

Autonomy Disturbances in Subtypes of Anorexia Nervosa

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This study examines the hypothesis, derived from several theories, that disturbances in the development of autonomy are a central psychological feature in anorexia nervosa. Several measures relevant to autonomy, including the General Causality Orientations Scale (Deci & Ryan, 1985b), Structural Analysis of Social Behavior (Benjamin, 1977), Mutuality of Autonomy Scale (Urist, 1977), and Family Environment Scale (Moos, 1974) were administered to 19 restrictive anorexics, 14 bulimic anorexics, and 17 normal control subjects. All three groups were matched for age, sex, race, education, and marital status; the anorexic groups were matched for current percentage of ideal body weight, duration of illness, and treatment history. We hypothesized that both restrictive and bulimic anorexics would evidence greater problems with autonomy than would controls and, further, that the three groups would show differential patterns of response on these measures. Results largely confirmed these hypotheses. The restrictors experienced a greater sense of impersonal causality than did either the bulimic anorexics or the controls. Compared with the control group, both restrictive and bulimic anorexic groups exhibited poorer self-concept, more pathological object relations, and more disturbed family interactions. We concluded that problems with autonomy-related issues are prominent in anorexia nervosa and that different subtypes may be associated with distinct forms of autonomy disturbance.

Anorexia nervosa is a psychosomatic disorder characterized by extreme weight loss, disturbed body image, and intense fear of becoming fat (American Psychiatric Association, 1980). Among the psychological features most often associated with this syndrome is a deviation in the development of autonomy (Garfinkel & Garner, 1982). Deficits in autonomy and initiative figure heavily in diverse etiological theories, including individual psychodynamic (Bruch, 1973, 1982), object-relational (Goodsitt, 1977; Masterson, 1977; Sours, 1980), and family-systems (Minuchin, Rosman, & Baker, 1978; Selvini-Palazzoli, 1971) perspectives. Although autonomy disturbances appear to be a common theme in the clinical literature, empirical confirmation is largely absent (Hsu, 1983). Thus in this study we sought to explore the nature of autonomy deficits in patients with anorexia nervosa. To accomplish this goal, we had to ascertain the specific autonomy disturbances postulated to underlie anorexia nervosa.

Bruch (1973, 1982) defined the anorexic's difficulties with autonomy as a "struggle for control, for a sense of identity, competence, and effectiveness" (1973, p. 251). A triad of major psychological manifestations result from these autonomy difficul-

ties: distortions of body image, misperceptions of internal states, and most centrally, a paralyzing sense of ineffectiveness. Several investigators have attempted to assess the anorexic's sense of ineffectiveness by using measures of locus of control (Rotter, 1966). The results have largely been disappointing (Basseches, 1979; Hood, Moore, & Garner, 1982; Strober, 1982).

Object relations theorists (e.g., Goodsitt, 1977; Masterson, 1977; Sours, 1980) have also offered accounts of autonomy deficits in anorexia nervosa. At the most general level, these theorists hold that the experience of autonomy depends on the development of a cohesive self (Kohut, 1971) through successful differentiation of the self-representation from object representations. Goodsitt (1977) and others have specifically suggested that the cohesive self is underdeveloped in anorexia nervosa, and consequently, the anorexic's experience of integrity and autonomy is impaired. Very little research has tested object-relational postulations empirically. Only two investigations bear even indirectly on self- and object representations in anorexia nervosa (Strober & Goldenberg, 1981; Sugarman, Quinlan, & Devenis, 1982), and their findings were contradictory and inconclusive.

Minuchin, Rosman, and Baker (1978) described the anorexic's autonomy difficulties as emblematic of familywide grappling with boundaries and individuation. They noted five predominant characteristics of anorexic families, all antithetical to the development of autonomy: (a) enmeshment, (b) overprotectiveness, (c) rigidity, (d) conflict avoidance and, when conflicts do arise, poor conflict resolution, and (e) involvement of the anorexic child in parental conflict. Past research has confirmed some of these hypotheses (Strober, 1981; Yager, 1982). Yet, other authors have argued that caution is warranted in the search for a single autonomy-stifling family pathology (Garfinkel et al., 1983).

This research was supported in part by National Institute of Mental Health Grant 5-T32-MH17074 and by a faculty grant from the University of Rochester.

Valuable assistance in various phases of this project was provided by Richard Kreipe, Christopher Hodgman, Joan Sobel, Elizabeth McAnarney, Donna Hinerman, and Mitchell Wittenberg. Thanks also to the many psychiatrists, psychologists, and counselors who aided in subject recruitment.

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Autonomy generally refers to the experience of choice and freedom in relation to oneself and to others. These theories of anorexia nervosa all posit problems in self-direction, yet each emphasizes a different aspect. Seeking to reflect these varied facets, we examined disturbances in autonomy through their manifestation in measures of ineffectiveness, intrapersonal and interpersonal autonomy, self- and other differentiation, and family dysfunction.

A second goal of this study was to determine whether different patterns of autonomy disturbance characterize subtypes of anorexia nervosa. Current opinion holds that there are at least two subtypes of anorexics: those who binge eat (bulimic anorexics) and those who consistently restrict their intake (restrictors) (e.g., Casper, Eckert, Halmi, Goldberg, & Davis, 1980). For example, relative to restrictors, bulimic anorexics tend to have increased difficulty with impulse control, increased social and sexual contact, increased psychopathology (especially affective disorders and borderline personality), differential pharmacologic response, and poorer prognosis (e.g., Garfinkel & Garner, 1982; Halmi, Eckert, LaDu, & Cohen, 1986). However, a recent investigation (Toner, Garfinkel, & Garner, 1986) suggests that restrictive and bulimic anorexics may have similar outcomes at long-term follow-up. Thus, although theoretical accounts do not address this subclassification, it seemed important to assess the extent to which restrictors and bulimic anorexics might manifest different difficulties with autonomy.

Method

Subjects

Subjects were White women between 16 and 31 years of age. The two anorexic groups were recruited from the practices of pediatricians, psychiatrists, and psychologists practicing in a metropolitan area in western New York. Of the 40 patients recruited, 39 (97.5%) agreed to participate; one restrictor declined. Thirty-three subjects (82.5%) completed the study; 1 of the 21 restrictors and 5 of the 19 bulimic anorexics did not return their questionnaires. All subjects met the Pathology of Eating Group criteria for anorexia nervosa (Garrow et al., 1975) and weighed less than 80% of ideal body weight (Metropolitan Life Insurance Society of Actuaries, 1959) at entry into the study, and their symptoms were not secondary to any other psychiatric or medical condition. In addition, none of the restrictors had engaged in binge eating (defined as rapid consumption of at least 1,200 calories excluding meals) more than once a month at the time of entry into the study. All of the bulimic anorexics met the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1980) criteria for bulimia except for the stipulation that the bulimia not be due to anorexia nervosa.

Thirty-two subjects, all of whom weighed between 80% and 110% of ideal body weight, were recruited simultaneously from posters at the University of Rochester Medical Center advertising a study entitled "Thoughts and Feelings About Body Image" and from a large introductory psychology course. The Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982) was used as a screening device to attenuate the likelihood of undiagnosed eating pathology in these women. Seventeen of these subjects (12 from introductory psychology and 5 from the posters) scored below the cutoff score of 19 (Garner et al., 1982) and served as controls. Because eating pathology could not be ruled out, the 15 women who scored above this cutoff were excluded from the control group.

The three groups did not differ in age ($M = 20.8$ years, $SD = 3.8$), education ($M = 12.9$, $SD = 2.0$), or marital status (92% single). As seen

in Table 1, anorexic groups did not differ on their EAT-26 score, current percentage of ideal body weight, duration of eating problem, hospital admissions (67% currently hospitalized, 12% formerly hospitalized), or outpatient psychotherapy (88% in therapy). Also reported are scores on the Beck Depression Inventory (Beck, 1978). This 21-item self-report measure has frequently been used in studies of eating pathology and was included to verify that subjects in this investigation resembled others reported in the literature. Overall these subject characteristics are consistent with past descriptions of anorexic patients (e.g., Garner, Garfinkel, & O'Shaughnessy, 1985) and suggest that the current samples are representative of the more general populations from which they were drawn.

Procedure

All subjects were introduced to the research as a study of thoughts and feelings about body image. At the initial meeting, the subject signed a consent form, scheduled a 1-hr Rorschach testing session, and received a preaddressed, stamped envelope containing the testing instruments.¹ The instructions included in the envelope indicated that the subject might take up to 3 weeks to complete the measures. After the envelope was returned and the measures scored, the subject was contacted for a follow-up meeting during which the experimenters provided a nominal participation fee (\$5) and feedback about results.

Measures

General Causality Orientation Scale. The General Causality Orientation Scale (Deci & Ryan, 1985a, 1985b) measures a person's perception of the sources of behavior initiation and regulation, known as "causality orientations." Deci and Ryan (1985a) described three orientations, which correspond to the three subscales of the General Causality Orientations Scale: Autonomy, Control, and Impersonal (ACI). An autonomy orientation reflects the experience of interest and choicefulness in the regulation of behavior. The control orientation implies that a person is predominantly attuned to external controls or pressures in regulating behavior. Finally, the impersonal orientation characterizes the view that forces in the world or within oneself are uncontrollable and unpredictable; it is marked by feelings of ineffectiveness and helplessness. Impersonal causality was of primary interest in the present study because it was hypothesized to reflect Bruch's concept of a paralyzing sense of ineffectiveness.

The ACI consists of 12 vignettes depicting interpersonal and achievement-related situations. Each is followed by three items, one representing each of three causality orientations. The resulting 36 items are rated along a 7-point Likert scale indicating the degree to which the subject would endorse each motivational orientation. Each subject received three subscale scores: autonomy, control, and impersonal causality orientation. Subscale internal consistency ($\alpha s = .70$ to $.76$) and temporal stability (2-month test-retest reliability = $.71$ to $.78$) were satisfactory. Construct validity may be derived from its high correlation with measures of depression, social anxiety, self-derogation, self-esteem, and other theoretically related constructs (Deci & Ryan, 1985a).

Structural Analysis of Social Behavior (SASB). The SASB (Benjamin, 1977, 1980) describes interpersonal and intrapsychic experiences along perpendicular axes of autonomy and affiliation; only the former dimension was relevant to this investigation. The autonomy dimension assesses the degree to which people experience relationships, either with themselves or with others, as characterized by pressure versus freedom. Two forms of the SASB were used. On the 36-item "Introject" form, subjects indicated their attitudes toward themselves on a 10-point Likert

¹ Several measures of cognitive dysfunction were included in this battery and have been reported separately (Strauss & Ryan, in press).

Table 1
Means, Standard Deviations, Ranges, and Analysis of Variance Results for Demographic Data and Clinical Characteristics

Variable	Restrictors (N = 19)			Bulimics (N = 14)			Controls (N = 17)			F	p
	M	SD	Range	M	SD	Range	M	SD	Range		
Eating attitudes test	43.2	15.1	19–66	40.2	16.4	15–62	4.9	4.0	0–12	45.90	.001 ^{a,b}
Current % of ideal body weight	68.1	6.3	59.5–76.8	73.3	5.6	60.6–78.9	91.4	8.6	77.9–106.3	56.92	.001 ^{a,b}
Duration of eating problem in months	49.7	35.8	2–99	37.9	32.5	4–99	—	—	—	0.90	ns
Beck Depression Inventory	25.0	10.8	10–46	24.8	12.6	3–48	3.6	2.8	0–9	27.77	.001 ^{a,b}

^a Restrictors ≠ controls.

^b Bulimics ≠ controls.

scale (e.g., low autonomy: "I put a lot of energy into making sure I conform to standards"; high autonomy: "I feel free to let my basic nature unfold as it will"). Attitudes toward relationships with "people who are important to you" were rated on the 144-item "Interpersonal" form (e.g., low autonomy: "Insists I follow his norms and rules so that I do things 'properly'"; high autonomy: "Gives me his blessing and leaves me free to develop my own separate identity").² Both the Introject and Interpersonal forms were analyzed using computer programs prepared by Benjamin and her colleagues. To highlight disorders of autonomy, we calculated a score to indicate the relative balance between high and low autonomy on each form; these indexes were labeled *intrapsychic autonomy* and *interpersonal autonomy*.

The SASB assessment system has been demonstrated to have impressive construct validity, established by factor analysis, circumplex analysis, autocorrelation analysis, canonical analysis, and a dimension ratings procedure (Benjamin, 1980). The complexity of the model and statistical procedures precludes discussing this validity in depth here.

Mutuality of Autonomy Scale (MAS). Rorschach responses involving human or animal interactions were scored according to the MAS (Urist, 1977). This rating system, derived from object-relations theory, places each interaction percept on a continuous scale from 1 to 7. Each scale point has explicit scoring criteria (Urist, 1977). Lower scores represent more differentiated, mutually autonomous object representations (e.g., two bears saluting each other). Higher scores denote interactions that compromise the independence of at least one of the participants (e.g., a spider swallowing a crab).

In accord with previous studies (e.g., Urist, 1977) we have used three summary scores from the MAS: the subject's mean object relations score, most pathological or highest score, and least pathological score. Because of the specific coding criteria for responses, interrater reliability of the MAS has been excellent. In the present study the protocols were scored by two independent raters. Rater 1 was a PhD candidate in clinical psychology, and Rater 2 held a bachelor's degree in psychology. Both raters were blind to group membership, and Rater 2 was blind to the study's hypotheses. The intraclass correlation of item ratings between the two raters was .98. Past research has shown the MAS's ability to predict subsequent treatment status of adolescents (Urist & Shill, 1982) and social adjustment in children (Ryan, Avery, & Grolnick, 1985).

Family Environment Scale (FES). Moos (1974) designed the FES as part of a more general attempt to assess social climates. The 90-item true-false scale yields 10 subscale scores, with internal consistency ratings between .64 and .79, item-subscale correlations between .45 and .58, and test-retest reliability between .73 and .86. Six of these subscales were relevant to understanding autonomy and were thus used in the present study: (a) cohesion—the mutual commitment and support

among family members; (b) expressiveness—the extent to which family members openly express feelings and actions; (c) conflict—the amount of aggression, anger, and conflict; (d) independence—the encouragement of self-sufficiency and assertion; (e) organization—order and organization in the family context; and (f) control—the rigidity of the family hierarchy and rules.

Results

Fourteen dependent variables were entered into a multivariate analysis of variance: the General Causality Orientation ACI subscales; the SASB intrapsychic and interpersonal autonomy scores; the MAS's highest, mean, and lowest object-relations scores; and the FES Cohesion, Expressiveness, Conflict, Independence, Organization, and Control subscales. Because an overall group effect was indicated, $F(28, 58) = 3.10, p < .001$, univariate analyses of variance were subsequently conducted. Post hoc multiple pair-wise comparisons were also performed using Tukey's standardized range test; critical differences were determined by a preset p value of .05. Table 2 depicts group means and F values for these analyses.

No differences emerged on the Autonomy and Control subscales of the General Causality Orientation Scale. On the Impersonal Causality subscale, however, restrictors indicated a greater sense of ineffectiveness than did either bulimic anorexics or controls. Both anorexic groups showed less autonomy than controls on the SASB intrapsychic autonomy score. No differences emerged on the interpersonal autonomy score.

The MAS scores suggested that relative to the control group, both anorexic groups exhibited less differentiated self- and other-object representations on average (mean object relations), and also differed on their most pathological (highest object relations) responses.³ There were no group differences on least pathological (lowest object relations) responses.

² The phrase "people who are important to you" was selected after considerable deliberation and pilot work. Initially, separate Interpersonal forms were completed, each dealing with a specific relationship (e.g., parents, boyfriends, bosses). This proved unwieldy. Thus, despite its ambiguity, this umbrella phrase was selected in order to elicit generalized styles of interaction.

³ As reflected in the degrees of freedom, two restrictors and two controls were unavailable for their Rorschach session.

Table 2
Means, Standard Deviations, and Analysis of Variance Results for Autonomy Variables

Variable	Restrictors		Bulimics		Controls		<i>F</i> ^a	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
General Causality Orientation								
Autonomy	67.9	9.2	68.6	8.7	71.0	4.9	0.75	<i>ns</i>
Control	49.4	8.0	48.8	10.0	46.8	8.6	0.40	<i>ns</i>
Impersonal	58.2	6.9	45.8	12.5	37.5	9.2	21.51	.001 ^{b,d}
Structural Analysis of Social Behavior								
Intrapsychic autonomy	0.57	0.18	0.62	0.21	0.83	0.19	9.41	.001 ^{b,c}
Interpersonal autonomy	1.13	0.29	1.13	0.25	1.22	0.22	0.67	<i>ns</i>
Mutuality Autonomy Scale (MAS)								
Mean object relations	2.6	1.0	3.0	1.1	1.8	0.5	6.02	.005 ^{b,c}
Highest object relations	4.1	2.1	4.7	1.8	2.3	0.8	7.87	.001 ^{b,c}
Lowest object relations	1.4	0.3	1.5	0.8	1.5	0.4	0.13	<i>ns</i>
Family Environment Scale								
Cohesion	43.5	15.1	43.4	13.4	54.5	13.1	3.50	.038
Expressiveness	37.1	17.0	35.7	10.0	55.9	10.6	12.04	.001 ^{b,c}
Conflict	56.8	8.2	49.9	11.5	45.4	12.6	4.99	.011 ^b
Independence	43.3	15.7	39.4	17.8	50.0	10.5	2.07	<i>ns</i>
Organization	48.7	12.9	50.2	13.8	49.8	10.6	0.06	<i>ns</i>
Control	52.1	15.2	53.4	14.4	46.0	11.4	1.34	<i>ns</i>

^a For MAS measures, *df* = 2, 42; for all other measures, *df* = 2, 46.

^b Restrictors ≠ controls.

^c Bulimics ≠ controls.

^d Restrictors ≠ bulimics.

The FES detected that both anorexic groups perceived less expressiveness in their families than did the control group. Conflict was reported more by the restrictors than by the controls. The control group tended to view their families as more cohesive than did the anorexic groups. No group differences were obtained on Independence, Organization, or Control subscales of the FES.

Discussion

Theories stressing the anorexic's deficits in autonomy have been prominent for 2 decades without convincing research support. Thus, the present study had two goals: to examine the nature of autonomy disturbances in anorexia nervosa through varied measures and to determine whether restrictive and bulimic anorexics manifest different types of disturbances.

Compared with controls, both anorexic groups exhibited a more controlling style of self-regulation, poorer self- and other differentiation, and poorer family communication. The SASB finding that anorexics experienced more pressure to conform to internal standards corroborates clinical descriptions (e.g., Bruch, 1973) of their "introjected" perfectionistic strivings. Their poor differentiation between self- and other representations, manifested on the MAS, lends credence to object-relational formulations. Finally, the FES results indicated certain family patterns antithetical to autonomy.

These results provide what is perhaps overdue support for the role of autonomy disturbances in anorexia nervosa. However, blanket confirmation was not obtained. On the SASB, anorexics and controls reported equivalent perceptions of autonomy in their relationships with significant people. Furthermore, on

the basis of their healthiest Rorschach responses, anorexics' object representations were indistinguishable from controls'. Finally, the FES data suggested that families of anorexic subjects were not decidedly pathological on all dimensions but rather were characterized primarily by more conflict and less interpersonal expressiveness.

One major difference emerged between restrictive and bulimic anorexics. On the General Causality Orientation Scale (Deci & Ryan, 1985a), a pervasive sense of ineffectiveness seemed uniquely characteristic of the restrictors; their high level of impersonal causality was significantly more elevated than that of either the bulimic anorexics or controls. This finding was in some sense counterintuitive because previous research suggests that bulimic anorexics often manifest greater psychopathology than do restrictors. Feelings of ineffectiveness, however, are not synonymous with psychopathology nor have they been adequately assessed in the past. A paralyzing sense of ineffectiveness may be as potent a deficit for restrictors as affective and impulsive disorders are for bulimic anorexics, thus accounting for the similar long-term outcomes for these two subtypes (Toner et al., 1986).

The present findings are largely descriptive and therefore cannot directly address the role of autonomy-related issues in the etiology and maintenance of anorexia nervosa. Indeed, Shapiro (1981) hypothesized that autonomy deviations are common to many forms of psychopathology. The factors that might lead women who evidence problems in autonomy to manifest the specific features of anorexia nervosa await further research. Nonetheless, this study does support the widespread clinical observation that autonomy disturbances are central to this enigmatic disorder.

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Received October 17, 1986

Revision received February 26, 1987

Accepted March 2, 1987 ■