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## ORIGINAL ARTICLE

## Motivating or stigmatizing? Public perceptions of weight-related language used by health providers

This article has been corrected since online publication and a corrigendum is also printed in this issue

R Puhl, JL Peterson and J Luedicke

**BACKGROUND:** Research demonstrates that health providers express negative attitudes toward overweight and obese patients that can be conveyed through weight-related language, yet little is known about people's perceptions of weight-related language used by providers. The current study examined public preferences and perceptions of weight-based terminology used by health-care providers to describe excess weight.

**METHOD:** A national sample of American adults ( $N = 1064$ ) completed an online survey to assess perceptions and preferences associated with 10 common terms to describe body weight. Participants rated how much they perceived each term to be desirable, stigmatizing, blaming or motivating to lose weight (using five-point Likert scales), and how they would react if stigmatized by their doctor's reference to their weight.

**RESULTS:** The terms 'weight' (3.43, 95% confidence interval (CI) 3.35–3.50) and 'unhealthy weight' (3.24, 95% CI 3.15–3.33) were rated most desirable, and the terms 'unhealthy weight' (3.77, 95% CI 3.69–3.84) and 'overweight' (3.51, 95% CI 3.43–3.58) were rated most motivating to lose weight. The terms 'morbidly obese', 'fat' and 'obese' were rated as the most undesirable (95% CI 1.61–2.06), stigmatizing (95% CI 3.66–4.05) and blaming (95% CI 3.62–3.94) language used by health providers. Notably, participant ratings were consistent across socio-demographic variables and body weight categories. A total of 19% of participants reported they would avoid future medical appointments and 21% would seek a new doctor if they felt stigmatized about their weight from their doctor.

**CONCLUSION:** This study advances our understanding of why individuals prefer particular weight-related terms, and how patients may react if their provider uses stigmatizing language to refer to their weight. It also offers suggestions for practical strategies that providers can use to improve discussions about weight-related health with patients.

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**Keywords:** stigma; language; health; health care; communication

## INTRODUCTION

In 2010, the British Public Health Minister urged health-care providers in Britain to tell obese patients that they are 'fat' rather than 'obese' to help motivate them to become healthier and take responsibility for their lifestyles.<sup>1</sup> In her public announcement, the Health Minister stated the importance of obese individuals taking personal responsibility for their lifestyles, and called on the National Health Service to ban terms such as 'obese' because it would not have the necessary emotional impact for patients, who would be less worried about their weight if they were told they are obese than if they were told they are fat.<sup>1</sup> Although the intentions of this announcement may have been initiated from goals to promote public health, the potential for obese patients to become stigmatized from this recommendation could instead be harmful. In fact, previous research examining patients' preferences for terms that providers use to describe their body weight found 'fatness' and 'excess fat' to be the least desirable terms.<sup>2–4</sup> With approximately two-thirds of American adults currently overweight or obese,<sup>5</sup> and an increasing prevalence of weight discrimination toward obese persons in the United States,<sup>6</sup> the recommendation to use this language from a public health official could potentially reinforce weight-based stigma and interfere with effective health promotion or obesity intervention efforts.<sup>7</sup>

Physicians are reported to be one of the most frequent sources of weight bias,<sup>8</sup> making health care a prominent setting where such bias occurs. Several decades of research have documented negative stereotypes and stigma toward obese patients by diverse groups of health-care providers (for example, physicians, nurses, dietitians and psychologists).<sup>8–13</sup> Unfortunately, being a target of weight stigmatization poses numerous consequences including heightened risk of psychological distress, maladaptive eating behaviors, exercise avoidance, reduced health-care utilization and poorer outcomes in weight-loss treatment.<sup>8,14–18</sup> Given that obese individuals are already at a greater risk for certain health conditions,<sup>19,20</sup> it is critical to improve the medical climate for obese patients and ensure that health-care experiences are positive, productive and free of bias.

Qualitative studies have examined preferences for weight-related terms in samples of overweight or obese adults. An Australian study documented preferences for the terms 'fat' or 'overweight' rather than 'obesity',<sup>21</sup> however, these preferences differed according to body mass index (BMI).<sup>22</sup> In contrast, research in the United Kingdom found that adults preferred 'overweight' rather than 'fat' and 'obese'.<sup>23</sup> Finally, survey studies of obese American adults identified preferences for more neutral terms such as 'weight' or 'BMI' rather than 'obesity', 'excess fat' and

'fatness'.<sup>2-4</sup> Thus, existing research is mixed, but further examination of why individuals favor particular terms may clarify our understanding of weight language preferences. For example, the term 'obese' may be perceived as confusing or emotionally charged for some individuals,<sup>23,24</sup> but may motivate weight loss for others.<sup>23</sup> The term 'fat' may be perceived as pejorative and derogatory for some individuals,<sup>25,26</sup> but in certain cases attitudes toward 'fat people' have been found to invoke more favor and less disgust than 'obese people',<sup>27</sup> and certain groups of individuals (for example, members of the Fat Acceptance movement) may publicly embrace this term.<sup>28,29</sup> Thus, weight-related language can invoke different interpretations and individual preferences, and this needs to be better understood especially in the context of health care where patient-provider discussions about weight are routine.

Given the qualitative nature of previous work and the general homogeneity of recent survey studies, it also remains unclear how personal characteristics influence language preferences. For example, a recent study of treatment-seeking American adults found that 'fatness' was the least desirable term and 'weight' was the most desirable term.<sup>3</sup> Although the authors found no significant effects of participant BMI, gender or race on term preferences, the sample included only obese persons, who were primarily female (80%), and did not approximate the racial composition of the USA.<sup>30</sup>

Additionally, although previous studies have examined a range of labels to describe excess weight,<sup>2-4</sup> several labels describe the state of having excess weight (for example, 'fatness' and 'obesity') rather than implying personal identity (for example, 'fat' or 'obese'). There are conceptual differences between these types of labels, with the latter 'diagnoses' viewed as more inherent in the person, enduring and potentially deviant or stigmatizing.<sup>31-33</sup> Furthermore, perceptions of numerous labels have been assessed, yet several commonly used, medicalized terms to refer to excess body weight (that is, 'overweight' and 'morbidly obese') have been absent. Finally, and perhaps most importantly, although these studies documented participants' preferences for labels to describe excess weight, they did not identify why participants endorsed these preferences or if their preferences differed according to personal experiences of weight-related stigmatization or attitudes toward obese individuals.

Thus, the current study aimed to expand on previous research to systematically examine public preferences associated with 10 common weight labels (including 'overweight' and 'morbidly obese') that doctors use to describe weight in a medical setting using a nationally representative sample of American adults. Importantly, participants' perceived connotations of weight terms were also assessed, namely, the extent to which they perceived various weight labels to be stigmatizing, blaming and motivating to lose weight. The current study also examined participants' personal and demographic factors (that is, race, age, education, attitudes toward obese people and personal history of weight bias) to assess the potential influence of participant characteristics, anti-fat attitudes or history of weight-related victimization on participants' preferences and perceptions of weight terms.

In contrast to recent studies, the present study also included participants of all weight groups. Participants from all BMI categories were analyzed to determine whether preferences for weight labels differ across weight categories or whether particular labels are perceived to be stigmatizing regardless of one's body weight. Although individuals with high BMI report the most experiences of weight discrimination, some normal-weight individuals also report weight discrimination.<sup>34</sup> Individuals who experience weight discrimination may perceive themselves as weighing more,<sup>35</sup> and perceived weight may mediate the effect of actual weight status on health.<sup>36</sup> Alternatively, normal weight individuals could have lingering social or psychological consequences from previously being overweight.<sup>17</sup> Thus, it is

important to identify public perceptions of weight-related labels across different BMI categories, so that providers can facilitate productive and sensitive discussions about weight-related health with patients of diverse body weights.

## MATERIALS AND METHODS

An online survey was developed to assess public preferences for terms that describe body weight. Piloting ( $N=100$ ) indicated no difficulties in participant question comprehension.

The final sample was recruited through a survey panel administered by Survey Sampling International (SSI),<sup>37</sup> consistent with recently published studies.<sup>38,39</sup> Participants were recruited through thousands of websites to maximize the representativeness of the panel to the online population, with data aggregators that reach millions of users. Panels included individuals who were 18 years or older, indicated intent to join an SSI panel, provided validated information (that is, geographic and demographic) and did not duplicate panelists. The SSI set quotas on completed interviews including geography, age and gender to approximate the US census demographics.<sup>30</sup> Data collection occurred during one week in the fall of 2010. All participants provided written informed consent, and the study received formal review and approval by the authors' university Institutional Review Board. Of the participants that began the survey, 85.53% completed the study with usable data, yielding a final sample of  $N=1064$ .

### Measures

Participants were asked to report their age, sex, ethnicity, education, annual household income, height and weight (to calculate BMI).

Preferences for weight terms were assessed using a questionnaire previously used for this purpose,<sup>2-4</sup> which we modified to emphasize a positive relationship between the health-care provider and patient: 'Imagine you are visiting your doctor for a routine checkup. The nurse has measured you and found that you are at least 50 pounds over your recommended weight. Your doctor will be in shortly to speak with you. You have a good relationship with your doctor, who is committed to your health and well-being. Doctors can use different terms to describe body weight. Please indicate how desirable or undesirable you would find each of the following terms if your doctor used it in referring to your weight.' Participants rated the following 10 terms (presented in random order) using a five-point scale (1=very undesirable to 5=very desirable) regarding how undesirable or desirable each term would be if a doctor used it to refer to their weight: 'morbidly obese', 'high BMI', 'weight problem', 'unhealthy weight', 'weight', 'heavy', 'obese', 'overweight', 'chubby' and 'fat.' The final set of terms was derived to reflect previously examined, colloquial and medicalized language,<sup>2,40</sup> and to reflect labels that imply a diagnosis or personal identity (for example, 'fat' or 'obese') and those that are more descriptive (for example, 'high BMI' and 'weight problem'). Term selection was also informed by labeling research from other domains (for example, substance use and mental illness).<sup>32,41</sup>

Perceptions of weight terms were assessed by asking participants to rate the degree that each of the 10 weight terms were (1) stigmatizing, (2) blaming a person for their weight and (3) motivating to reduce weight. All items were rated on a five-point scale (for example, 1=not at all stigmatizing to 5=very stigmatizing). These measures were developed for the current study.

Reactions to stigmatizing situations were assessed by asking: 'If your doctor referred to your weight in a way that makes you feel stigmatized, how would you react?' Participants then rated eight responses: 'do nothing', 'be upset/embarrassed', 'talk to doctor/request he or she use different language to discuss weight', 'seek a new doctor who is more sensitive about my weight', 'avoid future appointments with my doctor', 'go on a strict diet/significantly reduce my calorie intake', '... feel really bad about myself' and '...get depressed and eat' on a five-point scale (1=unlikely to 5=very likely). This measure was developed for the current study.

Anti-fat attitudes (that is, weight bias) were assessed using the Fat Phobia scale.<sup>42</sup> The participants selected a point on the scale that best described their feelings and beliefs about obese persons for each of 14 adjective pairs (for example, 'active' versus 'inactive', 'no will power' versus 'has will power'). Higher scores indicate negative attitudes toward obese people. Cronbach's alpha was 0.94.

Finally, history of weight victimization was assessed with three forced choice questions ('yes' or 'no') that asked whether or not participants had experienced stigma related to their weight (for example, teasing, unfair treatment or discrimination).

### Statistical analysis

Mean ratings of weight labels are presented including 95% confidence intervals. In addition, linear regression models (Ordinary Least Squares regression) are fitted, including marginal model predictions to compute covariate adjusted means. All the analyses were carried out using Stata version 11.1 (StataCorp., College Station, TX, USA).

## RESULTS

Table 1 summarizes sample characteristics, which generally approximate recent national estimates.<sup>30</sup> The participant BMI

	N	%
<i>Gender</i>		
Female	636	60.4
Male	417	39.6
<i>Age (mean = 45 years and s.d. = 16)</i>		
18–30 years	253	23.9
31–55 years	509	48.1
56–88 years	297	28.0
<i>Education</i>		
High school or less	296	27.8
Vocational school/some college	454	42.7
College or higher	313	29.4
<i>Annual household income</i>		
< \$25 000	361	34.3
\$25 000–49 000	336	31.9
\$50 000–74 999	177	16.8
> \$75 000	180	17.1
<i>Race/ethnicity</i>		
Caucasian	779	73.8
African American	139	13.2
Other	137	13.0
<i>Weight status (mean = 28 and s.d. = 7)</i>		
Underweight (BMI < 18.5 kg m <sup>-2</sup> )	47	4.5
Normal weight (BMI 18.5–24.9 kg m <sup>-2</sup> )	351	33.8
Overweight (BMI 25–29.9 kg m <sup>-2</sup> )	321	30.9
Obese (BMI > 29.9 kg m <sup>-2</sup> )	320	30.8
<i>History of weight-based victimization</i>		
Yes	440	41.4
No	624	58.7
Anti-fat attitudes (mean and s.d.)	3.59	0.86

was classified according to the guidelines for classification of overweight and obesity in adults by the National Heart, Lung, and Blood Institute of the National Institutes of Health.<sup>43</sup> This resulted in 34% normal weight, 31% overweight and 31% obese, which approximates the US population.<sup>5</sup> A total of 41% of participants reported a previous history of weight victimization (see Table 2). Scores on the Fat Phobia scale (mean = 3.59 and s.d. = 0.86) were similar to previously reported means.<sup>42</sup>

### Perceptions of weight terms

Figure 1 displays mean ratings of weight-related terms regarding desirability, stigma, blame and motivation to lose weight. Respondents rated 'weight' and 'unhealthy weight' as more desirable terms to be used by a doctor. Conversely, respondents rated 'obese', 'fat' and 'morbidly obese' as the least desirable terms, with mean ratings ranging from undesirable to very undesirable on the scale.

Respondents rated 'morbidly obese', 'fat' and 'obese' as the most stigmatizing. Respondents rated 'weight problem', 'unhealthy weight', 'high BMI' and 'weight' as the least stigmatizing. Similarly, participants rated 'morbidly obese', 'fat', and 'obese' to be most blaming, and 'high BMI' and 'weight' as least blaming, with 'weight' significantly less blaming than 'high BMI'. Finally, terms that participants rated to be motivating to lose weight were 'unhealthy weight' and 'overweight'. The terms 'weight' and 'chubby' were rated as the least motivating terms, both receiving neutral ratings for motivation.

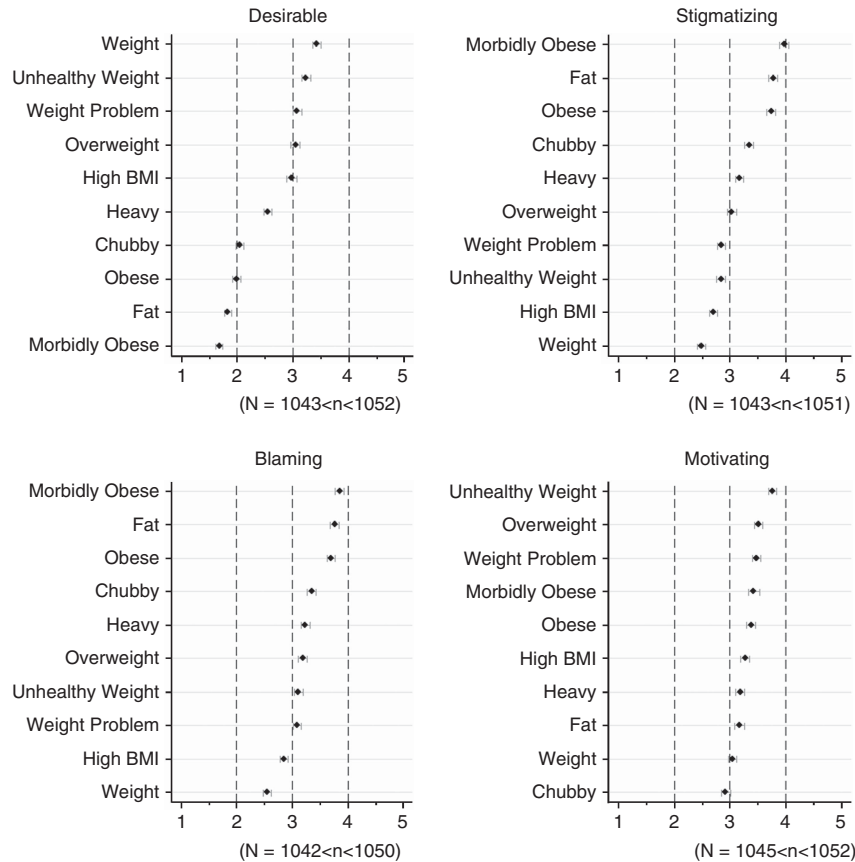
### Reactions to stigmatizing situations

High percentages of normal-weight and overweight/obese participants reported that they would be 'likely' or 'very likely' to feel badly about themselves, upset or embarrassed if a doctor stigmatized them about their weight (Figure 2). Higher percentages of normal-weight (41%) than overweight/obese (30%) individuals reported that they would go on a strict diet/significantly reduce caloric intake if their doctor stigmatized them because of their weight. In addition, 24% of normal-weight participants and 20% of overweight/obese participants reported that they would seek a new doctor and approximately 19% of individuals in both weight groups reported that they would avoid future appointments with a doctor who had stigmatized them because of their weight. Finally, 13% of normal-weight individuals and 18% of overweight/obese individuals reported that they would feel depressed and eat more food in reaction to being stigmatized about their weight by a doctor. Given the small number of underweight participants, individuals with a BMI < 18.5 kg m<sup>-2</sup> were excluded from this analysis.

**Table 2.** History of weight-based victimization by participant BMI

BMI category	History of weight-based victimization							
	No perceived victimization		Teased		Treated unfairly		Discriminated against	
	N	%	N	%	N	%	N	%
Underweight (n = 47; 4.5%)	24	3.9	18	4.5	7	2.9	12	6.1
Normal weight (n = 351; 33.8%)	265	43.5	75	18.9	43	17.6	32	16.2
Overweight (n = 321; 30.9%)	209	34.3	104	26.2	53	21.7	37	18.7
Obese (n = 320; 30.8%)	111	18.2	200	50.4	141	57.8	117	59.1
Total	609		397		244		198	

Abbreviation: BMI, body mass index.



**Figure 1.** Mean ratings of weight labels as desirable, stigmatizing, blaming or motivating to lose weight. Error bars indicate 95% confidence intervals. All weight-based terms were rated on five-point Likert scales: 1 = very undesirable to 5 = very desirable; 1 = not at all stigmatizing to 5 = very stigmatizing; 1 = not at all blaming to 5 = very blaming; or 1 = not at all motivating to 5 = very motivating, respectively.

**Individual characteristics**

Results from regression analyses regarding socio-demographic predictors of label ratings are presented in Table 3. To simplify analyses, only six of the ten weight-based terms were selected as dependent variables: two terms that were rated as most undesirable ('morbidly obese' and 'fat'), most desirable ('weight' and 'unhealthy weight') and closest to neutral ('high BMI' and 'overweight'). To ease interpretation of effect sizes, variables were z-standardized. The means presented represent adjusted means.

Men rated the least desirable terms ('morbidly obese' and 'fat') as slightly less undesirable than women. Regarding the most desirable terms ('weight' and 'unhealthy weight'), the opposite effect was observed. Obese respondents showed a slight increase in preferences for terms that were neutrally rated ('high BMI' and 'overweight') compared with normal-weight respondents. Obese respondents also rated the term 'fat' slightly more favorably than normal-weight respondents, although individuals in all weight groups rated this term as generally undesirable. Overweight respondents' ratings did not differ significantly from normal-weight respondents.

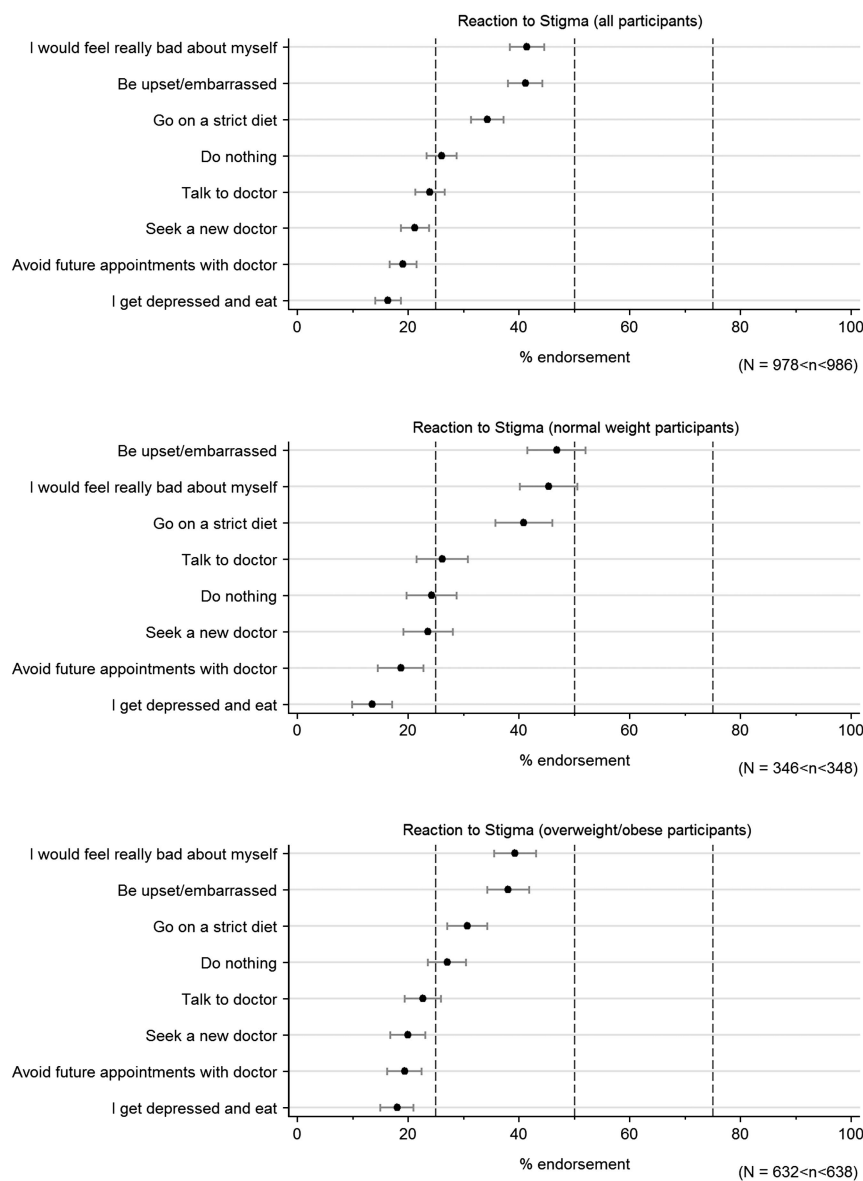
No other consistent patterns were observed across other socio-demographic variables, however, a few significant findings emerged (Table 3). Older participants (56–88 years) rated the term 'high BMI' less favorably than the youngest participants (18–30 years). The only difference among racial groups emerged for the term 'overweight' that was rated as slightly less desirable among African Americans and members from other ethnic minorities than Caucasians. In contrast, participants with a college degree (or higher education) rated 'overweight' and 'unhealthy weight' as more desirable than participants with lower educational

attainment. Finally, 'high BMI', 'overweight', 'unhealthy weight' and 'weight' were rated as more desirable among participants with higher Fat Phobia scores, yet there was no significant difference according to anti-fat attitudes among the least desired labels 'morbidly obese' and 'fat'.

Similar models examined participants' ratings of the degree to which weight-based terms were perceived as stigmatizing, blaming or motivating for weight loss. No significant differences between the weight groups were detected. Results remained consistent across sample characteristics, with several exceptions. Please see Supplementary Tables S1–S6 for full regression modeling results.

**DISCUSSION**

The present study is the first to systematically examine preferences and connotations of weight-based terminology in a large, diverse sample of American adults. The participants rated 'weight' and 'unhealthy weight' to be the most desirable terminology for providers to use to describe their excess weight, and 'morbidly obese', 'fat' and 'obese' to be the least desirable terms. The present findings are consistent with the limited existing research assessing preferences for weight-based terminology among treatment-seeking samples of overweight and obese patients,<sup>2–4</sup> suggesting that these preferences extend to weight-related labels (for example, 'fat' and 'obese') as well as descriptors that have been previously studied (for example, 'fatness', 'excess fat' and 'obesity'), and individuals who are not overweight generally share similar preferences as overweight and obese individuals.



**Figure 2.** Potential reactions after feeling stigmatized by a doctor. Percentages represent 'likely' and 'very likely' for the question 'If your doctor referred to your weight in a way that makes you feel stigmatized, how would you react?'. Underweight respondents were excluded from the analyses. Differences in endorsement of the items 'be upset/embarrassed' and 'go on a strict diet' between normal-weight and overweight/obese participants were statistically significant ( $P < 0.05$ ). Original response scales ranged from 1 ('unlikely') to 5 ('very likely').

Although several minor gender and weight differences emerged in preferences for weight-based terms, ratings remained highly similar across socio-demographic variables, and regardless of one's own personal history of weight victimization. It is interesting to note that individuals who expressed higher levels of weight bias showed stronger preferences for weight-based terms such as 'weight', 'unhealthy weight', 'high BMI' and 'overweight', but not for 'morbidly obese' and 'fat', which were rated as the least desirable and most stigmatizing terms. This suggests that even among individuals who endorse negative attitudes toward obese persons, there is a preference for non-stigmatizing language to describe obesity.

To our knowledge, no previous work has assessed perceived connotations associated with common weight-based terms in the context of health care. The present findings indicate that 'morbidly obese', 'fat' and 'obese' are perceived to be the most stigmatizing and blameful terms used to describe excess weight,

and 'weight' and 'high BMI' are perceived to be the least stigmatizing and blaming. In addition, participants rated 'chubby' and 'weight' as terms that would be the least motivating to reduce weight (although these were still rated as somewhat motivating), and the terms 'unhealthy weight' and 'overweight' to be the most motivating. In contrast to suggestions made by the British Public Health Minister recommending that health providers call their obese patients 'fat' in order to motivate them to lose weight, our study found that participants rated 'fat' among the least motivating terms for weight loss, and rated seven other terms to be more motivating than 'fat'. This suggests that for many people, being called 'fat' may not be a helpful or motivating term for providers to use in patient-provider discussions.

The present findings further suggest that people may have adverse reactions to weight stigmatization from providers, in ways that could be harmful to their emotional and physical health. High percentages of both normal-weight and overweight and obese

**Table 3.** Linear regressions of weight label desirability on demographics, history of weight victimization and anti-fat attitudes

	Weight labels					
	Morbidly obese	Fat	High BMI (kg m <sup>-2</sup> )	Overweight	Unhealthy weight	Weight
<i>Gender (ref. female)</i>						
Male	0.260***	0.295***	-0.106	-0.046	-0.166*	-0.167*
<i>Age (ref.: 18–30 years)</i>						
31–55 years	0.045	0.020	-0.131	0.078	0.079	-0.098
56–88 years	-0.023	0.083	-0.253**	0.097	-0.003	-0.108
<i>Race/ethnicity (ref.: Caucasian)</i>						
African American	0.037	-0.023	-0.125	-0.240*	-0.156	-0.011
Other	0.024	0.041	-0.125	-0.296**	-0.302**	-0.157
<i>Weight status (ref.: normal weight)</i>						
Underweight (BMI < 18.5)	-0.319	-0.163	-0.055	-0.266	-0.067	-0.184
Overweight (BMI 25–29.9)	-0.050	0.066	0.155	0.132	0.013	0.052
Obese (BMI > 29.9)	0.076	0.228**	0.299***	0.343***	0.087	0.136
<i>Education (ref.: high school or less)</i>						
Vocational school/some college	-0.012	0.037	0.178*	0.086	0.123	0.094
College or higher	0.074	0.090	0.166	0.193*	0.181*	0.094
<i>Annual household income (ref.: &lt; \$25 000)</i>						
\$25 000–49 999	-0.167*	-0.037	0.153	0.137	0.113	0.023
\$50 000–74 999	-0.178	-0.067	0.226*	0.127	0.215*	0.088
> \$75 000	-0.107	-0.006	0.067	0.135	0.076	0.036
<i>History of weight victimization</i>						
Yes	0.006	-0.057	-0.071	-0.018	0.050	-0.110
<i>Anti-fat attitudes</i>						
Constant	-0.031	0.003	0.104**	0.087**	0.102**	0.102**
Constant	-0.056	-0.229	-0.119	-0.285	-0.150	0.066
N	966	966	966	966	966	966

Note: all dependent variables and the continuous predictor ('anti-fat attitudes') were standardized by subtracting the mean and dividing by one s.d. \* $P < 0.05$ , \*\* $P < 0.01$  and \*\*\* $P < 0.001$ .

participants reported that they would feel badly about themselves, embarrassed and upset if stigmatized about their weight by a provider, with some individuals indicating that they would go on a strict diet in response to this stigma. Given the consistent evidence documenting the ineffectiveness<sup>44</sup> and potential health consequences of severe calorie restriction in efforts to achieve significant, sustainable weight loss,<sup>45</sup> this finding raises concern and suggests that stigmatization could reinforce unhealthy eating behaviors. This outcome could be further exacerbated by maladaptive eating patterns induced by negative affect from stigmatizing experiences, given that 13–18% of participants reported that they would feel depressed and eat more food in response to weight stigma from a provider. Finally, it is concerning to note that 19% of participants reported they would very likely avoid future medical appointments if their doctor referred to their weight in a stigmatizing manner. This finding adds to previous research documenting avoidance of health-care utilization as a result of experiences of weight stigmatization,<sup>14</sup> and underscores the importance of reducing weight bias and stigmatization in health-care interactions.

This study has important implications for improving the medical climate for overweight and obese patients. Physician weight counseling is associated with increases in patient desire and attempts to lose weight,<sup>46,47</sup> yet as few as 28.9% of physicians inform obese patients of their BMI category, and even fewer provide weight-related counseling.<sup>48</sup> Given that health providers report feelings of discomfort as a barrier to discussing weight with patients,<sup>49</sup> the current findings offer specific suggestions for providers of preferred, motivating weight terminology that can facilitate patient-provider discussions. Although the present

findings were primarily consistent across socio-demographic characteristics, it is also important to recognize variability in patient preferences. Thus, providers may want to ask patients which language and terminology they would most prefer and feel comfortable using.<sup>50</sup>

It is interesting to note that despite the range of weight-based terms rated by participants in the present study, even those terms that were rated as least stigmatizing and least blaming (for example, 'weight' and 'high BMI') were still assigned a mean rating of > 2 on the five-point rating scale. Thus, although these terms may be perceived as more sensitive and appropriate compared with other words that were rated more negatively by participants, it is important to note that no weight-based term was perceived to be completely free of stigma or blame. It may be that body weight is not a neutral subject for most people, and that regardless of what language is used to describe body weight, there may be an emotional reaction to it. This also reinforces the importance of providers asking patients what words or labels they would feel most comfortable using when discussing their body weight.

Several limitations should be noted. Participants' perceptions were assessed using hypothetical scenarios that suggested the participant was 50 pounds overweight. It would be informative for future research to observe interactions between patients and medical providers, attending to both non-verbal behaviors and terminology used, or to use scenarios with varying levels of overweight (for example, 25 or 100 pounds overweight). Also, all data were self-reported, including participant weight and height. However, research indicates high concordance between objective and self-reported measures of height and weight for adults, which

has improved in recent years.<sup>51</sup> In addition, there may be other terminology that people find more or less desirable or stigmatizing, as well as other responses to stigmatizing weight-related situations in health-care settings (that is, 'go on a healthy diet' or 'exercise regularly') that were not assessed in the current study. Although participants indicated how they would react to a stigmatizing experience from a provider, it will be critical to examine whether weight-based terminology used by providers affects actual patient outcomes. Additionally, although no racial differences were observed in the present study, it will be important for future research to examine preferences of weight-based terminology in more ethnically diverse samples.

The current study extends beyond previous research and documents both perceptions of, and reactions to, weight-based terminology in a national sample of American adults. These findings have important implications for improving health-care experiences and patient-provider interactions. Although health providers face significant challenges in efforts to prevent and treat obesity, their efforts must begin with a conversation with patients about weight and health.<sup>52</sup> Choosing their words wisely, and using weight-based terminology that patients feel comfortable with, may help facilitate a positive, productive discussion that communicates support and respect for patients, rather than stigma and blame.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

#### ACKNOWLEDGEMENTS

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