

# Obesity Among Sexually Abused Women: An Adaptive Function for Some?

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**ABSTRACT.** In an attempt to explore the possibly adaptive function obesity may serve for some women with histories of sexual trauma, we examined relationships among sexual abuse history, body dissatisfaction, and maximum weight fluctuation among obese ( $n = 38$ ; Body Mass Index  $\geq 27.3$ ) and nonobese ( $n = 112$ ; Body Mass Index  $< 27.3$ ) women sampled from a primary care medical setting. History of sexual abuse was unrelated to current body weight within the entire sample, as well as the nonobese and the obese subsamples. However, the interaction between obesity and sexual abuse was statistically significant in the prediction of both current/ideal body-weight discrepancy (i.e., body dissatisfaction) and maximum weight fluctuation during adulthood. Among nonobese women, history of sexual abuse was unrelated to current body dissatisfaction but was related to greater maximal weight fluctuation during adulthood. Among obese women, those with a history of sexual abuse reported relatively *less* current body dissatisfaction and less weight fluctuation during adulthood compared to nonsexually-abused obese women. Results are discussed with regard to the potential adaptive function obesity may play for some sexually abused women and the need for additional research using larger, more diverse samples and more elaborate measures. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: [getinfo@haworthpressinc.com](mailto:getinfo@haworthpressinc.com)]

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Many studies have been conducted exploring possible links between obesity and psychological adjustment, with the general finding of a lack of such relationships among obese individuals as a whole (see Friedman & Brownell, 1995; Striegel-Moore & Rodin, 1986; and Stunkard & Wadden, 1992; for reviews). However, Friedman and Brownell (1995) pointed out that obesity may be related to emotional or psychological problems for certain individuals. The research task then becomes elucidating psychosocial risk factors or conditions under which obesity may be caused, exacerbated or maintained. Unfortunately, little empirical research has been conducted on the more specific issue of potentially adaptive functions of obesity for at least some individuals.

Clinicians have alluded to the many psychosocial functions obesity may serve for some women (e.g., Hooker & Convisser, 1983). Investigators have demonstrated that obesity appears to serve a self-limiting function for at least some individuals (Baumeister, Kahn, & Tice, 1990; Hooker & Convisser, 1983). That is, regardless of its cause, obesity may provide a rationale for not engaging in particular activities or succeeding in certain arenas. One such arena might be sexual activity with a partner, particularly for obese women who wish to avoid sex due to a history of sexual trauma.

Although there exists a small minority of men who prefer large or obese women as mates (Goode & Preissler, 1983), American men typically find relatively thin women most sexually desirable (Harris, Walters, & Washull, 1991; Spillman & Everington, 1989). Heavier women are generally stigmatized with regard to issues of sexuality and courtship (Regan, 1996; Sobal, Nicolopoulos, & Lee, 1995). As women who have been sexually abused experience dramatically increased rates of sexual dysfunction (Golding, 1996; Wyatt, 1991) and are at greater risk for subsequent victimization (Messman & Long, 1996; Polusny & Follette, 1995), it stands to reason that some women who have been sexually abused may experience obesity as an adaptive protection from sexual advances or relationships, or being the object of interest by potential abusers.

This is not to say that obesity is invariably linked to sexual abuse. Prior research has found increased rates of sexual abuse among obese women (Felitti, 1991; Felitti, 1993; Sansone, Sansone, & Fine, 1995), but the relationships between obesity and sexual abuse were generally small. However, there may be unique relationships among obesity, body image, and weight fluctuation among women as a function of sexual abuse history. The purpose of the current study was to investigate these potential relationships.

The current study was based on data collected for another purpose (Sansone, Sansone, & Wiederman, 1995). Despite some inherent limitations with the data, we undertook the current investigation as a pilot study given the lack of empirical research on this topic. Specifically, we hypothesized that,

compared to nonabused obese women, obese women who had experienced sexual abuse would indicate less dissatisfaction with their current body weight which would correspond to relatively less maximum weight fluctuation during adulthood. Such would be the case if at least some of the sexually abused obese women in our sample found their current body size to be adaptive at some level, resulting in less frequent weight loss efforts or success in such efforts (Felitti et al., 1993). We chose to focus on women rather than men as women are more likely to experience obesity (Kuczmarski, 1992) and weight-related concerns (Bowen, Tomoyasa, & Cauce, 1991), as well as more likely to experience adult-child sexual contact and perceive it as abuse (Holmes, Offen, & Waller, 1997; Laumann, Gagnon, Michael, & Michaels, 1994; Rind, 1995).

## METHOD

### *Participants*

Participants were 150 women who presented consecutively for routine gynecological care to a female family physician in a health maintenance organization (HMO). Participants ranged in age from 18 to 49 years with a mean of 34.11 years ( $SD = 8.90$ ). The majority of participants (64.0%) were married, all had completed high school, and most (62.0%) had some post-high school education. Of the 150 women, 127 (84.7%) were White, 11 (7.3%) were American Indian, 4 (2.7%) were Black, 2 (1.3%) were Asian, 2 (1.3%) were Latino, and the remaining 4 (2.7%) indicated some other ethnic/racial identity.

### *Measures*

In a self-report questionnaire, participants were asked to provide demographic information as well as their "highest weight as an adult," "lowest weight as an adult," and "ideal body weight." Past research has demonstrated that women have remarkably accurate recall of past weight, even over periods of several decades (Casey et al., 1991). The women were also asked to indicate whether they had ever experienced sexual abuse which was defined for respondents as "any sexual activity against your will."

To determine obesity status, current height and weight from each woman's medical chart were converted into a standard index of overall body size, or body mass index (BMI), according to Quetelet's index ( $\text{kg}/\text{m}^2$ ; Garrow & Webster, 1985). BMI has been shown to be a convenient and accurate measure of adiposity (Bray, 1986; Hannan, Wrate, Cowen, & Freeman, 1995).

Following the National Center for Health Statistics (Najjar & Rowland, 1987), we considered a BMI of 27.3 or greater as obese.

Participant body dissatisfaction was measured by the discrepancy between actual weight and perceived ideal body weight, as used in previous studies (e.g., Casey et al., 1991). Previous research has revealed that this is an accurate measure of subject body dissatisfaction (Williamson, Gleaves, Watkins, & Schlundt, 1993), which we specifically calculated as  $[(\text{Current BMI} / \text{Ideal BMI}) - 1] \times 100$ . In this way, the resulting number for each respondent corresponds to the percentage their current BMI is over their ideal BMI. Higher scores indicate relatively greater body dissatisfaction.

Maximum weight fluctuation during adulthood was measured as  $[(\text{Highest BMI} / \text{Lowest BMI}) - 1] \times 100$ . Accordingly, the value on this variable directly translates into the percent greater highest BMI is compared to lowest BMI (e.g., a high BMI one-half as great as one's low BMI would result in a score of 50). Higher scores indicate a relatively greater degree of maximum weight fluctuation (range) during adulthood.

### ***Procedure***

Upon presenting for the medical examination, the study was introduced to each potential participant by her female family physician practicing in an HMO setting. Women who were currently pregnant or displayed cognitive impairment were not invited to participate. Those who agreed to participate provided written informed consent and were taken to a private room to complete the questionnaire. Of 154 women invited to participate, the 150 who agreed and completed all measures represents a 97.4% response rate.

## ***RESULTS***

Of the 150 women, 39 (26.0%) reported having experienced sexual abuse. Based on BMI, 38 (25.3%) of the 150 women were obese. BMI among the nonobese women ranged from 17.11-26.93 (*Mean* = 21.94, *SD* = 2.33) and BMI among the obese women ranged from 27.34-49.69 (*Mean* = 33.49, *SD* = 5.85).

Because of the relatively small subsamples used for comparison (i.e., obese, sexually abused), statistical power was relatively low in the current study (Cohen, 1969, 1992). Accordingly, we may fail to find statistically significant differences despite the existence of moderate relationships among the variables of interest. Rather than focus exclusively on probability (*p*) values corresponding to inferential statistics, we also present effect sizes (Cohen, 1994). Specifically, Cohen's (1969) effect size statistic *d* was calcu-

lated as the difference between the mean score of the group with the greater score (or rating) and the group with the lower score (or rating) divided by the pooled standard deviation (also see Rosenthal & Rosnow, 1991). Cohen (1969) considered effect sizes,  $d$ , of .80 or greater as large effects, those around .50 as medium effects, and those around .20 as small effects.

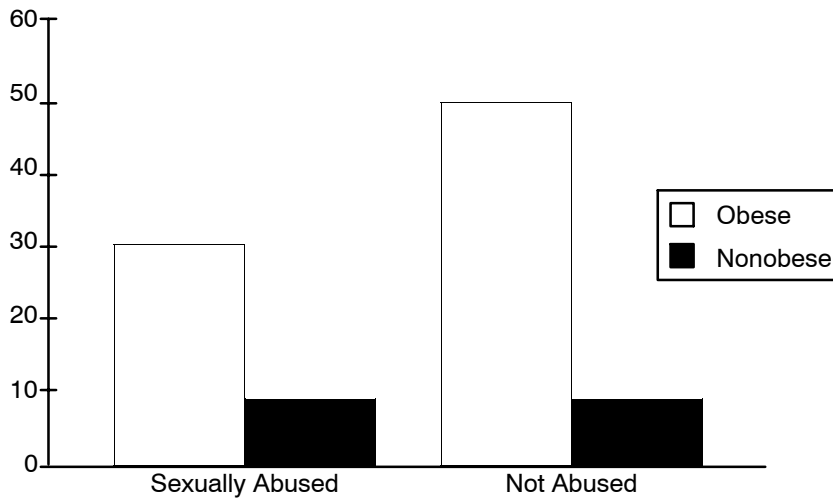
Was sexual abuse related to body size? For the entire sample, there was no difference in BMI between those who had been sexually abused ( $M = 25.17$ ,  $SD = 5.44$ ) and those who had not ( $M = 24.72$ ,  $SD = 6.43$ ),  $F(1, 148) = .15$ ,  $p < .71$ ,  $d = .07$ . Similarly, among the nonobese women ( $N = 112$ ), there was no difference in BMI between those who had been sexually abused ( $M = 21.94$ ,  $SD = 2.25$ ) and those who had not ( $M = 21.88$ ,  $SD = 2.36$ ),  $F(1, 110) = .001$ ,  $p < .93$ ,  $d = .02$ . Among the obese women, the difference in BMI between the sexually abused women ( $M = 31.62$ ,  $SD = 3.95$ ) and the non-abused women ( $M = 34.47$ ,  $SD = 6.49$ ) was not statistically significant [ $F(1, 36) = 2.09$ ,  $p < .16$ ] but was a moderate effect ( $d = .49$ ).

With regard to body dissatisfaction, 9 (6.0%) women had a “negative” discrepancy between current and ideal BMI. That is, nine women reported their ideal body size as larger than their current body size. An additional 7 (4.7%) women indicated no discrepancy between their current and ideal BMI. The remaining 134 (89.3%) women displayed a positive value on the measure of current/ideal weight discrepancy which indicated a perceived ideal smaller than their current body size. Overall, scores on the body dissatisfaction measure ranged from  $-6.92$  to  $120.74$  ( $Mean = 16.55$ ,  $SD = 20.79$ ). In other words, respondents ranged in their self-perceptions from seeing themselves as about 7% too light to about 121% overweight, with a mean of about 17% overweight.

To explore whether obesity or history of sexual abuse were related to degree of body dissatisfaction, we performed an analysis of variance (ANOVA). There was a main effect for both history of sexual abuse [ $F(1, 146) = 6.79$ ,  $p < .01$ ,  $d = .43$ ] and current obesity [ $F(1, 146) = 227.02$ ,  $p < .0001$ ,  $d = 2.49$ ]. However, the interaction of sexual abuse and obesity was also statistically significant [ $F(1, 146) = 12.88$ ,  $p < .001$ ,  $d = .59$ ], precluding consideration of the main effects. To understand the nature of the statistical interaction, mean body dissatisfaction scores were calculated according to obesity status and sexual abuse status, and the results are presented in Figure 1. Note that sexually abused nonobese women ( $n = 26$ ) and their nonabused, non-obese peers ( $n = 86$ ) did not differ in degree of body dissatisfaction. However, the sexually abused obese women ( $n = 13$ ) displayed substantially less body dissatisfaction relative to the nonabused obese women ( $n = 25$ ).

With regard to degree of weight fluctuation during adulthood, all women reported some discrepancy between their lowest and highest BMI. The degree of fluctuation ranged from 3.9% to 127.6% ( $Mean = 32.84$ ,  $SD = 19.86$ ).

FIGURE 1. Percent Discrepancy Between Current and Ideal Body Mass Index

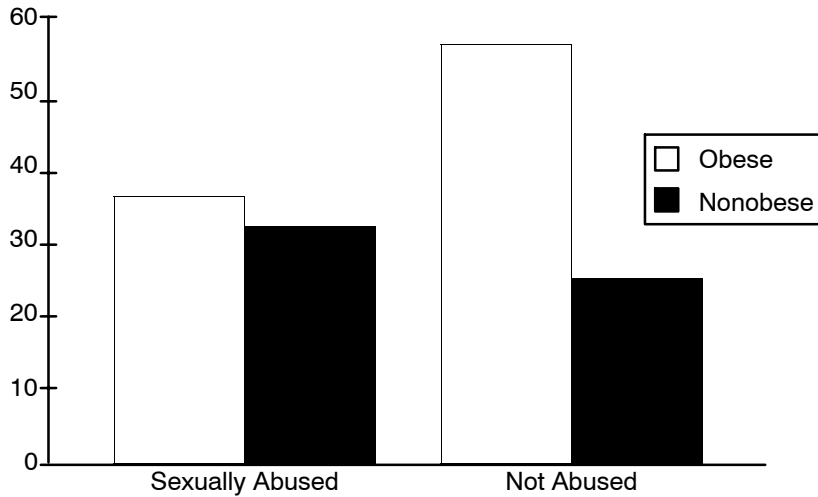


To explore whether obesity or history of sexual abuse were related to degree of weight fluctuation, we performed an ANOVA. There was not a main effect for history of sexual abuse [ $F(1, 146) = .17, p < .70, d = .07$ ] but there was for obesity [ $F(1, 146) = 60.23, p < .001, d = 1.28$ ]. However, the interaction of sexual abuse and obesity was also statistically significant [ $F(1, 146) = 18.23, p < .001, d = .71$ ], precluding consideration of the main effect. To understand the nature of the significant interaction, mean weight fluctuation scores were calculated according to obesity status and sexual abuse history, and the results are presented in Figure 2. Note that sexually abused nonobese women displayed greater weight fluctuation during adulthood compared to their non-abused nonobese peers whereas sexually abused obese women displayed less weight fluctuation relative to nonabused obese women.

### DISCUSSION

In the current sample of women drawn from a nonmental-health setting, history of sexual abuse was unrelated to current body size. Within the entire sample, history of sexual abuse interacted significantly with current obesity to predict degree of body dissatisfaction. There was no difference in body dissatisfaction among sexually abused and nonabused women who were not obese. Among the obese subsample, however, history of sexual abuse was

FIGURE 2. Maximum Weight Fluctuation During Adulthood (in percent of lowest body mass index)



predictive of relatively *less* body dissatisfaction. Was this relative lack of body dissatisfaction among sexually abused obese women mirrored by the degree of maximum weight fluctuation during adulthood? Apparently so, as obese women who indicated a history of sexual abuse had fluctuated less in body weight compared to their nonabused obese peers.

These findings are intriguing and are consistent with recent findings that sexually abused obese individuals enrolled in a hospital-based weight management program were less successful at weight loss relative to a matched sample of nonabused peers (King, Clark, & Pera, 1996; also see Felitti et al., 1993). Perhaps some women with sexual abuse histories are less motivated to lose weight. Given the limited amount of information in the current data set, however, it is difficult to definitively explain our findings, and any such tentative explanations of the apparent decrease in motivation for weight loss among some sexually abused obese women inherently contain several untested assumptions.

One possibility is that some sexually abused obese women may be relatively more reluctant to move from an obese to nonobese status as a defense against physically intimate relationships with males (Felitti et al., 1993; Hooker & Convisser, 1983). Felitti et al. (1993) noted that many obese adult women became obese shortly after childhood sexual abuse. Subsequently, Weiner and Stephenson (1996) noted that, among many women who experienced compulsive eating, there were what these authors labeled “barrier

weights.” Some women experienced certain body weights, which were frequently lower than the individual’s current weight, as extremely anxiety provoking. In Weiner and Stephenson’s clinical experience and limited research on the topic, these “barrier weights” seemed to coincide with the body weight the individual woman had when she experienced a sexually traumatic event or the onset of sexual abuse. Accordingly, these women were psychologically more comfortable at a higher weight, although they typically lacked insight into the psychodynamic relevance of their particular “barrier weight.” The higher body weight maintained after the sexual abuse or trauma seemed to serve a self-protective function (also see Felitti, 1993; Felitti et al., 1993).

Viewed from Weiner and Stephenson’s (1996) perspective, our results at least support the *possibility* that, for some obese women who have been sexually abused, obesity serves to insulate the individual from sexual advances by potential partners or provides a rationale for avoiding sexual intimacy (which may be very anxiety-provoking or traumatic). In previous research, at least a minority of obese individuals report that one of the perceived advantages of obesity is an avoidance of sexual activity (Beach & Martin, 1985; Felitti, 1993; Harris, Waschull, & Walters, 1990; Stuart & Jacobson, 1987). Such a possibility might explain why the sexually abused obese women in the current study, as a whole, were more satisfied with their current body weight and displayed a more narrow weight range throughout adulthood, compared to their nonabused obese peers. Along these lines, it is interesting to note that only three women in the current study indicated an ideal weight which was still in the obese range; all three were currently obese women who indicated a history of sexual abuse.

Another possible explanation for the relationship between sexual abuse history and body dissatisfaction among obese women involves personal priorities. Perhaps, after experiencing sexual abuse, adherence to the pervasive cultural ideal of thinness (Rothblum, 1990) seems less important as a life goal. That is, perhaps a traumatic history affects women’s focus on outward appearance such that trying to attain the cultural ideal is deemed less relevant or less attainable. Additionally, among some women, sexual abuse may result in secondary psychopathology such as chronic anxiety or depression (Felitti, 1991, 1993). The effects of these subsequent disorders could include low motivation, a general sense of apathy, or decreased self-efficacy, thereby affecting the degree to which the individual might strive to meet cultural expectations regarding body weight or might succeed if weight loss is attempted. Indeed, prior research revealed a positive relationship between a history of sexual abuse and degree of self-defeating personality (Viviano & Schill, 1996).

What is missing from both the current study as well as earlier research is



the explicit investigation of the potential motives or adaptive functions underlying obesity among those with sexual abuse histories compared with the nonabused obese. Previous studies have been conducted wherein the sexual functioning of obese individuals was compared before and after substantial weight loss was accomplished. Some of these studies revealed general improvement in sexual functioning (Abramson & Catalano, 1985; Goble, Rand, & Kuldau, 1986; Rand, Kowalske, & Kuldau, 1984; Stunkard, Stinnett, & Smoller, 1986; Werlinger, King, Clark, Pera, & Wincze, 1997), whereas others revealed substantial degrees of sexual distress after weight loss (Marshall & Neill, 1977; Neill, Marshall, & Yale, 1978; Stuart & Jacobson, 1987; Waring, 1983). It may be that those obese individuals who respond to substantial weight loss with increased sexual dysfunction and anxiety are more likely to have experienced a history of sexual abuse.

The results of the current study are interesting but should be interpreted with caution. We recognize that obesity is multidetermined and, for many individuals, has a strong genetic or biological component (Friedman & Brownell, 1995; Rothblum, 1990). With regard to the many limitations of the current study, the measures we used were far from ideal for the current purpose, and the effective sample was relatively small and select with regard to demographic composition. Accordingly, the current results need to be replicated with a larger, more diverse sample and using more elaborate, standardized measures. It does appear fruitful, however, for researchers to consider the potential interplay between obesity, body image, and previous experiences of trauma (Costin, 1996), whether such trauma involves sexual abuse or other forms of maltreatment (e.g., teasing about body weight; see Grilo, Wilfley, Brownell, & Rodin, 1994), to better understand body image and attempts at weight loss among obese women. The results of such research have important implications for clinicians working with obese patients.

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