

Is Obesity Stigmatizing? Body Weight, Perceived Discrimination, and Psychological Well-Being in the United States*

DEBORAH CARR
MICHAEL A. FRIEDMAN

Rutgers University

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We investigate the frequency and psychological correlates of institutional and interpersonal discrimination reported by underweight, normal weight, overweight, obese I, and obese II/III Americans. Analyses use data from the Midlife Development in the United States study, a national survey of more than 3,000 adults ages 25 to 74 in 1995. Compared to normal weight persons, obese II/III persons (body mass index of 35 or higher) are more likely to report institutional and day-to-day interpersonal discrimination. Among obese II/III persons, professional workers are more likely than nonprofessionals to report employment discrimination and interpersonal mistreatment. Obese II/III persons report lower levels of self-acceptance than normal weight persons, yet this relationship is fully mediated by the perception that one has been discriminated against due to body weight or physical appearance. Our findings offer further support for the pervasive stigma of obesity and the negative implications of stigmatized identities for life chances.

The number of Americans classified as obese has increased sharply in recent years, a pattern described by the media and medical community as an “obesity crisis” (Brownell and Battle Horgen 2003). One-quarter of adults are obese, with a body mass index (BMI) of 30 or higher, and 50 to 60 percent are classified as either overweight or obese, with a BMI of 25 or higher (Flegal et al. 2002). Although obesity is increasingly common in the United States, obese individuals still are regarded as one of the last acceptable targets of denigration (Puhl and

Brownell 2001). Unflattering portrayals of obese persons pervade popular culture, while multiple studies document that children, adults, and even health care professionals who work with obese patients hold negative attitudes toward overweight and obese persons (Crandall and Schiffhauer 1998; Greenberg et al. 2003). These patterns have been cited as evidence that obesity is an enduring and debilitating stigma (Allon 1981). However, recent theoretical work counters that prejudicial attitudes alone are not sufficient evidence that a personal attribute such as obesity is stigmatizing. Rather, the stigma process also may encompass both the *actions* of individuals and agents of social institutions who denigrate and exclude, as well as the *reactions* of persons in the devalued social category (Link and Phelan 2001).

Under this more expansive conceptualization, it is unclear whether obese persons experience a critical component of the stigma process: discrimination. Although prejudicial

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attitudes toward obese individuals are well-documented, these attitudes may not necessarily be translated into discriminatory behavior (Eagly and Chaiken 1993). We know of no systematic, nationally representative studies that document the discriminatory experiences reported by obese Americans. Anecdotal cases and lawsuits on the grounds of weight discrimination are reported in the media (e.g., Solovay 2000), yet these cases do not reveal how systematic or widespread such discrimination is. Moreover, such cases do not reveal whether the reported discrimination is due to body weight alone or to other attributes that are associated with both discrimination experiences and obesity, such as gender, race, or social class (Flegal et al. 2002; Kessler, Mickelson, and Williams 1999; Sobal and Stunkard 1989). These other personal attributes also may exacerbate or buffer against obese persons' experiences of discrimination, given that norms about ideal body weight vary across socioeconomic and cultural contexts (Crandall and Martinez 1996). Although discrimination is theorized to be an important pathway that contributes to the disadvantaged life chances of obese individuals (and other stigmatized persons), few studies of obesity and psychological, social, and economic well-being directly evaluate this potentially important influence (Friedman and Brownell 1995).

In this article, we document the prevalence, types, and psychological consequences of perceived discrimination reported by obese persons in the United States. Specifically, we use data from the Midlife Development in the United States (MIDUS) survey, a random sample survey of more than 3,000 men and women ages 25 to 74 in 1995, to (1) document patterns of perceived major discrimination and day-to-day interpersonal discrimination among underweight, normal weight, overweight, and obese Americans; (2) examine whether the association between body weight and discrimination is mediated and moderated by demographic characteristics including race, gender, age, and socioeconomic status; and (3) evaluate whether and how perceived discrimination affects self-acceptance, one dimension of life chances. Identifying the pervasiveness and consequences of perceived discrimination is critical for understanding the experiences of persons belonging to socially devalued groups; discrimination and individuals' reactions to such bias may have important consequences for their life chances.

THEORETICAL BACKGROUND

Is Obesity a Stigmatized Identity?

If early conceptualizations of stigma are used as the criteria, then obese persons clearly comprise a stigmatized group in the United States (Cahnman 1968). Goffman (1963) defined stigma as any personal attribute that is "deeply discrediting" to its possessors; these attributes include "tribal stigmata," "abominations of the body," and "blemishes of individual character" (p. 3). Obese Americans arguably are stigmatized along the latter two dimensions (DeJong 1980). Research conducted over the past 40 years shows that obese persons are viewed as physically unattractive and undesirable (Harris, Harris, and Bochner 1982; Puhl and Brownell 2001). Obese individuals also are viewed as responsible for their weight due to some character flaw or "blemish," such as laziness, gluttony, or a lack of self-control (Allon 1981; Crandall and Schiffhauer 1998; DeJong 1980; Harris et al. 1982).

Yet recent reconceptualizations of stigmatization (Link and Phelan 2001) suggest that prejudicial attitudes alone are not sufficient evidence that obese persons are a stigmatized group. Link and Phelan (2001) argue that a core component of the stigma process is that the labeled person experiences discrimination and status loss, which in turn may have harmful consequences for his or her life chances, including psychological, economic, and physical well-being. However, no studies have evaluated directly whether obese and overweight persons are more likely than normal weight persons to report discrimination, either in their interactions with major social institutions (such as employers or health care providers) or on a daily interpersonal basis. Rather, most studies document prejudicial attitudes toward obese people and presume that these attitudes will necessarily lead to discriminatory treatment.¹

The assumption that anti-obese attitudes will be translated into discriminatory behaviors is questionable, however, given the powerful evidence that attitudes are only weakly related to actual behavior, particularly when situational influences on behavior are strong (see Eagly and Chaiken 1993 for review). For instance, a company's equal opportunity employment policies or the mere presence of colleagues may prevent a prejudiced individual from treating an obese job applicant in a discriminatory manner,

even if he or she holds negative views toward obese people.

Moreover, few studies directly evaluate whether members of purportedly stigmatized groups suffer from disadvantaged life chances due to discrimination. Rather, "discrimination" is invoked as a post hoc explanation when members of a socially devalued group show a disadvantage in an important life domain. For example, studies show that obese persons have lower levels of education, earnings, and occupational status than normal weight persons. This disadvantage typically is attributed to "bias" or "discrimination," even when no direct measures of such experiences were obtained (Pagan and Davila 1997; Register and Williams 1990; Saporta and Halpern 2002).

We believe that it is important to explore individuals' *own perceptions* that they have been treated in a discriminatory manner. The perception that one has been treated unfairly due to an enduring personal attribute may be sufficient to prevent that person from pursuing important and necessary life goals (Major and Schmader 1998). For instance, obese persons who believe that their health care providers look down upon them may avoid seeking care; this reaction is potentially dangerous given that obese individuals are at an elevated risk for many health conditions (Fontaine et al. 1998). Our article is the first we know of that examines reports of both major discrimination (such as being passed over for a job promotion) and day-to-day interpersonal discrimination (such as being treated rudely) in a large national sample. Indicators of major discrimination reveal the ways that enduring, socially structured patterns of exclusion and rejection shape social and economic life (Link and Phelan 2001). However, institutional discrimination represents only a small proportion of the actual instances of unfair treatment based on personal characteristics (Ridgeway 1997). Thus, we also focus on interpersonal discrimination; even minor slights can produce considerable distress (Eisenberg, Neumark-Sztainer, and Story 2003).

The large MIDUS sample allows us to address three additional objectives. First, we move beyond the oversimplified dichotomy of "obese" versus "nonobese" and consider the distinctive consequences of underweight, normal weight, overweight, and two categories of obesity—persons with BMI between 30 and 35 (obese I), and persons with BMI of 35 or higher (obese II/III). Obese individuals are a heterogeneous

population, yet few studies examine whether they are treated differently at different points on the BMI spectrum (Puhl and Brownell 2001). This limitation may reflect the fact that once human differences are identified and labeled (e.g., obese versus "normal") they are taken for granted as meaningful demarcations despite enormous variability within the categories (Link and Phelan 2001).

Second, we examine whether the relationship between body weight and perceived discrimination persists when demographic characteristics are controlled. Persons possessing one stigmatized attribute often possess other related attributes that also are denigrated within a given social context (Link et al. 1997). For example, obese people are more likely than nonobese people to be female, black, and less educated (Flegal et al. 1998). Each of these demographic characteristics also is associated with a greater likelihood of reporting discriminatory treatment (Kessler et al. 1999). We control for socioeconomic and demographic characteristics in our analyses, because they may confound the observed relationship between body weight and perceived discrimination.

Finally, we explore whether discriminatory treatment varies based on other characteristics of obese persons. The extent to which a personal attribute is devalued and whether that attribute elicits negative treatment from others is contingent upon social context (Crocker, Major, and Steele 1998:505). Obese persons belonging to social strata where obesity is less common and acceptable may be more likely to experience discrimination. Whites, the highly educated, and those with richer economic resources are less likely to be obese. They also are more likely to value thinness, diet, and exercise, and they are more likely to hold negative attitudes toward obese persons (Averett and Korenman 1999; Crandall and Martinez 1996). Moreover, definitions of physical attractiveness are more closely tied to thinness for women than men (Friedman et al. 2002). Thus, it is possible that the interpersonal and social consequences of obesity are most acute for those who are white, young, female, and of a high socioeconomic status. We conduct moderation analyses to examine whether the relationship between body weight and perceived discrimination is conditioned upon demographic and socioeconomic status characteristics, including age, race, gender, and occupational status.

Obesity and Self-Acceptance: Is Discrimination the Link?

Persons possessing socially devalued attributes may be subject to discriminatory treatment; their reactions to this treatment may have important implications for their life chances, including compromised economic, physical, and psychological health (Link and Phelan 2001). We focus on one aspect of life chances, self-acceptance; we examine whether obese persons report lower self-acceptance than normal weight persons. Given the pervasiveness of negative attitudes toward obese persons in American society, symbolic interactionist theory predicts that obese persons may form negative self-evaluations as a reaction to discriminatory treatment. The self-concept develops through interactions with others, and it reflects one's perceptions of others' appraisals (Cooley 1956). Members of stigmatized groups who are mistreated by others then are likely to perceive that they are regarded negatively and may incorporate those negative attitudes into their self-concepts and evaluate themselves critically (Cooley 1956).

Despite strong theoretical rationale for the notion that obesity (and stigma, more generally) should be a source of poor psychological well-being, most empirical analyses do not confirm this hypothesis (Friedman and Brownell 1995).² Data from clinical and community samples show that neither being obese nor being overweight is associated with high levels of depression or anxiety (O'Neil and Jarrell 1992; Stunkard and Wadden 1992) or poor self-esteem (Kimm et al. 1991; Klesges et al. 1992).

The null (or equivocal) findings from past studies of weight and psychological well-being may reflect several methodological and substantive issues. First, few studies control for demographic confounding factors of obesity such as race or age, thus the effect of body weight may be suppressed. For example, blacks are more likely than whites to be obese (Flegal et al. 2002), yet they also tend to report lower levels of depression and higher levels of self-esteem than whites (e.g., Brown et al. 1999). Second, most studies examine whether obese and nonobese persons differ in terms of psychological well-being. Finer gradations of weight usually are not considered, thus the diverse range of psychological well-being scores within the heterogeneous obese versus nonobese categories

may mask important between-group differences (Friedman and Brownell 1995).

Finally, a potentially important pathway variable—perceived discrimination—has not been considered in past studies. The concept of reflected appraisals suggests that people will develop negative self-perceptions if they perceive that others view them negatively; thus, it is important to adequately measure and control both beliefs that one is being treated or evaluated poorly and one's attribution for the stigmatized treatment. The emotional consequences of negative encounters may depend on one's interpretation of the negative treatment (Crocker and Major 1989). When the attribution reflects negative personal traits, self-esteem is believed to suffer. For instance, attributing workplace mistreatment to one's obesity may be harmful to self-evaluations. However, attributing workplace discrimination to an external force, such as a mean-spirited boss, may protect one's self-concept (Weiner, Perry, and Magnusson 1988).

In order to address these research gaps, we examine whether underweight, overweight, and obese persons differ from normal weight persons in terms of self-acceptance, and we evaluate whether these differences persist when demographic and socioeconomic characteristics are controlled. We also evaluate whether the relationship between weight and self-acceptance is mediated, in part, by experiences of discrimination. We evaluate both *whether* one has ever experienced discrimination and one's attribution for *why* they have been the target of unfair treatment.

METHODS

Sample

The MIDUS is a national multistage probability sample of noninstitutionalized, English-speaking adults, ages 25 to 74, selected from telephone banks in the coterminous United States. A telephone interview and self-administered mail questionnaire were administered in 1995 and 1996. In the first stage, households were selected via random digit dialing. Disproportionate stratified sampling was used at the second stage to select respondents. The sample was stratified by age and gender; males and persons age 65 to 74 were oversampled.³ The response rate for the mail question-

naire is 87 percent; the response rate for the telephone interview is 70 percent. Because of the moderate rate of nonresponse, caution should be taken in extrapolating the results to the overall U.S. population in the same age range. The total MIDUS sample includes 4,242 adults (2,155 men and 2,087 women). This analysis is limited to the 3,437 persons (1,741 men and 1,696 women) who completed the mail questionnaire, including questions about height and body weight.⁴

The MIDUS assesses a broad range of perceived discrimination indicators. These indicators are based on concretely worded multi-item scales that produce more accurate estimates of the prevalence of perceived discrimination than more conventional single-item questions. Both lifetime occurrence of major episodic experiences, such as being passed over for a job promotion, and the occurrence of minor experiences, such as being treated rudely, are evaluated (Kessler et al. 1999).

Variables

Dependent variables. We consider two sets of outcomes. In the first part of the analysis, we identify the predictors of perceived discrimination, and in the second part we focus on self-acceptance. *Major lifetime discrimination* and *day-to-day mistreatment* are used as indicators of perceived discrimination.⁵ *Major discrimination* is assessed with the question "How many times in your life have you been discriminated against in each of the following ways because of such things as your race, ethnicity, gender, age, religion, physical appearance, sexual orientation, or other characteristics? (If the experience happened to you, but for some reason other than discrimination enter 0.)" Categories include "you were" (1) "discouraged by a teacher or advisor from seeking higher education"; (2) "denied a scholarship"; (3) "not hired for a job"; (4) "not given a job promotion"; (5) "fired"; (6) "prevented from renting or buying a home in the neighborhood you wanted"; (7) "prevented from remaining in a neighborhood because neighbors made life so uncomfortable"; (8) "hassled by the police"; (9) "denied a bank loan"; (10) "denied or provided inferior medical care"; and (11) "denied or provided inferior service by a plumber, car mechanic, or other service provider." Responses were recoded into a dichotomous variable

indicating whether one has *ever experienced any type of major discrimination*.

We also created separate indicators signifying whether one has *ever experienced work-related discrimination* (i.e., not hired for a job, not given a promotion, or were fired), and *health care related discrimination* (i.e., provided inferior medical care). We focus on the domains of employment and health care because discrimination in either domain may have important consequences for one's life chances (Link and Phelan 2001; Puhl and Brownell 2001).

Daily interpersonal discrimination describes recent interpersonal experiences that involve character assaults and unkind treatment. Nine questions evaluate the frequency of exposure to such daily occurrences. Respondents were asked, "How often on a day-to-day basis do you experience each of the following types of discrimination?" (1) "you are treated with less courtesy than other people"; (2) "you are treated with less respect than other people"; (3) "you receive poorer service than other people at restaurants or stores"; (4) "people act as if they think you are not smart"; (5) "people act as if they are afraid of you"; (6) "people act as if they think you are dishonest"; (7) "people act as if they think you are not as good as they are"; (8) "you are called names or insulted"; and (9) "you are threatened or harassed." The four response categories range from 1 ("never") to 4 ("often"). Two indicators are used in the analysis. First, a dichotomous indicator signifies *whether a person has ever experienced any of the above types of mistreatment*. Second, an *overall frequency score* ($\alpha = .98$) is the average of responses to the nine questions.

We consider one dimension of psychological well-being: *self-acceptance*. *Self-acceptance* ($\alpha = .62$) is one of six dimensions of the Ryff (1989) psychological well-being scale and is conceptually similar to widely used self-esteem scales (e.g., Rosenberg and Pearlin 1978). Scores are based on three questions: (1) "I like most parts of my personality"; (2) "When I look at the story of my life, I am pleased with how things have turned out so far"; and (3) "In many ways I feel disappointed about my achievements in life" (reverse coded). Respondents indicate their level of agreement using a 7-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Averaged scores range from 1 to 7, where higher scores indicate higher levels of self-acceptance.⁶

Independent variables. *Body mass index*

(BMI) is the key independent variable of our analysis. All MIDUS participants were asked to report their weight and height.⁷ BMI is calculated based on the formula where BMI equals kilograms divided by meters squared. Continuous BMI scores were recoded into six categories, based on cutpoints defined by National Heart, Lung, and Blood Institute guidelines (1998). The six categories are *underweight* (BMI of 18.5 or lower), *normal* (BMI between 18.5 and 24.9), *overweight* (BMI between 25 and 29.9), *obese I* (BMI between 30 and 34.9), *obese II* (BMI between 35 and 39.9), and *obese III* (BMI of 40 or higher).⁸ We combine the latter two categories, due to the small number of cases in the obese III category.

Demographic and socioeconomic status characteristics are controlled because they are important correlates of obesity (Flegal et al. 2002), and they also may affect one's likelihood of reporting discrimination (Kessler et al. 1999). Demographic variables include *age* (continuous measure, ranging from 25 to 74), *sex* (1 = female; 0 = male), *race* (1 = black; 0 = other), and *marital status* (dummy variables indicate persons who are never married, separated/divorced, and widowed; married is the omitted referent). Socioeconomic status variables include *educational attainment* and *occupational group*. Years of completed education are recoded into the following categories: less than 12 years, 12 years (reference group), 13 to 15 years, and 16 or more years. Current (or most recent) occupation is coded into two categories: *upper white-collar* (i.e., professional, executive, and managerial occupations), and a combined category including both *lower white-collar* (i.e., sales and clerical) and *blue-collar* (including crafts, operatives, labor, and farm occupations) workers. The latter category is the reference group.

Physical health is controlled in the models predicting self-acceptance. Obesity is a risk factor for health problems (Feinleib 1985; Ferraro and Yu 1995), and physical health, in turn, is strongly correlated with emotional health (Aneshensel, Frerichs, and Huba 1984). *Physical health* is evaluated with the question "In general, would you say your physical health is excellent, very good, good, fair, or poor?" Responses are recoded into a dichotomous variable where 1 = fair/poor, and good or better is the reference group.

Perceived discrimination experiences are the outcome measures for the first part of the analysis. In the second part of the analysis,

discrimination is an independent variable; we evaluate whether the association between obesity and self-acceptance is attributable, in part, to experiences of perceived discrimination. We use the following dichotomous indicators of discrimination: (1) whether one has *ever experienced an incidence of major discrimination*, and (2) whether one has *ever experienced day-to-day minor discrimination*. Finally, we include indicators of the *attribution for one's discriminatory treatment*. Those who report experiences of either major or day-to-day discrimination are asked, "What was the main reason for the discrimination you experienced? (If more than one main reason, circle all that apply.)" Response categories are (1) "your age"; (2) "your gender"; (3) "your race"; (4) "your ethnicity or nationality"; (5) "your religion"; (6) "your height or weight"; (7) "some other aspect of your appearance"; (8) "a physical disability"; and (9) "your sexual orientation." Two dichotomous indicators were created: (1) *whether one has ever experienced discrimination due to their weight or physical appearance*, and (2) *whether one has ever experienced discrimination for any other reason*. The reference category includes persons who have never experienced either major or minor discrimination.

RESULTS

Bivariate Analysis

Table 1 displays descriptive statistics, by BMI category. We conducted two-tailed *t*-tests to evaluate whether each weight category differs significantly from the "normal" weight category. Roughly 40 percent of the MIDUS sample is overweight (BMI of 25 to 29.9), while 21 percent is obese (BMI of 30 or higher). These proportions are similar to national estimates showing that 18 to 25 percent of the U.S. population is obese, while 50 to 60 percent is either overweight or obese (Flegal et al. 2002; Mokdad et al. 1999).

The bivariate analyses show that very obese persons (obese II/III), as compared to normal weight persons, report significantly lower self-acceptance scores (5.22 vs. 5.56; $p \leq .001$), more frequent daily discrimination (1.58 vs. 1.39; $p \leq .001$), and are more likely to report experiences of any major discrimination (41% vs. 33%; $p \leq .001$), work-related discrimination (31% vs. 21%; $p \leq .001$), health care related dis-

TABLE 1. Means and Standard Deviations for All Variables in the Analyses, by Body Mass Index

	Total Sample	Underweight (<18.5)	Normal (18.5–24.9)	Overweight (25–29.9)	Obese I (30–34.9)	Obese II/III (≥35)
Self-acceptance	5.51 (1.20)	5.34 (.97)	5.56 (1.23)	5.55 (1.17)	5.47 (1.19)	5.22*** (1.22)
<i>Perceived discrimination</i>						
Ever experienced major discrimination	.34 (.47)	.39 (.49)	.33 (.47)	.33 (.47)	.36 (.48)	.41*** (.49)
Ever experienced major discrimination, workplace	.23 (.42)	.24 (.43)	.21 (.41)	.23 (.42)	.26* (.44)	.31*** (.47)
Ever experienced major discrimination, health care	.03 (.17)	.01 (.12)	.03 (.16)	.03 (.16)	.03 (.16)	.08*** (.27)
Ever experienced day-to-day interpersonal discrimination	.61 (.49)	.65 (.48)	.59 (.49)	.59 (.49)	.63 (.48)	.71*** (.46)
Day-to-day discrimination, frequency score (1–4)	1.42 (.60)	1.41 (.52)	1.39 (.57)	1.41 (.58)	1.48** (.62)	1.58*** (.64)
Ever experienced any discrimination, due to weight/appearance	.11 (.31)	.05 (.23)	.07 (.26)	.09 (.26)	.16*** (.37)	.33*** (.07)
Ever experienced any discrimination, other reason	.40 (.49)	.46 (.50)	.41 (.49)	.37* (.48)	.41 (.49)	.41 (.49)
<i>Demographics</i>						
Sex (1 = female)	.50 (.50)	.80*** (.41)	.58 (.49)	.36*** (.48)	.46** (.50)	.65* (.48)
Race (1 = black)	.07 (.24)	.03 (.16)	.04* (.20)	.06* (.24)	.09*** (.29)	.12*** (.33)
Age (in years)	47.04 (13.25)	40.92 (13.05)	45.38 (13.54)	48.13* (13.38)	49.39*** (12.05)	47.79** (11.71)
Currently married	.63 (.48)	.45** (.50)	.60 (.49)	.67*** (.47)	.66* (.47)	.62 (.49)
Separated/divorced	.18 (.39)	.30* (.46)	.19 (.39)	.17 (.38)	.17 (.38)	.17 (.38)
Widowed	.06 (.24)	.07 (.25)	.06 (.22)	.06 (.23)	.06 (.24)	.07 (.25)
Never married	.13 (.34)	.19 (.39)	.15 (.36)	.15*** (.30)	.11* (.31)	.14 (.35)
<i>Socioeconomic status</i>						
<12 years education	.09 (.29)	.08 (.28)	.07 (.26)	.09 (.29)	.13*** (.34)	.08 (.28)
12 years education	.28 (.45)	.24 (.43)	.25 (.43)	.30*** (.46)	.31*** (.46)	.36*** (.48)
13–15 years education	.30 (.46)	.36 (.49)	.30 (.47)	.29 (.45)	.30 (.46)	.33 (.47)
>16 years education	.33 (.47)	.31 (.47)	.38 (.49)	.33*** (.47)	.26*** (.44)	.23*** (.42)
Upper white-collar job (current/most recent job)	.30 (.45)	.32 (.47)	.34 (.47)	.29 (.45)	.30 (.46)	.21*** (.41)
Not currently employed	.28 (.45)	.34 (.48)	.28 (.45)	.28 (.45)	.27 (.45)	.32 (.47)
Self-rated health, fair/poor	.15 (.36)	.20* (.41)	.11 (.31)	.13 (.34)	.22*** (.41)	.31*** (.46)
N	3,437	74	1,334	1,286	491	252
Percent	100	2.2	38.8	37.4	14.3	7.3

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

Source: Midlife in the United States 1995.

Notes: The reference category is "normal." Numbers in parentheses are standard deviations.

crimination (8% vs. 3%; $p \leq .001$), and day-to-day discrimination (71% vs. 59%; $p \leq .001$). Compared to normal weight persons, those in the obese I category are more likely to report workplace discrimination (26% vs. 21%; $p \leq .05$) and more frequent daily dis-

crimination (1.48 vs. 1.39; $p \leq .001$), although they do not differ significantly from normal weight persons in terms of self-acceptance. Obese I and obese II/III persons are significantly more likely than normal weight persons to attribute their discriminatory experiences

to weight or appearance (16% and 33%, respectively, vs. 7%; $p \leq .001$).

African Americans and persons with poor physical health are overrepresented among both obese I and obese II/III persons. Obesity also is inversely related to socioeconomic status. The proportion of MIDUS respondents with at least a college degree declines monotonically, as weight increases beyond the "normal" category. Obese II/III persons also are less likely than normal weight persons to work in professional occupations (21% vs. 34%; $p \leq .001$).

Multivariate Analysis

Are obese persons more likely to report discrimination? Table 2 presents logistic and ordinary least squares (OLS) regression results showing the effects of the independent variables on any major lifetime discrimination (column 1), any job-related discrimination (column 2), denied access to appropriate medical care (column 3), any experience of day-to-day interpersonal discrimination (column 4), and perceived frequency of day-to-day interpersonal discrimination (column 5). In general, body

TABLE 2. Predictors of Lifetime and Day-to-Day Perceived Discrimination

	Logistic Regression Results (log odds)				OLS
	Any Major Lifetime Discrimination	Any Major Job-Related Discrimination	Ever Denied Appropriate Medical Care	Ever Experienced Day-to-Day Discrimination	Regression Coefficients for Frequency of Day-to-Day Discrimination
<i>Body mass index</i>					
Underweight (<18.5)	1.09	1.08	.43	1.10	-.02 (.07)
Overweight (25–29.9)	1.12	1.26*	1.07	1.16	.04 (.02)
Obese I (30–34.9)	1.39***	1.51***	1.64***	1.31*	.10*** (.03)
Obese II/III (≥35)	1.51**	1.84***	2.98***	1.66***	.17*** (.04)
<i>Demographics</i>					
Race (1 = black)	2.51***	2.29***	2.44**	7.02***	.63* (.04)
Sex (1 = female)	1.32***	1.16	1.12	1.20*	-.01 (.02)
Age (in years)	.97***	.99***	.97***	.98***	-.01*** (.00)
Separated/divorced	1.58***	1.58***	1.33	1.55***	.09*** (.03)
Widowed	.73	.61*	1.66	.96	.02 (.04)
Never married	1.24	1.25	.83	1.83***	.12*** (.03)
<i>Socioeconomic status</i>					
<12 years education	.90	.81	1.92	1.18	-.03 (.04)
13–15 years education	1.68***	1.63***	2.48**	1.21*	.05* (.02)
>16 years education	1.90***	1.82***	1.89*	1.21	.03 (.02)
Upper white-collar occupation	1.10	.96	.80	.80*	-.01 (.02)
Constant	-.43	-1.29	-3.06	.90	1.66 (.04)
Chi-square (df)	253 (14)	162 (14)	50 (14)	259 (14)	
Adjusted R ²					.12

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

Source: Midlife in the United States 1995.

Notes: N = 3,437. "Normal" weight (body mass index 18.5–24.9) is the omitted weight category. Models include a missing data flag for occupation; the indicator is not statistically significant. Numbers in parentheses are standard errors. OLS = ordinary least squares.

weight is related to each type of perceived discrimination, and the disadvantages reported by persons classified as obese I and obese II/III are large and significant, even after widely documented demographic and socioeconomic correlates of obesity are controlled.

Compared to normal weight persons, persons classified as obese I and obese II/III are 40 and 50 percent more likely to report any experiences of major discrimination, respectively. Similarly, the odds of reporting any day-to-day interpersonal discrimination are 1.3 for obese I persons, and 1.7 for obese II/III persons, compared to persons of normal weight. Slightly different patterns emerge when two specific forms of major discrimination are considered. Work-related discrimination is positively associated with weight, across all categories heavier than "normal." Overweight persons are 26 percent more likely than normal weight persons to report work-related discrimination, while obese I persons are 50 percent more likely and obese II/III persons are 84 percent more likely to report job-related discrimination. Obese II/III individuals are the only category with a significantly elevated risk of reporting health-related discrimination: Such individuals are nearly three times as likely as normal weight persons to report that they have been denied or received inferior medical care.

Consistent with past research on discrimination, African Americans are more likely than whites to report all forms of discrimination. Blacks are more than twice as likely to report experiences of institutional discrimination, and they are more than seven times as likely to report interpersonal discrimination. Women are more likely than men to report overall major and minor discrimination. Age is inversely related to reported experiences of discrimination, perhaps reflecting generational differences in both awareness of and willingness to acknowledge discriminatory treatment. Surprisingly, persons with post-high school education are more likely than high school graduates to report all forms of discrimination.⁹ Higher education, like younger age, may reflect increased awareness of and willingness to report discriminatory treatment.

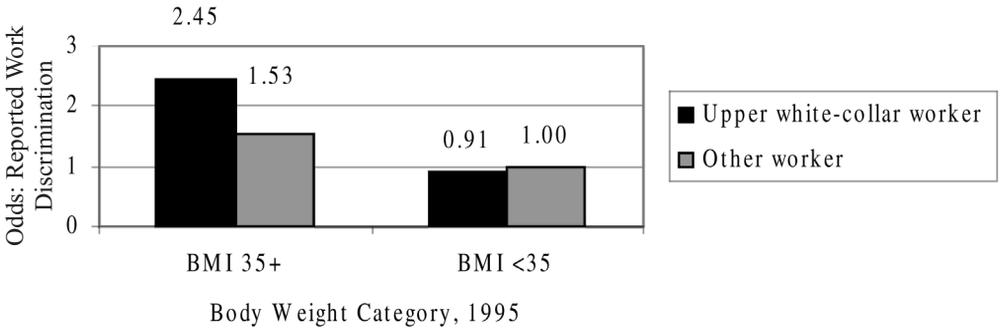
Which obese persons report heightened discrimination? Next we assess whether body weight affects perceptions of discriminatory treatment differently across demographic groups. We reestimated each model presented in Table 2 (except for health-related discrimination,

due to the small proportion reporting that experience) and added separate two-way interaction terms for each weight category and gender, age, race, and occupational status. A significant two-way interaction term would suggest that the effect of BMI on perceived discrimination varies significantly across a given demographic characteristic. Very few of the two-way interaction terms were statistically significant. The effect of each of the five weight categories did not differ significantly by sex, age, or race for any of the four discrimination outcomes. However, the effect of severe obesity differs significantly based on one's occupational standing, for the outcomes of job discrimination and frequency of day-to-day interpersonal discrimination.

Figure 1 displays the odds of reporting work-related discrimination, by occupational status and weight, net of all demographic and socioeconomic status variables. Highly obese professional workers are 2.5 times as likely as thinner professional workers to report work-related discrimination. They are also more likely than nonprofessional obese II/III persons to report workplace discrimination. Similarly, OLS regression models (not presented) reveal that very obese upper white-collar workers report day-to-day discrimination scores that are roughly .3 to .4 points higher than all other persons, suggesting that severe obesity is evaluated most harshly in higher socioeconomic strata (all models are available from the first author).

Obesity and self-acceptance: evaluating the role of discrimination. Our final objective is to explore the relationship between body weight and self-acceptance, and to evaluate whether this relationship is mediated by perceived discrimination experiences. Results from this analysis are presented in Table 3. Model 1 estimates the effects of BMI category only, and model 2 incorporates demographic and socioeconomic status characteristics. Models 3 through 5 evaluate whether specific types of perceived discrimination account for the negative association between severe obesity (obese II/III) and self-acceptance.

Model 1 shows that obese II/III persons report self-acceptance scores (on a scale from 1 to 7) that are .34 points lower than normal weight persons ($p \leq .001$). This effect remains statistically significant after demographic and socioeconomic status characteristics are controlled, although it declines from .34 to .21. The relationship does not attenuate when general

FIGURE 1. Odds of Reporting Any Experiences of Work-Related Discrimination, by Body Weight Category and Occupation

Notes: Plotted values are net of socioeconomic status and demographic characteristics. BMI = body mass index.

indicators of discrimination are controlled, in models 3 and 4. Although perceived major ($b = -.17$) and interpersonal ($b = -.19$) discrimination have significant negative effects on self-acceptance, they do not explain obese II/III persons' low levels of self-acceptance.

However, the relationship between severe obesity and self-acceptance attenuates dramatically and is no longer statistically significant when the perceived *reason* for discrimination is controlled (model 5). After we control for weight-related discrimination (versus other types of discrimination), very obese persons no longer evidence a self-acceptance disadvantage. This attenuation is likely not due to multicollinearity; the zero-order correlation between being obese II/III status and reporting weight-based discrimination is only .2. Rather, reflected appraisal processes may be operating; very obese persons may hold critical self-views because they perceive that others view them negatively due to their weight.

DISCUSSION

Extensive research shows that Americans hold prejudicial attitudes toward obese and overweight individuals (Puhl and Brownell 2001). This pervasive devaluation of individuals possessing a "discredited" personal attribute is a core component of classic conceptualizations of stigma (Goffman 1963). Recent theoretical innovations propose, however, that stigma is a much broader concept (Link and Phelan 2001). The stigma process also may encompass the *actions* of social institutions and individu-

als who denigrate and exclude, as well as the *reactions* of persons in the devalued social category. Our article provides compelling evidence that obese persons are stigmatized and that this stigmatization transcends negative evaluations by others. Rather, we find that obese individuals perceive that they are the target of multiple forms of discrimination and that this discrimination has implications for their psychological well-being.

First, we have shown that very obese persons (i.e., with a BMI greater than 35) are more likely than normal weight persons to report major discrimination, interpersonal discrimination, and work-related discrimination. Even overweight people (those with a BMI between 25 and 30) are more likely than normal weight persons to report job-related discrimination. However, only the most obese persons (obese II/III) reported health care related discrimination. This may reflect the fact that the physical health consequences of obesity are most acute at the highest levels of BMI (Allison et al. 1999), and some health care providers may act on their prejudicial views only when they perceive a serious health threat to their patients. Moreover, standard health care equipment and procedures may prevent the delivery of adequate health care to severely obese persons. For example, severely overweight people cannot fit into standard wheelchairs, blood pressure cuffs, or MRI and CAT scan machines (Perez-Pena and Glickson 2003).

Although most public health interventions that target obese persons focus on their lifestyles and health behaviors (Brownell and Battle Horgen 2003), our findings suggest that inter-

TABLE 3. Ordinary Least Squares Regression of Self-Acceptance on Body Mass Index, Perceived Discrimination, Demographic, and Socioeconomic Status Characteristics

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Body mass index</i>					
Underweight (<18.5)	-.22 (.14)	-.05 (.14)	-.05 (.14)	-.05 (.14)	.04 (.12)
Overweight (25–29.9)	-.01 (.05)	-.04 (.05)	-.03 (.05)	-.03 (.05)	.01 (.04)
Obese I (30–34.9)	-.09 (.06)	-.06 (.06)	-.05 (.06)	-.05 (.06)	-.02 (.05)
Obese II/III (≥35)	-.34*** (.08)	-.21** (.08)	-.20* (.08)	-.19* (.08)	.03 (.07)
<i>Demographics</i>					
Race (1 = black)		.21** (.08)	.25** (.08)	.27** (.08)	.33*** (.07)
Sex (1 = female)		-.10* (.04)	-.09* (.04)	-.09* (.04)	-.03 (.04)
Age (in years)		.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Separated/divorced		-.43*** (.05)	-.41*** (.05)	-.41*** (.05)	-.35*** (.05)
Widowed		.02 (.09)	-.01 (.09)	.01 (.09)	.03 (.08)
Never married		-.33*** (.06)	-.32*** (.06)	-.31*** (.06)	-.26*** (.05)
<i>Socioeconomic status</i>					
<12 years education		-.02 (.08)	-.02 (.08)	-.01 (.08)	-.03 (.07)
13–15 years education		.05 (.05)	.07 (.05)	.06 (.05)	.05 (.05)
>16 years education		.29*** (.06)	.31*** (.06)	.30*** (.06)	.18*** (.05)
Upper white-collar occupation		.16** (.05)	.16** (.05)	.15** (.05)	.07 (.04)
Employment status (1 = not working)		.01 (.05)	-.01 (.05)	.01 (.05)	-.03 (.04)
Self-rated health (1 = fair/poor)		-.50*** (.06)	-.48*** (.06)	-.49*** (.05)	-.34*** (.05)
<i>Perceived discrimination</i>					
Ever experienced major lifetime discrimination			-.17*** (.04)		
Ever experienced day-to-day discrimination				-.19*** (.04)	
Ever experienced either discrimination, due to weight					-.33*** (.06)
Ever experienced either discrimination, other reason					-.12*** (.04)
Constant	5.56 (.03)	5.43 (.09)	5.50 (.10)	5.57 (.10)	5.84 (.08)
Adjusted R ²	.01	.08	.08	.08	.07

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed tests)

Source: Midlife in the United States 1995.

Notes: N = 3,437. "Normal" weight (body mass index 18.5–24.9) is the omitted weight category. Models include a missing data flag for occupation; the indicator is not statistically significant. Numbers in parentheses are standard errors.

ventions also should focus on the practices of "those who do the discriminating" (Link and Phelan 2001:366). These practices are potentially injurious: For example, discriminatory treatment by health care providers may prevent obese people from seeking timely care, or it may discourage their efforts to lose weight (Fontaine et al. 1998; Major and Schmader 1998). Per-

ceived discrimination also has been linked to elevated blood pressure, a condition for which obese persons are already at risk (Krieger 1990).

Second, we found that the interpersonal consequences of severe obesity are most acute for members of higher socioeconomic strata. Highly obese persons working in professional jobs are more likely than their thinner peers and

obese nonprofessionals to report job discrimination and elevated levels of daily discrimination. This finding underscores the observation that stigma is an inherently social process; the extent to which a personal characteristic is viewed as unattractive or indicative of a moral flaw varies across social contexts (Archer 1985). A number of studies suggest that upper-middle class Americans are less likely to be obese, more likely to adopt negative views toward the obese, and more likely to view thinness as an ideal body type (e.g., Ross 1994). This may reflect a strong adherence to the Protestant work ethic among advantaged social groups; the belief that obesity is a consequence of laziness may be particularly common among those with richer resources and opportunities (Crandall and Biernat 1990). Physical appearance and putting forth a positive image of one's employer also may be a more critical aspect of job success in professional occupations than in blue-collar or service occupations (Hochschild 1983).

Third, we found that obese II/III persons have lower self-acceptance levels than normal weight persons, yet this association is explained largely by one's belief that he or she has been mistreated due to weight or appearance. Our finding that very obese people have lower self-acceptance than normal weight persons counters a large body of research showing an inconsistent relationship between weight and psychological health (see Friedman and Brownell 1995 for a review). This discrepancy may reflect the fact that we conducted fine-grained comparisons across five distinct weight groups rather than a coarse comparison of obese versus nonobese. We found that only obese II/III persons have poorer self-acceptance levels and that obese I persons are no different in self-acceptance than normal weight persons. In studies comparing only obese and nonobese persons, the relatively high psychological well-being of persons in the obese I category may inflate the psychological health scores of the large and diverse obese category. This finding has important implications for understanding the personal consequences of stigma, more generally; stigmatized groups often are viewed as monolithic, taken-for-granted categories, thus within-group variability often is ignored (Link and Phelan 2001).

Our findings also provide insights into why some very obese persons hold negative self-perceptions: They may perceive that they have been

mistreated or devalued due to their weight (Cooley 1956). Being treated in a discriminatory fashion or, more importantly, *believing* that one has been the target of discrimination due to a personal attribute is an important pathway that may explain why some persons with stigmatized identities have more negative self-evaluations than "normals" (Goffman 1963).

We also found that the effect of obesity on both perceived discrimination and self-acceptance is generally similar across race, gender, and age categories. This is surprising, given the large literature suggesting that obesity is considered a greater normative violation among women, whites, and young persons (Averett and Korenman 1999; Crandall and Martinez 1996; Ross 1994). At very high weight levels (i.e., BMI greater than 35), obesity may become a "master status," or a characteristic that overrides all other features of a person's identity (Goffman 1963).

LIMITATIONS

Our article has several important limitations. First, reports about experiences of discrimination are based on perceptions only. Perceptions are important in their own right, however, and may have important consequences for the perceiver's health and well-being (Thomas and Znaniecki [1918] 1958). Second, we examine the effect of perceived discrimination on self-acceptance only, and we do not directly measure the possible sequelae of events that may follow such discriminatory experiences. For example, if a person loses his or her job due to excessive body weight, then financial difficulties and family disputes may result, which in turn may affect psychological health (e.g., Price, Choi, and Vinokur 2002). Moreover, our measure of self-acceptance may be confounded with discrimination experiences; individuals may view their accomplishments negatively precisely because discrimination has impeded their efforts. Future studies should explore a broader array of psychological, economic, and physical health outcomes that may result from experiences of discrimination among stigmatized individuals (Link and Phelan 2001).

Third, our measure of major discrimination is a lifetime measure and may refer to experiences that occurred years earlier, when a person was at a very different weight. Although body weight tends to fluctuate over the life course,

persons who are obese in adulthood often have been overweight since adolescence (Ferraro and Kelley-Moore 2003). In the MIDUS sample, more than half of all persons in the obese II/III category report that they were overweight or obese at age 21. Still, future research should explore the ways that weight trajectories over the life course affect one's perceptions of and attributions for experiences of both major and interpersonal discrimination. Finally, the MIDUS data are cross-sectional, thus we cannot ascertain definitively whether the observed associations between contemporaneous measures (such as perceived discrimination and self-acceptance) are correlational or causal.

Despite these limitations, we believe that our article provides persuasive evidence that obese individuals are stigmatized in the United States today. Obese individuals believe they are subject to unfair treatment in terms of employment, health, and daily encounters, and these encounters contribute to their poor self-evaluations. Future research should explore the distinctive coping strategies used by obese individuals (and stigmatized persons, more generally). Most research on coping with discrimination focuses on racial discrimination, and the findings are equivocal. Some conclude that confrontation is more effective than forbearance (Krieger 1990), while others propose that passive coping is the only realistic option for managing chronically distressing situations (Wethington and Kessler 1991). Identifying the most effective strategies for coping with the persistent stigma of obesity is a critical step toward ensuring a positive quality of life for overweight Americans (Myers and Rosen 1999).

Future studies also should explore whether the increasing prevalence of obesity in the United States will lead to more or less widespread discrimination. The specific stigmas that elicit negative reactions from others may change over time as knowledge, tastes, and public acceptance of "deviant" conditions and behaviors change (Archer 1985). As more Americans become obese, biases may be reduced because more people (and their significant others) will become targets of stigmatization, and awareness of weight-based inequities may increase.

It is naïve to assume that the stigma associated with obesity will simply fade away, however; thus, more sweeping social reforms may be necessary. Public education about the distinctive challenges facing obese persons and about the pervasiveness of prejudicial attitudes

toward them may help to reduce unfair treatment of severely overweight Americans. Legislative changes also may be an effective strategy for reducing weight-based discrimination. To date, Michigan is the only state that prohibits employment discrimination on the basis of weight.¹⁰ In the remaining 49 states, obesity is not a protected category. The Civil Rights Act of 1964 does not identify weight as a protected characteristic, and only in rare instances can severely obese people seek legal protection under Americans with Disabilities Act legislation. Expanding protected categories to include obese persons may be a potentially effective strategy for ensuring that prejudicial beliefs against stigmatized individuals are not translated into discriminatory treatment.

NOTES

1. Prejudice refers to negative beliefs about members of a particular group, whereas discrimination refers to overt negative and unequal treatment of members of a given social group due to their membership in that group (Allport 1954).
2. Similarly, studies of "tribal" stigma reveal that blacks and Mexican Americans have self-esteem levels that are equal to or higher than that of whites in the United States (Crocker and Major 1989; Jensen, White, and Galliher 1982).
3. Our results are based on the unweighted sample. Findings were virtually identical when we used the sample weights. The sample weight adjusts for unequal probabilities of household selection and of respondent selection within households.
4. The 89 sample members who did not report their weight do not differ significantly from the "normal" weight category in their reports of having experienced any major discrimination or any interpersonal discrimination. However, they are significantly more likely to report that they have experienced some form of discrimination due to their weight. We assume that the "missing" weight persons are overrepresentative of persons whose BMI would fall into one of the obese categories. Consequently, the findings presented for obese persons in our article may be slightly understated.
5. Frequency distributions for each indicator of major discrimination and daily discrimination,

by BMI category, are available from the first author.

6. We also considered dichotomous indicators of whether one has had a major depression episode and generalized anxiety disorder in the past 12 months, based on criteria specified in the third edition (revised) of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (1987; Wittchen et al. 1994). Obese and overweight persons did not differ significantly from normal weight persons, net of demographic characteristics. This finding is consistent with past research (O'Neil and Jarrell 1992; Stunkard and Wadden 1992).
7. Self-reported weights are highly correlated with scale weights (Palta et al. 1982; Stunkard and Albaum 1981). Very overweight persons tend to underestimate their weight, but the bias introduced by using self-report data is considered "inconsequential" (Palta et al. 1982).
8. The obese III category is considered to be "morbidly obese," or those with a heightened risk of one or more obesity-related health conditions that may result in significant physical disability or death (National Heart, Lung, and Blood Institute 1998).
9. The significant effect of education persists even when the indicator of occupational status is omitted from the model.
10. The Elliot Larsen Civil Rights Act, Act 453 of 1976, Section 209, bans discrimination in employment on the basis of height and weight. Local ordinances in Santa Cruz, California, San Francisco, and the District of Columbia also prohibit weight-based discrimination.

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Deborah Carr is associate professor in the Department of Sociology and Institute for Health, Health Care Policy, and Aging Research at Rutgers University. Her research focuses on the psychological consequences of work and family roles over the life course. Her current projects investigate the psychological consequences of stigmatized identities and the ways that older adults and their families prepare for the end of life.

Michael A. Friedman is assistant professor in the Department of Psychology and Institute for Health, Health Care Policy, and Aging Research at Rutgers University. His research focuses on understanding and treating depression among individuals with chronic physical diseases such as obesity and cardiovascular disease.