

Body Image and Depression in Women With Early and Late Onset Obesity

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ABSTRACT. Three groups of women ($N = 27$ in each group) were compared: women of normal weight and asymptomatic for eating disorders ($M = 125.5$ lb); women with early onset obesity—before 13 years ($M = 182.4$ lb); and women with adult onset obesity—17 years or over ($M = 172.4$ lb). Subjects (M age = 40.7 years) were obtained through church and business groups. Body image and depression were assessed, respectively, by three scales of the Body-Self Relations Questionnaire (Winstead & Cash, 1983) and by the Beck Depression Inventory (Beck, 1967). The combined group of obese subjects rated their bodies as less fit than normal weight subjects ($p < .01$). However, there were no other significant differences between obese and normal weight subjects. Also, no significant differences were found between the early and late onset groups. Results showed that (a) there is a subpopulation of obese women who are relatively satisfied with their bodies and whose psychological adjustment is no different from that of other women, and that (b) an early onset of obesity does not necessarily have more serious psychological consequences than late onset.

OBESE WOMEN are believed to have an extremely negative body image (Bruch, 1973, 1975, 1977, 1980; Crisp Kalucy, Pilkington, & Gazet, 1977; Glucksman, Ránd, & Stunkard, 1978; Halmi, 1980; Rand & Stunkard, 1977, 1978; Solow, Silberfarb, & Swift, 1974; Wampler et al., 1980). A liking for one's body is supposed to be especially low if the obesity developed before adulthood (Brownell & Stunkard, 1980; Bruch, 1981; Penick & Stunkard, 1973; Rand & Stunkard, 1977; Stunkard, 1976, 1980; Stunkard & Burt, 1967; Stunkard & Mendelson, 1967, 1973).

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Unfortunately, prior literature on which these beliefs about body image are based is methodologically flawed. Much of it is clinical, which means that objective measurement is lacking (Bruch, 1973, 1975, 1977, 1980, 1981; Crisp et al., 1977; Halmi, 1980; Solow, 1977; Stunkard & Burt, 1967; Stunkard & Mendelson, 1967). Even when objective measurements were used, investigators did not always include control groups (Solow et al., 1974; Wampler et al., 1980) and therefore statistical comparisons were not made.

In one series of papers (Rand & Stunkard, 1977, 1978; Stunkard, 1980), statistical comparisons were made, but they were largely irrelevant because the underlying data were suspect. What made the data suspect was that they were obtained not from the subjects themselves (who were never questioned at any time) but from their psychiatrists, who commented retrospectively on their own perceptions of how certain of their patients viewed their bodies. Moreover, the psychiatrists' responses were made to a mail questionnaire on which there was a remarkably low return rate (13%).

A final methodological flaw concerns the nature of the population that has been studied. The great bulk of prior literature deals with individuals who have sought help, in psychotherapy (e.g., Bruch, 1973; Rand & Stunkard, 1977, 1978), at a diet clinic (e.g., Hammar et al., 1972; Stunkard & Mendelson, 1967), or at a surgical facility (e.g., Crisp et al., 1977). As critics have noted (Loader, 1985; McReynolds, 1982; Rodin, 1982), such individuals constitute a select population, one that may not be typical of all obese individuals.

In addition to a disturbance in body image, obese women have been said to suffer from an underlying depression. Here, the data are conflicting. Clinical observations support the idea of an underlying depression (Bruch, 1981; Glucksman et al., 1978; Hopkinson & Bland, 1982; Rand & Stunkard, 1977, 1978; Wolman, 1982), but objective measurements often fail to demonstrate the expected effect (Brownell & Stunkard, 1980; Crisp, Queenan, Sittampaln, & Harris, 1980; Hutzler Keen, Molinari, & Carey, 1981; Williamson, Kelley, Davis, Ruggerio, & Blouin, 1985; Wise & Fernandez, 1979). A further problem that arises in evaluating the evidence on depression is that, in a number of the empirical studies, control groups were omitted (Brownell & Stunkard, 1980; Hutzler et al., 1981) or statistical comparisons were not done between the obese and normal groups (Crisp et al., 1980).

The major purpose of the present study was to reexamine old ideas about the relationship between psychological disturbance and obesity, but to improve upon the methodology of earlier studies. First, subjects came from the general population; they were not individuals who had sought help from professionals. Second, objective measures were employed and statistical comparisons were made among three sets of women: those with an early onset of

obesity; those with a late onset of obesity; and normal weight, asymptomatic women. Third, for body image, a newly developed test was used (Cash, Winstead, & Janda, 1986; Winstead & Cash, 1983). The Body Self-Relation Questionnaire provides more detailed information than can be obtained with traditional measures such as the Body Cathexis Questionnaire (Secord & Jourard, 1953). Specifically, it yields scores not only for the degree to which the body is liked and found attractive but also for the degree to which the body is viewed as fit and healthy.

Three specific questions were asked. Do obese women have a poorer body image than women of normal weight? Are obese women more depressed than women of normal weight? Are both depression and body image disturbance greater in women with early onset of obesity than in women with late onset of obesity?

Method

Subjects

The sample was nonrandom and consisted of female volunteers between the ages of 20 and 60 years obtained through church and business groups in the Los Angeles area. There were three groups of subjects ($N = 27$ in each group): those with an early onset of obesity (before 13 years), those with a late onset of obesity (17 years or over), and women of normal weight. To be included in one of the obese groups, a woman had to be at least 20% over her ideal weight as determined from the Metropolitan Life Insurance Company tables (1983). To be included in the normal weight group, a woman had to be within 10% of her ideal weight, as determined from the same source, and also be asymptomatic for eating disorders. Specifically, there had to be no history of anorexia or bulimia, no self-report of past or present behaviors indicative of an eating disorder, and no history of obesity (criteria taken from Thompson & Thompson, 1986).

To use the Metropolitan Life Insurance Company tables (1983) as a means of determining the extent to which the subject deviated from her ideal weight, the subject's height, weight, and a characterization of body frame were required. Information about height and weight was provided by the subject. Information about the body frame was obtained by measuring the subject's wrist on the nondominant hand. Up to 7 in. was considered a small frame; a medium frame was 7 to 10 in., and a large frame was above 10 in. (Christopher, 1985).

A series of my own questions was used to sort subjects. If a woman was 20% overweight, she was a candidate for inclusion in one of the two obese groups. If a woman was within 10% of normal weight, she was a candidate

for inclusion in the normal weight group. She was eliminated as a potential subject, however, if she met one or more of the following criteria: (a) made more than one positive answer to questions about eating binges; used laxatives, suppositories, and diuretics; vomited intentionally after eating; missed menstrual cycles three times or more in a row (excluding pregnancy and menopause); (b) had lost or gained more than 11 pounds in one month in the past; (c) had been more than 10% above or below her ideal weight for one month or more in the past (excluding illness and pregnancy). On the basis of these criteria, 7 potential subjects were eliminated from the normal weight group.

Materials

The Body Self-Relations Questionnaire (Cash et al., 1986; Winstead & Cash, 1983) was used to assess body image. On this 140-item test, subjects are presented with a series of statements about the body and they respond on a 5-point scale that ranges from *definitely agree* at one end to *definitely disagree* at the other end. The higher the score on any of its scales, the more positive is that aspect of body image.

Because the test is relatively new, it is necessary to explain why it was chosen over an older and better-known instrument, the Body Cathexis Questionnaire (Secord & Jourard, 1953). Unlike the older test, which simply assesses how much an individual likes or dislikes particular parts of the body (e.g., waist, face), the Body Self-Relations Questionnaire provides information about how the person feels with respect to three domains: affective (how much the individual likes the body), cognitive (how much attention and importance is attached to that aspect of body image), and behavioral (what steps the individual would take to change). The Body Self-Relations Questionnaire also does something else that is not accomplished with the earlier test: It separately assesses three aspects of body image—appearance, fitness, and health. Instead of providing a single score, as does the older test, the Body Self-Relations Questionnaire yields scores on nine subscales (obtained by multiplying the three domains cited above by the three aspects of body image). To simplify the analysis of data in the present study, only three of the nine possible subscales were used: Appearance, Fitness, and Health.

The major virtue of the Body Self-Relations Questionnaire is that it is broader in scope than the Body Parts Satisfaction Scale. It was designed to take into account the theoretical arguments of Bruch (1973) and of Cash et al. (1986) that body image is a complex phenomenon that cannot be adequately assessed by means of a single score on a single test, especially if that single test does nothing more than tap affective responses to superficial aspects of appearance.

Reliability and validity data have been published and are not repeated here (Winstead & Cash, 1983). The test has been used successfully in a number of recent investigations (Cash & Cash, 1982; Cash, Cash, & Butters, 1983; Cash & Smith, 1982) in which a measure of body attitude was necessary. The test has been used not only with obese subjects but also with normal weight individuals. Moreover, it has been used with college and with noncollege populations.

The Beck Depression Inventory was used to assess depression. This test (Beck, 1967) is a widely used 21-item instrument of known reliability and validity (Beck & Beamesdorfer, 1974; Bumberry, Oliver, & McClure, 1978). The subject picks from each set of four statements the one that best represents her recent feelings; the higher the score, the greater the degree of depression.

In addition to the formal measures, a brief questionnaire was used to sort subjects into groups; it provided information both about physical characteristics (e.g., height) of individual subjects and about the demographic characteristics (education, marital status, etc.) of the sample as a whole.

Procedure

Subjects were tested only once, at their convenience; testing was done in my office. The data were analyzed by means of one-way independent groups analyses of variance (ANOVAs), followed, if appropriate, by post hoc comparisons (Keppel, 1982). One such comparison was between the two obese groups; the other comparison was between the normal weight group and the combined obese group.

Results

On the Beck Depression Inventory, the ANOVA revealed no significant effect for group, $F(2, 78) = 1.29, p > .05$, and so no post hoc tests were necessary. The findings were similar for two of the three scales of the Body Self-Relations Questionnaire, the Appearance scale, $F(2, 78) = 1.87, p > .05$, and the Health scale, $F(2, 78) = 2.46, p > .05$. Only on the Fitness scale of the same test was a significant effect found for group, $F(2, 78) = 4.89, p < .01$. Post hoc comparisons (see Table 1) showed that the combined group of obese subjects ($M = 2.59$) obtained significantly lower scores ($p < .01$) than the normal weight group ($M = 2.92$) and that women with early onset of obesity ($M = 2.50$) did not differ significantly from women with late onset of obesity ($M = 2.69$).

On questionnaire items pertaining to physical characteristics, the groups did not differ significantly in height, $F(2, 78) = 0.27, p > .05$, or in body

TABLE 1
Post Hoc Comparisons of Scores on the Fitness Scale of the
Body Self-Relations Questionnaire

Comparison	<i>df</i>	Mean square	<i>F</i>
All obese versus normal	1	1.90	7.60*
Early versus late	1	0.48	1.92
Within groups	78	0.25	

* $p < .01$.

build, $\chi^2(2, N = 78) = 0.83, p > .05$. The average subject was 64.67 in. and was of small body build. However, as expected, the groups differed significantly in weight, $F(2, 77) = 49.68, p < .001$. The combined group of obese subjects ($M = 177.45$ lb) weighed significantly more, $F(1, 78) = 97.00, p < .001$, than the normal group ($M = 125.51$ lb), but the two obese groups did not differ significantly from one another, $F(1, 78) = 2.68, p > .05$.

There were significant effects also for highest and lowest weight reached; the comparisons are shown in Table 2. The maximum weight reached by the combined obese group ($M = 189.86$) was significantly higher than that of the normal group ($M = 134.66$), and the minimum weight reached by the combined obese group ($M = 128.70$) was significantly above that of the normal group ($M = 112.25$). There were corresponding differences between the early and late obesity groups. The maximum weight reached by the early obesity group ($M = 198.18$) was significantly higher than that of the late

TABLE 2
Post Hoc Comparisons of Groups With Respect to Highest and Lowest
Weight Level Reached

Comparison	<i>df</i>	Mean square	<i>F</i>
Highest weight			
All obese versus normal	1	54851.68	70.41*
Early versus late	1	3733.51	4.79***
Within groups	78	779.00	
Lowest weight			
All obese versus normal	1	4870.84	18.60*
Early versus late	1	2191.15	8.37**
Within groups	78	261.77	

* $p < .001$. ** $p < .01$. *** $p < .05$.

obesity group ($M = 181.55$), and the minimum weight reached by the early obesity group ($M = 135.07$) was significantly above that of the late obesity group ($M = 122.33$). The groups did not differ, however, with respect to how long they had stayed at their maximum, $F(2, 68) = 0.51, p > .05$, and minimum, $F(2, 67) = 1.16, p > .05$, weights.

For the most weight gained in a single month, the groups did not differ significantly, $\chi^2(6, N = 81) = 7.34, p > .05$. Regardless of group, the majority of subjects (71%) had gained no more than 11 pounds in one month. For the most weight lost in a single month, there was a significant effect, $\chi^2(6, N = 77) = 24.04, p < .001$. Weight losses of more than 11 pounds occurred exclusively in the two obese groups. The groups differed significantly with respect to ideal weight, $F(2, 76) = 12.79, p < .001$. The ideal weight for the normal group ($M = 120.46$) was significantly lower than the ideal weight for the combined obese group ($M = 137.44$); the two obese groups did not differ significantly (see Table 3).

The groups did not differ significantly with respect to whether the menstrual cycle had ever been missed three or more times in a row, $\chi^2(2, N = 81) = 2.34, p > .05$. The great majority of subjects (85%) had never missed three or more menstrual cycles. A significant effect was found in responses to a question about whether subjects thought they had trouble controlling their weight, $\chi^2(2, N = 79) = 13.59, p < .002$. The great majority of obese women (81%) felt that they had such trouble, whereas the majority of normal weight women (60%) felt that they did not.

The groups did not differ significantly in age, $F(2, 76) = .59, p > .05$, years of education, $F(2, 77) = .65, p > .05$, occupation, $\chi^2(10, N = 80) = 17.19, p > .05$, monthly family income, $F(2, 67) = 1.44, p > .05$, marital status, $\chi^2(6, N = 81) = 6.19, p > .05$, or number of children, $F(2, 75) = 1.19, p > .05$. The average subject was 40.74 years old, married, and had at least one child ($M = 1.82$). On the basis of education ($M = 15.45$ years) and monthly family income ($M = \$3,825$), it was judged that most subjects were middle class. A wide range of occupations was represented.

TABLE 3
Post Hoc Comparisons of Groups With Respect to Ideal Weight

Comparison	df	Mean square	F
All obese versus normal	1	4997.55	24.64*
Early versus late	1	172.24	0.84
Within groups	76	202.78	

* $p < .001$.

Discussion

The results showed that obese women do not necessarily have a poorer body image than women of normal weight. Although the obese women tested here saw themselves as less fit than women of normal weight, they did not see themselves as less healthy or even as less attractive. The results also showed that obese women are not necessarily more depressed than women of normal weight and that depression and body image disturbance are not greater in women with early onset of obesity than in women with late onset of obesity.

Where differences were found among the three groups in the expected direction, they were not on formal measures pertaining to psychological characteristics. Rather, the differences were on measures pertaining directly to weight. For example, obese women thought they had a problem with weight control; and, in fact, the evidence supported their view. The maximum and minimum weights they had attained at any time were above the weights reached by women of normal weight, and their weight losses in a single month were larger than those of women of normal weight. A similar point applies to the comparison between women with early and late onset of obesity. No differences were demonstrated on the formal psychological measures, but early obesity was more serious in that the maximum and minimum weights reached in the past were greater in the early obesity group than in the late obesity group.

Overall, then, the results did not support much of the prior literature on the psychological consequences of obesity (cf. Bruch, 1973; Rand & Stunkard, 1977; Wolman, 1981). The most likely explanation for the differences between the present results and those already in the literature has to do with methodology. Unlike many previous studies, the present study used objective measures of body image and depression, made statistical comparisons, and used a nonclinical sample. It is worth noting that, in one of the few prior studies in which a deliberate attempt was made to obtain subjects who were not trying to lose weight and who were not in psychotherapy, the results were similar to those reported here. Young and Reeve (1980) found that, on a test of liking for the body, there were remarkably few significant differences between obese and normal weight women.

The conclusion would seem to be that, in addition to the subpopulation of obese women who seek help and therefore come to the attention of professionals, there is another, and different, subpopulation. It consists of obese women who are relatively satisfied with their bodies and whose psychological adjustment is no different from that of women of normal weight. This subpopulation is one that has not received much attention to date. Clearly, it is a subpopulation that merits further study. It would appear that old ideas about the inevitability of psychological disturbance in obese women, especially those who have been obese since childhood, are in need of revision.

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