

Body Image, Physical Attractiveness, and Depression

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Although substantial literatures attest to the psychosocial impact of individuals' physical attractiveness and the centrality of physical self-concept, or body image, to global self-concept, little research has examined the relationship of these two variables to depression. Accordingly, in the present study, 224 college men and women completed affective and cognitive measures of body image, the Center for Epidemiological Studies-Depression scale (CES-D), and a single, self-labeling of depression item. Each subject was videotaped, and objective raters reliably evaluated a static, full-body pose of each subject on physical attractiveness. The subjects were classified as depressed ($n = 35$) or nondepressed ($n = 42$) on the basis of the conjunctive criteria of self-labeling and extreme groups on the CES-D. As hypothesized, the multivariate and univariate analyses of variance indicated that depressed subjects were less satisfied with their bodies and saw themselves as less physically attractive than was reported by nondepressed subjects. These groups did not differ, however, with respect to observer-rated physical attractiveness. Support was obtained for Beck's (1973, 1976) cognitive hypothesis that depressed persons negatively distort their body images. However, the results also indicated substantial positive distortion among nondepressed subjects.

Researchers and theorists have speculated about the relationship between body image and depression based primarily on clinical observation (e.g., Cash, in press). Bedrosian (1981) and Emery (1981) both suggested that depressed individuals have distorted self-images based on their concerns about their physical attributes. Peto (1972) contended that body image is an important aspect of both psychotic and nonpsychotic depression. These theorists did not follow up their positions with systematic research.

In Beck's (1973, 1976) cognitive theory of depression, "distortion of body image" (Beck, 1973, p. 24) is included among the cognitive symptoms of depression. Beck (1973) classified 975 individuals as nondepressed or as mildly, moderately, or severely depressed

based on their Beck Depression Inventory scores. He reported that in each group, 12%, 33%, 50%, and 66%, respectively, suffered from a "distortion of body image." His use of the word *distortion* here may be inappropriate, however, because Beck did not compare subjects' own ratings of body image with ratings by objective and reliable raters.

In a classic study, Secord and Jourard (1953) found a high positive correlation between body cathexis (ratings of body parts) and self-cathexis (ratings of aspects of the self). Berscheid, Walster, and Bohrnstedt (1973) surveyed 2,000 *Psychology Today* readers and found body satisfaction was related to personal happiness. Teenagers who reported being unattractive were by far the most unhappy group of respondents; adults presently in their 30s who reported that they were attractive teenagers were the happiest. Neither of these studies, however, directly addressed the issue of body image and depression.

Marsella, Shizuru, Brennan, and Kameoka (1981) did investigate body cathexis and depression. They categorized college students on their Zung Self-Report Depression Scale scores and found depressed students were more dissatisfied with 17 body areas. Archer

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and Cash (in press), using a clinical inpatient sample, found that patients who rated themselves as less physically attractive tended to be more external in locus of control and more anxious, socially introverted, and depressed on the Minnesota Multiphasic Personality Inventory (MMPI).

In addition to a possible link between self-perceived attractiveness and depression, physical appearance as perceived by others may contribute to depression. Based on evidence that unattractive persons receive less social reinforcement than do their attractive peers (e.g., Berscheid & Walster, 1974; Cash, 1981, in press; Cash & Burns, 1977), one might predict from Lewinsohn's (1974) reinforcement theory that less attractive persons would be more susceptible to depression. Cash and Smith (1982) found that lower physical attractiveness, as determined by reliable observers, was related to significantly higher self-reported depression for male subjects. A similar though nonsignificant association was found for females.

The fact that there are so few studies of body image and depression was the major impetus for the present study. Subjects evaluated their own physical appearance and satisfaction with various body parts and completed inventories assessing depression. At the same time, a full-body pose was videotaped and later was rated on physical attractiveness by peers. Subjects were classified as depressed or nondepressed using conjunctive criteria that incorporate a single, self-labeling of depression item as well as a symptom-based inventory, a strategy found by Lewinsohn and Teri (1982) to improve predictive utility with nonclinical samples.¹ The following hypotheses were generated and tested:

1. Depressed subjects will report being less satisfied with their body parts and their physical appearance and will regard themselves as less physically attractive than will nondepressed subjects.

2. Objective raters will perceive depressed individuals as less physically attractive than nondepressed individuals.

3. Relative to nondepressed individuals, depressed persons will distort their degree of physical attractiveness, perceiving themselves to be less attractive than objective raters regard them.

Method

Subjects

The initial pool of subjects consisted of 224 undergraduates, 163 females and 61 males, who were enrolled in general psychology courses at a mid-Atlantic university. Subjects received research credit for their participation. Subjects ranged from 17 to 63 years of age ($M = 20.4$); 85% were white, and 15% were nonwhite. Subjects were classified as depressed or nondepressed based on conjunctive criteria. These criteria required subjects to admit to (or to deny) a high frequency of symptoms associated with depression on the Center for Epidemiological Studies-Depression scale (CES-D) and to label themselves as depressed (or not) on a self-labeling scale. These instruments are described in more detail later. In previous studies, a wide range of CES-D cutoff scores was used, and the present study used a conservative (high) cutoff less than or equal to 20 as indicating depression. The conjunctive criteria for depression required the subject to obtain a score of 20 or greater on the CES-D and to label himself or herself as *somewhat*, *moderately*, or *very depressed* on the self-labeling item. For the nondepressed group, the criteria were a CES-D total score less than or equal to 7 and a subject's self-labeling as *not at all depressed*. The cutoff scores of 20 and 7 were at the 73rd and 22nd percentiles, respectively, with 35 depressed and 42 nondepressed subjects. The mean CES-D was 32.9 for the depressed group and 4.9 for the nondepressed group. The two groups did not differ significantly with respect to sex (74% vs. 67% female, respectively, for the depressed and nondepressed groups), race (74% vs. 86% white), or age ($M = 19.8$, range = 17 to 32 years vs. $M = 19.9$, range = 18 to 30 years).

Materials and Procedure

The subjects participated in groups of 6 and listened to audiotaped instructions. Then, in individual rooms used to increase privacy, the subjects completed an assessment battery of four instruments that were partially counterbalanced to control for sequence effects. Each subject was then individually debriefed. The debriefing interview was videotaped, and during this interview, subjects were asked to stand in front of the camera and smile, so that a standardized picture of each subject was obtained.

Body Parts Satisfaction Scale (BPSS). The BPSS (Berscheid et al., 1973; Bohrnstedt, 1977) consists of a list of 24 body parts plus an overall appearance item. Each part is rated on a 6-point Likert scale ranging from *extremely dissatisfied* to *extremely satisfied*. Although the scale consists of five factors for each sex, a second-order factor analysis led Bohrnstedt (1977) to conclude that "when an overall, body satisfaction score is desired,

¹ The term *depressed* is used throughout as a descriptive referent to the operationally defined group and does not necessarily correspond to clinical depression defined by other diagnostic criteria (e.g., the *Diagnostic and Statistical Manual of Mental Disorders*, DSM-III; American Psychiatric Association, 1980).

the findings indicate that the construction of it is justified" (p. 12). Such an overall score was used in this study. Cronbach's alpha for the BPSS was .89 for the present sample.

*Body-Self Relations Questionnaire (BSRQ).*² The BSRQ is a recently constructed inventory (Winstead & Cash, 1984) that consists of 140 items to which the subject responds on a 5-point Likert scale ranging from *definitely disagree* to *definitely agree*. This self-report inventory contains items concerning the person's attitudes and actions toward three somatic domains (physical appearance, physical fitness, and physical health). The current investigation used the 19-item Physical Appearance Evaluation subscale. Cronbach's alpha for the present sample was .90.

Center for Epidemiologic Studies-Depression scale (CES-D). The CES-D (Radloff, 1977) was developed to measure symptoms of depression and comprises 20 items selected from previously existing depression scales. Subjects rate the frequency of each symptom during the past week, from *rarely or none of the time* (0) to *most or all of the time* (3). The instrument consists of four primary factors: Depressed Affect, Positive Affect, Somatic, and Interpersonal. Cronbach's alphas for the CES-D Total and four factors ranged from .60 to .90 for the present sample.

Self-labeling of depression scale. The fourth instrument used in this study was a single, 5-point Likert scale (Lewinsohn & Teri, 1982), which asks subjects to indicate their current level of depression as either not at all depressed, a little, somewhat, moderately, or very depressed.

Physical attractiveness measure. Thirteen college students (9 females and 4 males) who were enrolled in advanced psychology courses and were blind to the purposes of the study were asked to make objective ratings of the overall physical attractiveness of each subject. As part of the training procedure, raters assessed the physical attractiveness of 40 individuals who were not subjects in the study. Individual feedback was given to each rater with respect to his or her average deviation from the mean rating of the group for each person. Also, they were instructed that their ratings should resemble a normal distribution and should be based on how they felt the average person would rate the subjects.

The raters viewed each subject's static, standing, smiling pose from the video recording, presented without audio on a 19-in. television monitor. Raters made independent assessments on a 7-point scale ranging from *very physically unattractive* to *very physically attractive*. An intraclass correlation (Shrout & Fleiss, 1979) indicated that the reliability of the objective raters was .95. To eliminate any impact of the different number of male and female raters, the mean ratings of the male raters and the mean ratings of the female raters were averaged, which created an overall physical attractiveness rating for each subject.

Results

To test the stated hypotheses,³ four measures of the subjects' body image were used. These measures were (a) an Appearance Satisfaction score determined by the subject's

6-point rating on the BPSS item concerning satisfaction with overall appearance; (b) a Body Parts Satisfaction score, which was the mean of each subject's 6-point satisfaction ratings of the 24 body parts on the BPSS; (c) a self-perceived physical attractiveness score, which was the mean response to 3 items from the BSRQ with high face validity with respect to self-perceived physical attractiveness; and (d) the mean response score from the BSRQ 19-item Physical Appearance Evaluation subscale.

Because these body-image indices were positively interrelated ($r_s = .53$ to $.87$, $p_s < .01$), multivariate analyses of variance (MANOVAS) were conducted prior to the examination of univariate effects. The MANOVA evaluating the body-image scores of depressed versus nondepressed subjects was significant, Hotelling's $T^2(4, 71) = 7.28$, $p < .001$. The means, standard deviations, and univariate F ratios for comparisons of depressed and nondepressed subjects are given in Table 1. As predicted, depressed subjects were significantly less satisfied with their overall appearance ($p < .001$), less satisfied with their body parts ($p < .0001$), viewed themselves as less physically attractive ($p < .02$), and generally evaluated their physical appearance in a less favorable manner ($p < .002$) than did nondepressed subjects. Therefore, the results of these analyses support the first hypothesis. Depressed people had poorer body images than did people who were not depressed.

A second set of analyses examined this hypothesis more specifically by comparing the depression factor scores for all 224 subjects divided according to their Body Parts Satisfaction scores into low, moderate, and high body-image groups. A MANOVA comparing the CES-D total and four factor scores across these groups was significant, Hotelling's $T^2(10, 432) = 4.33$, $p < .001$. The between-groups univariate ANOVAs were all significant.

² Copies of the BSRQ and psychometric information for this instrument are available on request from the second author.

³ Initial tests of the study's hypotheses also included the subjects' sex as an independent variable. Because no main or interactive effects of sex were found on any measure, the reported analyses were collapsed across this factor.

Table 1

Mean Comparisons Between Depressed and Nondepressed Subjects on Body Image, Objective Attractiveness, and Distortion Scores

Dependent measure	Depressed		Nondepressed		<i>F</i> (1, 75)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Body-Image scores					
BPSS Appearance Satisfaction	3.89	0.99	4.80	0.87	18.45***
BPSS Body Parts Satisfaction	3.93	0.53	4.63	0.59	28.13***
BSRQ self-perceived physical attractiveness	3.45	0.94	3.88	0.57	6.18*
BSRQ Physical Appearance Evaluation	3.07	0.63	3.46	0.45	10.04**
Objective physical attractiveness	3.98	0.86	3.82	0.99	0.52
Distortion Score A ^a	-0.25	1.42	+0.52	1.24	5.94*
Distortion Score B ^b	-0.59	1.44	+0.79	1.54	15.46***

Note. BPSS = Body Parts Satisfaction Scale; BSRQ = Body-Self Relations Questionnaire.

^a The discrepancy between self-perceived physical attractiveness and objective physical attractiveness.

^b The comparison of degree of satisfaction with one's body in relation to its objective level of attractiveness.

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

Scheffé's test of the group means indicated that the low body-image group differed significantly from the high body-image group on the CES-D Interpersonal score ($p < .05$) and differed significantly from the high and moderate body-image groups in the other CES-D scores: CES-D Total, Depressed Affect, Positive Affect, and Somatic factors ($p < .05$). Again, our prediction was supported, indicating that individuals with a poor body image reported greater depression in all symptomatic categories than did individuals with moderate and/or high levels of body image.

The second hypothesis was that objective raters would perceive depressed subjects as less physically attractive than nondepressed individuals. As noted previously, the raters were quite reliable in their ratings of the subjects' physical attractiveness. A single-factor ANOVA evaluating these ratings of the depressed versus nondepressed groups produced nonsignificant results ($F < 1$). As shown in Table 1, the two groups did not differ in physical attractiveness, therefore there was no support for this prediction.

The final hypothesis stated that depressed individuals, as compared with nondepressed individuals, would report greater distortion in body image. To evaluate this prediction,

two distortion scores were generated for each subject, using differences between standardized z scores because the components of the distortion scores had varying scale lengths and consequently were not directly comparable. Distortion Score A reflected the discrepancy between self-perceived physical attractiveness and objective physical attractiveness. Distortion Score B reflected the comparison of degree of satisfaction with one's body in relation to its objective level of attractiveness. The z -score differences were calculated so that a negative distortion score would indicate that relative to his or her objective physical attractiveness level, the subject underestimated his or her physical attractiveness (A) or had a lower relative standing on body satisfaction than that obtained on objective physical attractiveness (B).

The MANOVA on subjects' distortion scores indicated a significant effect of depression, $F(2, 72) = 8.48$, $p < .001$. The univariate effects were significant on both Distortion Score A ($p < .02$) and Distortion Score B ($p < .001$). As shown in Table 1, depressed individuals distorted their body image in a negative direction, that is, as expected, these people reported being less satisfied with their physical attractiveness and perceived themselves to be less attractive than the ratings of

the objective raters would indicate to be consensually valid. Also, nondepressed individuals distorted their body image, but in an enhancing or positive manner. In other words, nondepressed people reported being more satisfied with their physical appearance and perceived themselves to be more attractive than the objective ratings would suggest to be warranted. Thus, depressed subjects and nondepressed subjects distorted their body image in a negative direction and a positive direction, respectively.

Discussion

The hypothesis that depressed persons would have a less positive body image than would nondepressed individuals was consistently supported across several body-image indices. Congruent with the findings of Marsella et al. (1981), the depressed group reported less satisfaction with their body parts as well as with their overall physical appearance. In addition, the depressed group reported a less favorable evaluation of their physical aesthetics. From the analysis in which subjects were divided into three body-image groups, it is apparent that individuals with an average body image did not differ in depression from those with a positive body image. For the present sample, persons with a poor body image were, however, significantly more likely to report depressive symptomatology than were subjects in the other two groups. Consistent with this result is the fact that patients who seek cosmetic surgery not only have negative body images but also frequently suffer from depression (e.g., Cash & Horton, 1983; Goin & Goin, 1981). Although causal inferences are not possible from our data, perhaps individuals with poor body images have a greater predisposition to depression than do people with adequate-to-good body images.

The hypothesis that depression would be related to lower levels of observer-rated physical attractiveness was not supported. One may expect unattractive persons to be more susceptible to depression on the basis of either a social-behavioral perspective (Coyne, 1976; Lewinsohn, 1974) or a learned helplessness perspective (Seligman, 1975). Unattractive individuals not only receive less re-

sponse-contingent positive reinforcement but also perceive their interpersonal environments to be less responsive to their actions (e.g., Cash, in press), and following rejection, unattractive individuals make more unstable attributions for subsequent social success (Weinberger & Cash, 1982). However, the present study's assessment of depression as a transient emotional state might have been insensitive to group differences. For example, Cash and Smith (1982) did find attractiveness to be negatively related to depression when it was assessed as a more enduring affective trait. Furthermore, at a higher, more debilitating level, depression itself may diminish personal grooming and thereby lower physical attractiveness. Clinical-sample studies are needed, particularly in view of the explicit attention given to physical appearance in a standard diagnostic mental status exam (Maloney & Ward, 1976; Nelson & Barlow, 1981). The clinical distinctions of bipolar-unipolar disorder, reactive-process, and primary-secondary depression also warrant consideration (see Depue & Monroe, 1978) in evaluating the generality of the present findings with normal depression.

The present study further tested Beck's (1973, 1976) theoretical contention and clinical observation that the depressed person's assessment of his or her appearance is a marked distortion of objective reality. Specifically, it was predicted that depressed individuals would underestimate their physical attractiveness relative to its social consensual level. The analyses of subjects' body-image distortion scores confirmed this prediction. Although negative distortion was evident among the depressed group, the nondepressed group also expressed a distorted self-perception of attractiveness that reflected an overestimation, or positive distortions. This finding is somewhat at odds with Beck's theory but is consistent with other research.

Several investigations have found that depressives exhibit greater perceptual accuracy, or realism, as compared with nondepressives, who display more positive distortions of self-directed social events (Lewinsohn, Mischel, Chaplin, & Barton, 1980), especially negative events (Hoehn-Hyde, Schlottmann, & Rush, 1982), and more positive distortions of their control over environmental events (Alloy &

Abramson, 1979). Thus, as cognitive social psychologists have demonstrated (e.g., Wegner & Vallacher, 1980), self-relevant information is normally processed in a manner reflecting self-enhancement and self-serving attributional biases. It appears that the inaccuracy of one's beliefs about his or her appearance is less important than the direction of the inaccuracy. Believing that one is acceptably attractive, even if objectively untrue, may be an adaptive self-deception in the service of one's emotional well-being.

In conclusion, three directions for research with clinical groups are noteworthy. First, the body-image differences between depressed and nondepressed individuals may reflect other cognitive differences, particularly differences in the importance and stringency of personal standards of attractiveness and in one's self-efficacy for achieving those standards. Kanfer and Zeiss (1983), for example, found that depression was positively related to the discrepancy between behavioral standards and self-efficacy expectations in interpersonal contexts. Given the current controversy regarding the causal role of cognitive factors in depression (cf. Blaney, 1977; Coyne & Gotlib, 1983), longitudinal data are required to clarify the nature of the observed association between body image and depression. One methodology (e.g., Eaves & Rush, 1984; Lewinsohn, Steinmetz, Larson, & Franklin, 1981; Silverman, Silverman, & Eardley, 1984), for example, would entail tracking body image and depression over a several-month period. Finally, despite the link between body image and a host of psychosocial dysfunctions (e.g., Cash, in press; Cash, Cash, & Butters, 1983), there is a striking paucity of systematic research to demonstrate the effectiveness of specific psychotherapeutic interventions for the enhancement of body image.

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