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Abstract

The relationship between obesity and structural aspects of the self-concept was examined in adult women. Participants were 119 adult women [age range: 18-73, M=26.9; body mass index (BMI) range: 16.2-54.7, M=27.3] who completed measures of self-esteem, self-complexity, and the spontaneous self-concept. BMI was associated with less complex and more compartmentalized self-knowledge and more frequent mention of weight-stereotypic traits as self-descriptive. The findings are discussed in the context of research on obesity- related stigma.

Keywords

Obesity, stigma, selfconcept, self-complexity, compartmentalization

Disciplines

Health Psychology | Statistics and Probability

BRIEF REPORT

Obesity, self-complexity, and compartmentalization: On the implications of obesity for self-concept organization

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ABSTRACT. *The relationship between obesity and structural aspects of the self-concept was examined in adult women. Participants were 119 adult women [age range: 18-73, M=26.9; body mass index (BMI) range: 16.2-54.7, M=27.3] who completed measures of self-esteem, self-complexity, and the spontaneous self-concept. BMI was associated with less complex and more compartmentalized self-knowledge and more frequent mention of weight-stereo-typic traits as self-descriptive. The findings are discussed in the context of research on obesi-ty-related stigma.*
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INTRODUCTION

Abundant research documents the nature and extent of weight-related prejudice and discrimination (1-4). Overweight and obese people prompt an array of negative emotional reactions in others (5, 6) and, as a group, are believed to be lazy, self-indulgent, unattractive, lacking self-esteem, socially inept, uncooperative, and intellectually slow (1, 7-10). In short, obesity is a socially stigmatizing attribute.

How does weight-related stigma affect the way people describe themselves? The relationship between obesity and the evaluative aspects of the self (e.g., self-esteem) is well-documented. A recent meta-analytic review of data from about 70 studies found a small negative (r=-0.18) correlation between weight and self-esteem (11, 12). In contrast, relatively little attention has been given to the relationship between obesity and structural aspects of the self. Research shows that the evaluation and structure of self-knowledge are independently related to psychological well-being (13, 14). Thus, if we are to understand the implications of weight-related stigma for adjustment we must consider the structure, as well as the content, of heavy individuals' self-concepts.

The theoretical basis for the relationship between obesity and structural aspects of the self-concept is Goffman's (15) notion of a "master status attribute." Master status attributes are deeply discrediting and dominate all the interactions of the stigmatized person. As a result, the individual develops a stigmatized identity, a self-concept that is organized around that attribute (16). According to Jones et al. (16) attributes acquire master status to the extent that they are negatively stereotyped and socially disruptive. Inasmuch as obesity is negatively stereotyped and socially disruptive (6, 17), research suggests that obesity is a master status attribute.

Although no studies have directly examined the association of weight and self-concept structure, there are plausible processes by which obesity might influence how the self-concept is organized. For example, obese individuals tend to adopt and imagine others' perspective on themselves and internalize the negative evaluations of others (18-20). This may contribute to self-concepts that are more organized around weight and appearance and perhaps less complex. If weight-related feedback from others is largely negative, obese individuals' internalization of others' views of them may also contribute to the clustering of negative attributes in the self-concept. In this way the stigma associated with obesity should have consequences for the organization of obese individuals' self-concepts.

This paper addresses the relationship between obesity and two structural ele-

ments of self-knowledge: self-complexity and compartmentalization. Self-complexity is defined as the degree to which one's self-knowledge is organized into a large number of independent domains (13, 21). Compartmentalization refers to the separation of positive and negative self-aspects into distinct categories (14). Both of these structural aspects of self-knowledge have implications for psychological well-being. For example, research has shown that self-complexity buffers the negative effects of stress on well-being. Participants who were high compared to those who were low in self-complexity were less depressed after experiencing stressful events (13). Other research shows that people with positive self-concept compartmentalization (e.g., organizing one's positive attributes together) report more positive moods and higher self-esteem (14, 22). Finally, both self-complexity and compartmentalization explain variance in psychological well-being independently of the content or evaluative tone of that self-knowledge (13, 14).

In sum, obesity is a master status attribute and should have predictable relation to structural aspects of the self-concept yet, to date, no studies have tested these ideas. In this study we measured self-complexity and compartmentalization in the self-descriptions of a sample of adult women. To check on the master status of obesity, the presence of spontaneously mentioned weight-stereotypic traits in participants' self-descriptions was also measured. Based on the reasoning developed above we hypothesized that body mass index (BMI) would be associated with more frequent mention of weight-stereotypic traits as self-descriptive, less complex self-concepts, and more compartmentalized self-knowledge. Because structural and evaluative aspects of self-knowledge have been found to be independently related to psychological well-being, we also predicted that the relationships between BMI and self-complexity and compartmentalization, respectively, would not be appreciably reduced when controlling for a measure of self-esteem.

METHOD

Participants

One hundred nineteen (119; 86 White, 25 ethnic minority) women from the University and surrounding community, ages 18 to 73 (M=26.9 years, SD=12.6 years), participated either in exchange for course credit or for payment ($5). The participants' BMI ranged from 16.2 to 54.7 (M=27.3, SD=6.8).

Materials and Procedure

A task was adapted from Linville (21) and Mullen et al. (23) to measure self-complexity and compartmentalization. Forty (40) traits were printed on sheets of small stickers. The traits included 22 positive terms (e.g., caring, confident) and 18 negative terms (e.g., moody, angry) selected from Anderson's (24) list of trait words. Participants were instructed to describe themselves by arranging the traits on a sheet of paper; traits that described a particular aspect of themselves were to be positioned together and circled. The sticker task is identical to Linville's (21) card sort method of measuring self-complexity but can be put into a packet of questionnaires and self-administered.

The spontaneous self-concept (25) was measured by asking participants to describe themselves with words or short phrases on a sheet with 20 numbered lines. They were instructed to freely report the descriptors without censoring or arranging their self-descriptions. Self-esteem was measured with the Rosenberg (26) Self-Esteem Scale, a 10-item scale that measures global, personal, self-evaluations, and to which participants responded on a 1 (strongly agree) to 4 (strongly disagree) scale. Rosenberg (26) reports high test-retest reliabilities for this scale; the Cronbach alpha for this study was 0.83. Participants' ethnicity, height, weight, and age were measured on a separate form. This information was collected last so that participants' weight would not be primed as they completed the self-related measures.

RESULTS

Self-complexity (Scott's H) scores were calculated by entering the appropriate parameters (# traits used, # clusters, traits in each cluster) for each participant into H-Comp, a program for calculating Scott's H (27). Self-complexity is most commonly measured with Scott's H and has been used widely in research (13, 21, 28). Compartmentalization was calculated by computing a phi coefficient for each participant from the frequencies of positive and negative traits in each of their circled self-aspects. Phi coefficients range from 0 to 1.00 and indicate an increasing variability of the proportions of positive and negative traits across one's self-aspects. In other words, the higher the phi coefficient the more positive and negative traits are compartmentalized in one's self-concept. Participants' self-descriptions were coded by three assistants for whether they included an obese category term (e.g., fat, overweight) or any of 4 obese-stereotypic traits (unattractive,

lazy, humorous, friendly) that were identified through pretesting as most typical of overweight people. The proportion of self-descriptive attributes that were obese-stereotypic was computed for each participant to control for the number of attributes generated. The raters' codes were in 100% agreement.

BMI was significantly related to the proportion of obese-stereotypic traits in the participant's self-descriptions (r(117)=0.18, p=0.05). As expected, heavier compared to lighter participants' spontaneous self-descriptions reflected more of the cultural stereotype associated with obese people. To get another perspective on this relationship we compared the obese-stereotypic traits mentioned by obese (BMI>30) and nonobese (BMI<25) participants. Obese (M=1.65, SD=0.48) compared to nonobese (M=1.21, SD=0.50) participants listed more obese-stereotypic attributes in their self-descriptions (t(37)=2.11, p<0.05) and these attributes made up a greater proportion of obese (M=0.12) compared to nonobese (M=0.05) participants' self-descriptions (t(92)=2.89, p<0.05). Because participants' age and ethnicity were uncorrelated with BMI, those variables are ruled out as alternative explanations for these self-concept differences. This evidence is consistent with the idea that obesity is a master status attribute, occupying a more prominent place in the self-concepts of obese than nonobese participants.

The correlation between BMI and Scott's H scores (r(109)=-0.22, p=0.02) indicated that, as predicted, heavier compared to lighter participants had less complex self-concepts. Although the effect size is small, the simpler structure of obese compared to nonobese participants' self-knowledge is also consistent with the master status nature of obesity. Consistent with other findings on the relationship between obesity and self-esteem (11) obese (M=2.85, SD=0.72) compared to nonobese (M=3.10, SD=0.58) participants had marginally lower levels of self-esteem (t(90) = 1.86, p=0.07). Scott's H and self-esteem scores were uncorrelated (r(109)=0.05, p=0.6) and, as predicted, controlling for self-esteem did not change the relationship between BMI and self-complexity.

Similar analyses were conducted to examine the relationship between obesity and compartmentalization. Subject loss occurred in this analysis due to subjects not circling their trait clusters or describing themselves in unidimensional terms (e.g., all their traits in a single cluster). For these subjects (N=38) a phi coefficient could not be calculated. The lost subjects, however, did not differ in their mean BMI, age, or demographic variables from the rest of the sample. The correlation between BMI and compartmentalization scores indicated that, as predicted, heavier compared to lighter participants had more compartmentalized self-knowledge (r(80)=0.27, p=0.04). Phi coefficients and self-esteem scores were unrelated (r(80)=0.02, p=0.50), and controlling for self-esteem did not change the relationship between BMI and compartmentalization. Finally, self-complexity and compartmentalization scores were unrelated (r(79)=-0.06, p>0.05) indicating that these structural variables are empirically as well as conceptually distinct.

Although subjects' age did not moderate the correlations between BMI and self-complexity and compartmentalization, some interesting age differences did emerge. A dichotomous age variable was created due to the bimodal distribution of age, yielding college-age (n=71, M=19.1 years, SD=1.6) and adult (n=43, M=39.7 years, SD=12.3) groups. Analyses showed that adult (M=1.56, SD=0.50) compared with college-age (M=1.3, SD=0.46) participants included more stereotypic traits in their self-descriptions (t(111)=2.79, p<0.01). Consistent with this difference, adult (M=2.05, SD=0.80) compared with college-age (M=2.44, SD=1.0) had less complex self-concepts (t(105)=2.05, p<0.05). The correlation of BMI and self-esteem, however, was only significant for the college-age participants (r(69)=-0.29, p<0.05); among the adult participants there was no relation between BMI and self-esteem (r(41)=0.01, p>0.05). These findings may reflect the longer time since the onset of obesity among the adult participants. Although older compared with younger obese women's self-concepts may be more influenced by obesity, they may have disconnected that attribute from their self-evaluations.

DISCUSSION

The primary contribution of this study is in documenting a relationship between obesity and structural aspects of the self-concept that had been hitherto untested. Obese, compared to nonobese, participants had self-concepts that were simpler, more compartmentalized, and more colored by weight-stereotypic traits. These results reflect the master status of obesity in the self-concepts of adult women and are likewise consistent with research on stigma and the self-concept. Whereas other researchers have documented the implications of this process for self-evaluation (11) our study shows that obesity-related stigma also has independent effects on self-structure.

Much research suggests that altering the

structure of one's self-concept may be an adaptive response to negative life experiences. For example, compartmentalization allows people to contain the effects of their negative attributes by separating them from their positive aspects, and allowing those threatening traits to be de-emphasized (22). Similarly, research shows that people adjust their compartmentalization with changing stress levels (29). Although the cross-sectional nature of the present study obscures the direction of relationship between obesity and compartmentalization, we argue that the simplifying and compartmentalizing of obese individuals' self-concepts is more likely an effect than a cause of the stigma and discrimination associated with obesity.

Given that the overall association between obesity and well-being is small and inconsistent (11, 12), we suggest that the influence of obesity on well-being may depend on the importance placed on positive and negative attributes. In obese individuals for whom thinness and appearance are important the stigma associated with obesity could spur negative compartmentalization which should in turn predict depression. In obese people who place less importance on thinness, the experience of others' negative treatment toward them should spur positive compartmentalization which should predict better coping and increased well-being. This analysis is consistent with reviews of the literature mentioned earlier. Those reviews find that the association between obesity and well-being is most predictive of well-being decrements in groups of people (e.g., eating disordered people, those who seek weight loss treatment) who also likely value thinness and appearance.

Finally, the cross-sectional nature of the present study cannot establish whether obesity causes changes in self-concept structure or whether people with self-concepts that emphasize weight and appearance become obese. There is suggestive evidence for both causal hypotheses. Obese individuals who have lost weight through surgery report more positive treatment from others (30); this might produce more positive self-perceptions. Alternatively, obese people for whom weight and appearance is important are more likely to binge eat (31) which could in turn contribute to greater obesity. The obesity/self-concept relationship must be regarded as dynamic rather than unidirectional.

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