	SD	6.29	1.27	
Body Dissatisfaction	Mean	21.70	8.59	8.84**
	SD	8.59	5.48	
Ineffectiveness	Mean	9.93	1.81	5.60**
	SD	7.09	2.57	
Perfectionism	Mean	7.78	2.41	4.52**
	SD	5.51	2.76	
Interpersonal Distrust	Mean	5.41	1.56	4.49**
	SD	4.10	1.76	
Interoceptive Awareness	Mean	9.15	1.37	5.85**
	SD	6.68	1.76	
Maturity Fears	Mean	7.19	2.93	3.30**
	SD	6.04	2.89	
Asceticism	Mean	6.04	1.26	5.09**
	SD	4.76	1.06	
Impulse Regulation	Mean	7.07	1.22	4.27**
	SD	6.93	1.65	
Social Insecurity	Mean	6.81	2.85	3.87**
	SD	4.31	3.11	

Note: *p < .05. **p<.01.

Table 2. Family Assessment Device mean scale scores

Variable		Eating Disorder Group (n=27)	Control Group (n=27)	t
FAD total	Mean	142.67	124.22	2.85**
	SD	29.87	15.51	
Problem Solving	Mean	17.11	12.85	2.42**
	SD	9.01	1.68	
Communication	Mean	16.78	14.85	1.93
	SD	4.25	2.90	
Roles	Mean	22.48	19.96	2.59**
	SD	4.44	2.43	
Affective Responsiveness	Mean	17.63	14.85	2.70**
	SD	4.57	2.80	
Affective Involvement	Mean	19.11	17.26	2.04
	SD	4.05	2.41	
Behaviour Control	Mean	19.85	20.30	0.37
	SD	5.22	3.43	
General Functioning	Mean	29.70	24.15	3.02**
	SD	8.32	4.74	

Note: **p<.01.

Table 3. Perceived mother's and father's SCL-90 mean scale scores

Variable		Eating Disorder Group (n=27)	Control Group (n=27)	t
Mothers				
SCL total	Mean	95.89	45.59	3.61**
	SD	58.78	42.40	
Somatization	Mean	14.19	8.26	2.53**
	SD	10.44	6.24	
Obsessive-Compulsive	Mean	11.78	7.11	2.34
	SD	8.50	5.90	
Interpersonal Sensitivity	Mean	11.67	5.15	3.69**
	SD	7.83	4.80	
Depression	Mean	20.11	9.11	3.79**
	SD	12.68	8.19	
Anxiety	Mean	12.22	4.26	3.89**
	SD	9.17	5.37	
Anger-Hostility	Mean	6.96	3.11	3.14**
	SD	4.91	4.08	
Phobic Anxiety	Mean	4.85	1.78	2.25
	SD	5.75	4.14	
Paranoid Ideation	Mean	6.78	3.22	3.13**
	SD	5.08	2.99	
Psychoticism	Mean	7.33	3.59	2.30
	SD	6.69	5.14	
Fathers				
SCL total	Mean	49.19	23.67	2.32*
	SD	43.30	37.42	
Somatization	Mean	8.22	4.26	1.99
	SD	8.46	5.92	
Obsessive-Compulsive	Mean	5.15	3.67	1.04
	SD	6.64	4.82	
Interpersonal Sensitivity	Mean	6.22	2.59	2.27
	SD	6.85	4.70	
Depression	Mean	10.85	4.22	3.05**
	SD	9.09	6.72	
Anxiety	Mean	4.70	2.59	1.71
	SD	4.62	4.46	
Anger-Hostility	Mean	6.11	1.59	3.85**
	SD	5.57	2.48	
Phobic Anxiety	Mean	1.48	1.19	0.38
	SD	2.61	3.05	
Paranoid Ideation	Mean	3.56	1.85	1.82
	SD	4.04	2.73	
Psychoticism	Mean	2.89	1.70	0.89
	SD	5.32	4.44	

Note: *p<.05. **p<.01.