BRIEF REPORT

Sex Role Identity and Anorexia Nervosa

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ABSTRACT

Much controversy surrounds the issue of sex role identity in anorexia nervosa. In this study, 16 inpatient and 13 nonhospitalized anorectic women were compared with each other on the Bem Sex Role Inventory and with two non-eating-disordered control groups of women, one consisting of 16 undergraduate students and the other of 16 students pursuing graduate degrees in social work. No significant differences in scores were found between the two groups of anorectic subjects, and both control group scores also showed no significant differences. However, while femininity item scores were similar in all four groups, both groups of anorectic subjects scored significantly lower on the masculinity items than both control groups. No significant correlations were found in the anorectic subjects between masculinity item score and percentage of ideal body weight, duration of illness, or extent of education.

An interpretation of anorexia nervosa as primarily a rejection or a caricature of the feminine role is challenged by this study. Rather, the results suggest that one characteristic of those women vulnerable to developing this syndrome may be a failure to develop adequately those "masculine" traits that are also necessary for optimal adult female functioning in contemporary society.

Anorexia nervosa remains an enigmatic condition. One aspect that has been of particular interest to many in the field is the role of sexual identity in the pathogenesis of the disorder. It has been speculated, for example, that anorexia nervosa is a rejection of adult femininity, a refusal to accept the inevitability of becoming a sexually mature woman (Frick & Schindler, 1972; Muller & Beck, 1973).

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The usual absence of this syndrome as a clinical entity prior to the onset of puberty, the inevitable amenorrhea, and the retardation of secondary sexual characteristics consequent to the emaciation indeed suggest that the origins of anorexia nervosa may be related to psychosexual immaturity and conflict. Adjustment to menarche, for example, is said to be particularly problematic for those at risk for anorexia nervosa (Crisp, 1980; Bruch, 1978).

Puberty and adolescence, then, with their evolving alterations in physical appearance, sexual characteristics, social relationships, and family interactions, are critical transitional experiences for the potential anorectic girl (Crisp, 1980). Bruch (1973) states that the future anorectic patient, subject to conflicts over initiative and autonomy, is unprepared to assume the independence and responsibilities introduced during adolescence after a childhood of precarious dependability and obedience. Thus, her reaction to the biological changes of puberty and the social changes of adolescence is one of retreat from the apparent demands of female adulthood coupled with an attempt to establish a sense of control over herself. Herein lies the rub: Boskind-Lodahl (1976) contends that such features in fact reflect an over-compliance with, rather than a rejection of, adult femininity. Based on her work with "bulimarexic" women, she suggests that these young women, by pursuing thinness so relentlessly, actually seek to achieve the culturally stereotyped ideal feminine form and role. Orbach (1978) suggests that the anorectic woman both rejects and exaggerates the feminine role: While she lacks prominent female secondary sexual characteristics, she has become excessively petite and fragile.

The problem may in fact be far more complex than these writers have suggested, for we must discern the more fundamental question: What personality characteristics are actually present in the psychologically healthy adult female? We are in an era of transition: Masculine and feminine traits are no longer perceived as opposite ends of a single dimension, but rather as coexisting and sometimes overlapping qualities in the same individual (Bardwick, 1979). Hence, the androgynous concept of mental health has been proposed; this suggests that healthy persons of both sexes manifest an integration of both "masculine" and "feminine" traits (Bem, 1972).

These insights into the nature of sex roles in contemporary Western society could be relevant to our understanding of the recent dramatic increase in the incidence of anorexia nervosa. This increase has coincided with the changing role of women in our culture and the accompanying changing definition of the traits that characterize the sexes.

Empirical clinical observations that we had made in a large number of anorectic patients led us to suspect that the anorectic woman's problems in life adjustment were not due to a deficiency in those qualities traditionally associated with feminine role identity in our culture. She usually seemed no more or less nurturing, sensitive, or affectionate than her peers. Rather, it appeared as if she had failed to incorporate those traditionally "masculine" traits, such as aggressive self-reliance, that are now particularly essential for optimal functioning by a woman in Western society. In other words, perhaps the range

of her potential behaviors was too constricted to permit her to adjust flexibly and competently to the vicissitudes of becoming an adult. Could anorexia nervosa thus provide a "safety net" for those individuals who are unable to cope with the next stage of developmental tasks, particularly when such tasks require an increase in the more traditionally masculine behaviors?

The investigation reported here is a pilot one, designed to study more operationally than heretofore these clinical conjectures. It was our hypothesis that anorectic women would not differ from their peers on feminine identity traits, but would differ from control cohorts on traits characteristically associated with masculine identity.

SUBJECTS AND PROCEDURES

Four groups of women comprised the subjects for the study. The first group consisted of 16 inpatient anorectic women who had been admitted for participation in psychoendocrine research studies in the clinical research center of Montefiore Medical Center. The second group consisted of 13 nonhospitalized anorectic women, 11 of whom were in active outpatient treatment at the time of the study; four of the nonhospitalized anorectic subjects had been participants in the inpatient studies two years earlier. All subjects in both of these groups met the diagnostic criteria for anorexia nervosa of Garfinkel, Moldofsky, and Garner (1980) and were medication-free for at least two weeks prior to the study. Table 1 summarizes mean weight and illness duration for these two groups.

TABLE 1

Group Mean Values for Percentage Ideal Body Weight and Duration of Illness for Inpatient and Nonhospitalized Anorectic Subjects

Group	Ideal Body Weight (%)	Duration of Illness (Years)
Inpatient AN	78.7 (±16.2)	7.3(±5.0)
Nonhospitalized AN	82.5 (± 8.5)	4.6 (±2.9)

The other two groups consisted of 16 female part-time undergraduate students and 16 female students pursuing graduate degrees in social work, respectively. These subjects were matched for age and socioeconomic status with the anorectic subjects; mean values for age and extent of education for all four groups are given in Table 2. All control subjects were within 15% of their ideal body weight. Two different control groups were chosen to decrease the likelihood of selecting one control group that might, by chance, be either strikingly similar to or different from the anorectic experimental groups. Thus, the subjects in the first control group were attending school only part-time, had not completed college, and were working in nonprofessional jobs; the subjects in

TABLE 2

Group Means Values for Age and Extent of Education for Inpatient and Nonhospitalized Anorectic Subjects and for Undergraduate and Social Work Graduate Student Control Subjects

Group	Age (Years)	Length of Education (Years)
Inpatient AN	25.2 (±5.8)	15.1 (±1.9)
Nonhospitalized AN	25.3 (±5.4)	14.9 (±1.9)
Undergraduate Control	25.2 (±5.8)	14.5 (± .7)
Social Work Student Control	25.3 (±5.7)	16.0 (± .9)

the second group were full-time participants in a graduate program leading to an M.S.W. degree and were presumably career oriented.

The Bem Sex Role Inventory (BSRI) (Bem, 1974) was used to assess sex role identity. This paper and pencil self-rating questionnaire consists of 20 "masculine" personality characteristics (e.g., ambitious, self-reliant, independent, assertive), 20 "feminine" personality characteristics (e.g., affectionate, gentle, understanding, sensitive to the needs of others), and 20 "neutral" characteristics (e.g., truthful, happy, conceited, unsystematic), which serve as filler items. The subject must rate herself from 1 ("Never, or almost never, true") to 6 ("Always, or almost always, true") for each characteristic. The "masculine" and "feminine" items, obtained from a large pool of descriptors, were rated by both males and females as significantly "more desirable" in American society for the respective sexes. Masculinity and femininity are treated as two orthogonal dimensions rather than as two ends of a single dimension. Bem (1979) has indicated that the masculinity and femininity scales can be used as contrasting indices, as well as being combined to give an overall "androgyny" score.

Moreover, scoring on these scales has been shown empirically, as well as conceptually, to be independent of each other (Bem, 1974). Clearly, this scale reports self-perception of one's characteristic traits; it does not examine concrete behaviors, but does reflect the sense of self that presumably relates significantly to manifest conduct.

The anorectic inpatients were administered the BSRI on the first day of admission to the clinical research center by the experimenter (T.S.). The testing occurred after a brief introduction to the floor by the nursing staff and prior to medical examination. Nonhospitalized anorectic subjects were administered the BSRI in an outpatient setting, while control subjects received it in the classroom. All subjects were given the test materials and asked to follow the accompanying written instructions. BSRI scoring was done according to the method delineated by Bem (1974), each subject receiving mean scores for masculine and feminine items, respectively.

RESULTS

Group mean scores averaged out per masculine and feminine item are given in

TABLE 3

Group Mean Values for Average Score per Masculine and Feminine Item for Inpatient and Nonhospitalized Anorectic Subjects and for Undergraduate and Social Work Graduate Student Control Subjects

Group	Average Scores Per Masculine Item*	Average Scores Per Feminine Item
Inpatient AN	3.77 (±1.74)	4.69 (±1.88)
Nonhospitalized AN	3.28 (±1.68)	4.68 (±1.80)
Undergraduate Control	4.48 (±1.85)	4.57 (±1.87)
Social Work Student Control	4.39 (±1.84)	4.65 (±1.87)

* Mean AN group masculinity scores vs. mean control group masculinity scores: $p < .01$

Table 3. Analysis of variance (ANOVA) of the BSRI results indicated that each group of anorectic patients had a significantly ($p<.01$) lower mean masculinity score than both groups of normal subjects had. The ANOVA was followed by an au pair Fischer protected *t*-test on the differences between the means and by three specific comparisons using Scheffe tests. These analyses found no significant difference between the two control (normal) group mean masculinity scores and no significant difference between the two anorectic group mean masculinity scores, but a significant difference between both anorectic and both control group mean scores ($p<.01$). In fact, not only was the comparison significant, but the effect size was also large in magnitude ($f=.57$) (Cohen, 1977). No significant differences in femininity scores were found among all four groups. Pearson product-moment correlations were performed to determine whether any relationship might exist between the masculinity scores of the two groups of anorectic subjects and several variables that conceivably could have influenced outcome measures. The results, however, indicated no significant correlations between BSRI scores and duration of illness ($r=.07$), percentage of ideal body weight ($r=.08$), or extent of education ($r=-.16$).

DISCUSSION

The general hypothesis was supported: Anorectic women, both hospitalized and nonhospitalized, scored significantly lower than two different groups of nonanorectic, nonhospitalized, functioning women on a scale measuring masculine role traits, but did not demonstrate a significant difference from them on feminine trait scores.

The possible importance of these data becomes evident when we examine the consequences that a paucity of masculine traits appears to have for females in general. Macoby (1966) associated greater intellectual development with masculinity in girls. Baruch and Barnett (1975) found that perceiving oneself as having traditionally feminine traits is unrelated to self-esteem, while perceiving oneself as having traditionally masculine traits is associated with high

self-esteem. Also, girls who characterized themselves and their fathers as ascendant-dominant (masculine) were found to be more confident, self-reliant, competitive, assertive, and self-accepting than were girls who saw both themselves and their mothers as passive and retiring (Williams, 1973).

In general, masculinity is associated with an orientation that suggests assertiveness, perseverance, self-confidence, and independence (Bem, 1972). Broverman and associates (1970) asked clinicians to identify those traits associated with the "healthy man," the "healthy woman," and the "healthy adult." Both male and female clinicians identified the same traits as characterizing both the healthy man and the healthy adult. The healthy woman, however, was found to be significantly different. A few years later, Fabrikant (1974) conducted a follow-up study and found that mental health criteria had changed: The healthy woman was now synonymous with the healthy adult. This redefinition of sex roles, however, has been rather sudden and has possibly contributed to a great deal of sex role confusion for women.

The implication for treatment suggested by this study would thus seem related to facilitating the development of such "masculine" traits. It is interesting to note that two of the nonhospitalized anorectic subjects who participated initially as inpatients in this study showed an increase on the follow-up testing of 1.3 and 1.6, respectively, in their mean masculinity item scores. Their weights and their general global presentations had improved as well. Both of these patients had participated in a treatment approach that used assertion training and focused on issues particularly relevant for women functioning in a changing sociocultural context. In contrast, the other two patients who were also tested both on an inpatient and a nonhospitalized basis showed insignificant changes in their mean masculinity scores ($-.65$ and .95, respectively). These two women had declined treatment during the test-retest interval. Consequently, we wonder whether the BSRI could not prove to be a valuable tool for assessing the efficacy of treatment.

In concluding, however, we should note that this pilot study has certain limitations that are not trivial. First, and foremost, responses of the anorectic subjects may in fact be a consequence of the disorder itself, i.e., any serious illness may curtail feelings of assertiveness, confidence, and leadership, thereby significantly influencing responses on a scale that taps precisely such traits. Hence future studies of this aspect of anorexia nervosa should include a group of age-matched females with some other debilitating illness (medical and psychiatric) to test this possibility. On the other hand, it is also conceivable that even if these self-perceptions are merely secondary to the illness, they may then serve to sustain the eating disorder because they are likely to impair further self-confidence and adaptability. Second, the number of subjects in this study was relatively small, and significant correlations may emerge in a larger group between masculinity scores and those variables for which none was observed here (i.e., percentage of ideal body weight, duration of illness, or extent of education). Third, most of our anorectic subjects were older and more chronic than many anorectic patients; although we could find no correlation between

masculinity scores and duration of illness, it is conceivable that younger, more acute, anorectic subjects would score differently on the BSRI.

Nevertheless, the results of this study are provocative, particularly in light of the dramatic increase in the incidence of anorexia nervosa in recent years. The sociocultural changes that may be associated with this escalation clearly require further examination. We believe that an exploration of sex role identity, as perhaps a critical mediating variable, may yield information helpful in understanding, preventing, and treating this potentially pernicious disorder.

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