A central component of anorexia nervosa is a body image disturbance (BID). BID, as it is experienced in anorexia nervosa, is defined as an inability to recognize how thin one really is and is exhibited by a sense of feeling overweight in spite of severe emaciation. Several researchers have recognized a relationship between depressive personality traits and a negative body image. This study was conducted to investigate whether there exists a predispositional link between feelings of depression and the onset of BID. Female college students (N=110) with different levels of depression were asked to estimate their body size after being given feedback that they either weighed three percent more or less than they actually did. As predicted, females who had personality traits of depression had a body image that was more vulnerable to the external feedback than did their less depressed counterparts. The external feedback in the study was designed to simulate a possible mechanism that underlies the societal messages American females are constantly confronted with about their weight. The results can aid in understanding the etiology of body image disturbance and offer important implications for the treatment and prevention of BID and anorexia nervosa. (Author/NB)
The Vulnerability of Female Body Image to Weight Related Feedback

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The Vulnerability of Female Body Image to Weight Related Feedback

Abstract

This experiment was designed to study the impact of weight related feedback on the body image of females with different levels of depression. As predicted, females who had personality traits of depression had a body image that was more vulnerable to this external feedback than their less depressed counterparts. The external feedback in this study was designed to simulate a possible mechanism that underlies the societal messages American females are constantly confronted with about their weight. The results of this study shed light on the etiology of body image disturbance and offer important implications for the treatment and prevention of body image disturbance and anorexia nervosa.
The Vulnerability of Female Body Image to Weight Related Feedback

One of the central components of anorexia nervosa is a body image disturbance (BID). BID is a necessary criterion for the diagnosis of anorexia nervosa (American Psychiatric Association, 1980). BID, as it is experienced in anorexia nervosa, is defined as an inability to recognize how thin one really is and is exhibited by a sense of feeling overweight in spite of severe emaciation.

Although there is relatively little known about the development of BID, a number of researchers have recognized a relationship between depressive personality traits and a negative body image (Beck, 1967, 1973, 1976; Garner, 1981; Noles, Cash & Winstead, 1985; Strober, 1981). The purpose of the present study was to investigate a predispositional link between feelings of depression and the onset of BID. More specifically, it was hypothesized that females with personality traits of depression may be more suggestable and therefore have a body image that is particularly vulnerable to external feedback they receive about it.

This hypothesis was studied in the present experiment by having female subjects with different levels of depression estimate their body size after being given feedback that they either weighed three percent more or less than they actually did. It was hypothesized that subjects high in depression would respond by increasing their body image estimates when receiving feedback that they weighed more than they actually did and decrease their body image estimates when receiving feedback that they weighed less than they actually did. On the other hand, it was predicted that subjects low in depression would have a more stable body image that would not be affected by the feedback, regardless of its nature.
Method

Subjects

Subjects were 110 female undergraduate psychology students from Vanderbilt University.

Procedure

First session. When subjects first arrived at the laboratory, they were told that they were participating in a two-part experiment designed to study the accuracy and stability of people's self-perception of body size.

First, subjects were asked to fill out the Self-Rating Depression Scale (Zung, 1967). Next, subjects were asked to estimate their actual weight and report their ideal weight (i.e., the weight they would most like to weigh) with the knowledge that they would later be weighed. After this information was obtained, the Experimenter weighed the subjects in pounds on a scale and made sure that the subjects were aware of their weight. Subjects were then asked to estimate the width of their shoulders, waist and hips by using the Image Marking Technique devised by Askevold (1975). Actual measurements were taken by the Experimenter, but subjects were not informed of these measurements. Subjects also estimated the height and width of a box. Finally, subjects were scheduled to come back in two weeks.

Second session. When subjects arrived two weeks later, they were again asked to estimate their body weight and report their ideal weight. Subjects were weighed on a scale, but the scale was set so that they weighed three percent more or less than they actually did. Subjects then estimated the width of their shoulders, waist and hips and the height and width of the box.
Before subjects were released, they were debriefed and were probed for suspicions.

Results

Validity of the Weight Feedback Manipulation

Analyses indicated that subjects accurately perceived their false weight feedback in the second session as being greater than or less than what they anticipated weighing. Only one subject expressed suspicion about the validity of the weight feedback during the second session and her data were eliminated from the analyses.

Effect of Weight Feedback on Body Image

A score was calculated for both the first and second session that demonstrated the extent to which subjects distorted their overall body size estimations. A difference score was then derived that indicated how much subjects increased or decreased their body image distortion between the first and second session. This difference score was used as the dependent variable in the analyses below.

A difference score for the measurements of the box was calculated in the same manner. It was then used as a covariate in the analyses reported below to control for any change in subjects' global perception of size.

Depression predisposition analyses. An analysis of the subjects' body image difference score by Condition (heavy vs. light weight feedback) and Depression (high vs. low depression) was performed. A significant Depression x Condition interaction, F(1,97) = 6.1, p < .02, (see Figure 1) indicated that subjects high in Depression tended to increase their body image estimations when in the heavy feedback condition (m = .03) and decrease their body image measurements when in the light feedback condition (m = -.08). A comparison of these change
scores indicated that they were significantly different from each other $t(97) = 3.93, p < .01$. This interaction also indicated that subjects low in depression tended to react in a similar manner, regardless of whether they received heavy feedback ($m = 0.00$) or light feedback ($m = 0.01$), $p > .05$. This analysis also revealed a significant main effect of Condition, $F(1,97) = 9.44, p < .002$.

Discussion

As was predicted, when depressed subjects were told that they weighed three percent more than they actually did, they incorporated this feedback into their body image by increasing their estimated body dimensions. In addition, when depressed subjects were told that they weighed three percent less than they actually did, they decreased their body image estimations. On the other hand, the body image estimations of the non-depressed subjects neither increased or decreased after they received the false weight feedback. These results provide support for the notion that females who have personality traits of depression have a body image that is more vulnerable to external feedback than do less depressed females.

The results of this study show that depressed females tend to react to external feedback about their weight, regardless of whether it is "heavy" or "light" feedback. However, it is important to note that many external messages that females are confronted with about their appearance (e.g., diet and beauty ads) leave them feeling overweight and unattractive so that they will buy the advertised diet or beauty aid. This has important implications about how societal messages that females constantly receive about their weight may interact with their level of depression to negatively affect their body image and possibly offset the occurrence of BID. Intervention
efforts aimed at reducing feelings of depression may help females become less vulnerable to incorporating external weight related feedback into a negative body image, thus preventing the occurrence or recurrence of BID and possibly anorexia nervosa.
References


Figure 1. Body size difference scores for the depression analyses.