Published in final edited form as:

Prev Med. 2014 May ; 62: 103–107. doi:10.1016/j.ypmed.2014.02.001.

Perceived judgment about weight can negatively influence weight loss: A cross-sectional study of overweight and obese patients

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Abstract

Objective—To examine the association between patient-perceived judgments about weight by primary care providers (PCP) and self-reported weight loss.

Methods—We conducted a national internet-based survey of 600 adults engaged in primary care with a BMI $\geq 25\text{kg/m}^2$ in 2012. Our weight loss outcomes included attempted weight loss and achieved $\geq 10\%$ weight loss in the last 12 months. Our independent variable was “feeling judged about my weight by my PCP.” We created an interaction between perceiving judgment and PCP discussing weight loss as an independent variable. We conducted a multivariate logistic regression model adjusted for patient and PCP factors using survey weights.

Results—Overall, 21% perceived that their PCP judged them about their weight. Respondents who perceived judgment were significantly more likely to attempt weight loss [OR 4.67, 95%CI 1.96–11.14]. They were not more likely to achieve $\geq 10\%$ weight loss [OR 0.87, 95%CI 0.42–1.76]. Among patients whose PCPs discussed weight loss, 20.1% achieved $\geq 10\%$ weight loss if they did not perceive judgment by their PCP as compared to 13.5% who perceived judgment.

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Disclosure

The authors declare no conflicts of interest.

Conclusions—Weight loss discussions between patients and PCPs may lead to greater weight loss in relationships where patients do not perceive judgment about their weight.

Keywords

Obesity; patient-provider; primary care; psychosocial research

Introduction

The U.S. Preventive Services Task Force has issued a recommendation that healthcare providers counsel obese patients to lose weight (McTigue et al, 2003; Moyer, 2013). Recent evidence from a meta-analysis found that behavioral weight loss interventions can be effective in the primary care setting, and lead to improved control of obesity-related conditions including hypertension (LeBlanc et al, 2011). Primary care provider (PCP) advice on weight loss has also been shown to have a significant influence on patients' engagement in weight loss efforts (Rose et al, 2013).

Yet, the pervasiveness of negative provider attitudes and weight stigma could limit the effectiveness of PCP advice and behavioral counseling for obese patients. Physicians have been shown to have less respect for obese patients (Huizinga et al, 2009), and obese individuals commonly report stigmatizing experiences during interactions with the healthcare system (Puhl & Brownell, 2001; Puhl & Brownell, 2006; Puhl & Heuer, 2009). Obese patients have reported avoiding or delaying medical services such as gynecological cancer screening due to negative experiences (Amy et al, 2006). Evidence also suggests that PCPs engage in less emotional rapport building during visits with overweight and obese patients (Gudzune et al, 2013), which may negatively influence the patient-provider relationship and decrease the effectiveness of behavior change counseling. Obese patients may be less receptive to weight loss counseling and be less likely to lose weight if they perceive negative attitudes from their PCP; however, we are aware of no studies that have examined this question.

Our primary objective was to evaluate whether overweight and obese patients who perceive being judged by their PCPs about their weight report differences in weight loss attempts and weight loss success as compared those who do not perceive judgment. We hypothesized that patients, who perceived being judged by their PCP, would be less likely to achieve clinically significant weight loss. Our second objective was to evaluate whether greater weight loss success occurs among patients who receive weight loss counseling from a provider perceived to be free of weight-related judgment as compared to other scenarios. We hypothesized that patients who report that their PCP discussed weight loss and did not perceive being judged about their weight would lose more weight than those patients who reported receiving counseling but perceived being judged.

Methods

Design and Participants

We conducted a cross-sectional, internet-based survey of a nationally representative sample of 600 overweight and obese U.S. adults about physician factors that influence patient trust (Bleich et al, 2013). Experts in obesity and patient-physician relationships reviewed the survey instrument for content, which was then pretested for length and comprehension and revised with the assistance of Social Science Research Solutions. The survey was administered online through the Authentic Response web panel, which includes approximately 4,000,000 registered members. This panel consistently updates its member profiles to ensure the accuracy of its information, and uses algorithms to identify and exclude professional survey-takers. We recruited panel members through invitation to represent a general U.S. population sample. Invited members were eligible for the survey if they had seen their PCP within the last 12 months and their BMI was $\geq 25 \text{ kg/m}^2$. We excluded pregnant women.

This study was approved the Institutional Review Board of the Johns Hopkins Bloomberg School of Public Health.

Measures: Association of Perceived Judgment and Weight Loss

Our independent variable was patient perceptions of PCP judgment about their weight. We asked participants, “In the last 12 months, did you ever feel that this doctor judged you because of your weight?” with the options on answering “often,” “sometimes,” or “never.” Participants were asked to keep their current PCP in mind when answering this question. We dichotomized this variable as ‘felt judged’ if participants indicated they were “often” or “sometimes” judged, otherwise they were labeled as ‘not judged.’

Our dependent variables included two weight loss-related outcomes: weight loss attempted and clinically significant weight loss achieved. To determine if weight loss was attempted, we asked participants, “In the last 12 months, how much did you try to lose weight?” with the options of answering “a lot,” “only a little,” or “not at all.” We defined ‘weight loss attempted’ if participants answered either “a lot” or “only a little.” To determine if clinically significant weight loss was achieved, we asked participants, “In the last 12 months, have you lost any weight?” (Yes/No). Participants who reported losing weight were then asked, “In the last 12 months, how much weight did you lose?” and they could then enter their pounds lost. We then calculated the percentage of weight lost for each participant. We defined ‘clinically significant weight loss achieved’ if participants reported at least a 10% weight loss in the last 12 months (NIH, 1998).

Measures: Relationship Factors Associated with Weight Loss

Our independent variable represents an interaction between ‘patient feelings of PCP judgment about their weight’ described above and ‘PCP discussed weight loss.’ For the later variable, we asked participants, “In the last 12 months, did you and this doctor talk about weight loss a lot, only a little, or not at all?” We defined participants as PCP discussed weight loss if they answered “a lot” or “only a little.” We first used PCP discussion as an

independent variable, and then we combined the two concepts by creating a new variable with the following categories: ‘not judged + not discussed,’ ‘not judged + discussed,’ ‘judged + not discussed,’ and ‘judged + discussed.’ Our dependent variables were our weight loss attempted and clinically significant weight loss achieved variables described above.

Covariates

Our covariates included several patient- and PCP-level variables. Categorical variables were modeled as shown in Table 1. Patient covariates included age, sex, race/ethnicity, BMI, insurance status, education, and duration of relationship with PCP. Patients reported characteristics about their PCP. These PCP covariates included approximate age, sex, perceived race/ethnicity, and approximate BMI evaluated by body size pictogram. Pictograms have been previously used to identify others’ body weight (Stunkard et al, 1983; Sorenson et al, 1983).

Statistical Analyses

All analyses were conducted using STATA, version 11 (College Station, TX). We used weighting to address systematic under- or over-representations of subpopulations within the panel, account for systematic non-response along known demographic characteristics, and adjust for sampling biases due to differences in response rates (Keeter et al, 2000). We used STATA’s SVY function to adjust for the complex survey design in all analyses described below. The weighted margin of error was $\pm 4.9\%$.

We performed descriptive analyses for all variables using chi-square and t-tests as appropriate. For both objectives, we conducted multivariate logistic regression analyses to evaluate the relationship between the independent and dependent variables outlined above. All models were adjusted for patient age, patient sex, patient race, patient BMI, PCP relationship duration, PCP race, and perceived PCP BMI. We included these covariates based on their prior associations with weight loss behaviors and/or the patient-physician relationship (Johnson et al, 2004; Roter & Hall, 2006; Ghods et al, 2008), regardless of statistical significance. Using STATA’s post-estimation adjust command, we calculated the adjusted predicted probabilities for all outcomes.

Given that our outcomes were common (prevalence $> 10\%$), logistic regression may lead to inflated estimates of the odds ratios (OR). Therefore, we conducted a sensitivity analysis using Poisson regression to calculate prevalence ratios (PR), which more accurately reflect the magnitude of effect but overestimate the variance estimates (Cummings, 2009). For each objective, we conducted multivariate Poisson regression analyses to evaluate the relationship between the independent and dependent variables outlined above, adjusting for all the same covariates as in the logistic regression models.

Results

We screened 1380 panel members who responded to the survey invitation, and excluded 335 participants who had not seen their PCP in the last year, 396 who did not have a BMI $\geq 25\text{kg/m}^2$, 6 who were currently pregnant, and 43 who had incomplete survey

responses. Our final sample included 600 participants. Mean age was 47.4 years, 48% were female, 76% were white, and mean BMI was 31.5 kg/m². In the last 12 months, 66% reported that their PCP discussed weight loss, 83% attempted weight loss, and 15% reported achieving a clinically significant weight loss. Overall, 21% of respondents perceived that their PCP judged them about their weight, where 12% felt sometimes judged and 9% felt often judged.

Table 1 compares patient and PCP characteristics between those participants who perceived judgment by their PCP because of their weight with those who did not feel judged. Patients who perceived judgment were significantly younger, had greater BMI, and had newer relationships with their PCPs. Patients who reported their PCP as having greater BMI were more likely to perceive judgment about their own weight by this provider.

Results: Association of Perceived Judgment and Weight Loss

Respondents who perceived judgment were significantly more likely to report attempting weight loss [OR 4.67, 95%CI 1.96-11.14; PR 1.15, 95%CI 1.07-1.24]. Despite the increased attempts, they were not more likely to report having achieved a clinically significant weight loss [OR 0.87, 95%CI 0.42-1.76; PR 0.89, 95%CI 0.50-1.60] as compared to respondents who did not perceive judgment. Figure 1 shows the adjusted predicted probabilities for attempting weight loss and achieving clinically significant weight loss for patients who did and did not perceive judgment by their PCP about their weight. Over 95% of patients who perceived judgment attempted weight loss, while 84% of patients who did not perceive judgment made weight loss attempts. However, only 13% and 14% of patients in these groups, respectively, achieved a clinically significant weight loss.

Results: Relationship Factors Associated with Weight Loss

Respondents who reported that their PCP discussed weight loss were significantly more likely to attempt weight loss [OR 5.15, 95%CI 2.81-9.42; PR 1.33, 95%CI 1.18-1.51] and achieve a clinically significant weight loss [OR 3.74, 95%CI 1.80-7.78; PR 3.01, 95%CI 1.58-5.73].

Table 2 shows how perceptions of PCP judgment may influence the effectiveness of PCPs' weight loss counseling in helping patients to achieve weight loss. The replication of these analyses with Poisson regression revealed similar trends (Appendix Table 1).

Figure 2 shows the adjusted predicted probabilities for attempting weight loss for these same groups. Patients whose PCPs discussed weight loss, regardless of whether the patient perceived judgment or not, were significantly more likely to attempt weight loss [OR 18.94, 95%CI 5.90-60.71; OR 4.22, 95%CI 2.24-7.96, respectively].

The only group significantly more likely to achieve a clinically significant weight loss was patients who's PCP discussed weight loss without creating perceptions of judgment [OR 4.36, 95%CI 1.99-9.56] (Table 2). Figure 2 also shows the adjusted predicted probabilities for achieving clinically significant weight loss for these same groups.

Discussion

Over 20% of overweight and obese patients perceived judgment from their current PCPs because of their weight. Prior studies have described the pervasiveness of healthcare providers' negative attitudes towards patients with obesity (Puhl & Brownell, 2001; Amy et al, 2006; Puhl & Brownell, 2006; Huizinga et al, 2009; Puhl & Heuer, 2009), and this study confirms that patients' perceive judgment from their PCPs. We found that respondent perceptions of being judged were associated with weight loss attempts; however, this perceived judgment was not associated with greater weight loss. Our results may suggest that negative encounters can prompt a weight loss attempt, but they do not necessarily facilitate successful weight loss. On the other hand, patients were significantly more likely to report a clinically significant weight loss if they had a PCP that discussed weight loss and from whom they did not perceive judgment. Future studies should consider exploring how patients' perceived judgment by their PCP about their weight might influence other patient-provider relationship elements such as trust or lead patients to switch to a new healthcare provider.

In 2011, the Centers for Medicare and Medicaid announced new benefits coverage for intensive behavioral counseling for obese patients (BMI $\geq 30\text{kg/m}^2$) by their PCP (Center for Medicaid and Medicare, 2011). PCPs now have additional encouragement to provide counseling for their obese Medicare patients, although many PCPs may be wary of potentially creating a rift in the patient-provider relationship by discussing weight loss with their patients. A prior study of PCPs has documented that some avoid the weight loss discussion for this very reason (Gudzune et al, 2012). However, we saw that those patients who had a weight loss discussion with their PCP, regardless of perceptions of judgment, were more likely to make a weight loss attempt. Other studies have found that healthcare providers can be a powerful influence on patient weight loss behavior (Rose et al, 2013). Most patients reported recently attempting weight loss in our study, which has previously ranged from 49-78% of obese U.S. adults (Kruger et al, 2004; Zhao et al, 2009). These patients may engage in healthy and unhealthy weight loss practices during these attempts (Kruger et al, 2004). Overall, our results suggest that PCPs should not avoid discussing weight loss with their patients; rather these conversations can be an impetus for patients to attempt losing weight and be an opportunity for PCPs to discuss healthy weight loss practices.

Importantly, we found that nearly half of our patients reported that their PCP discussed weight loss and they did not perceive being judged by this PCP. The differential experience between patients may speak more to how the individual PCP approaches and engages the patient in the weight loss discussion, rather than the weight loss discussion itself. Some patients may also be more sensitive to discussing their weight and weight loss. In general, PCPs have more challenges building rapport with overweight and obese patients such as expressing empathy, concern, reassurance, and partnership (Gudzune et al, 2013). Given the combination of these findings, PCPs may benefit from additional training in communication skills as well as specific guidance on how to discuss weight loss with overweight and obese patients. An observational study found that patients lost more weight when they had weight loss counseling visits with physicians who used motivational interviewing strategies (Pollak

et al, 2010). Additional PCP training in this area would benefit the patient-provider relationship, as research has shown that such patient-center communication strategies lead to greater patient satisfaction (Beck et al, 2002; Dwamena et al, 2012), improvement in some clinical outcomes (Hojat et al, 2011), and less physician burnout (Krasner et al, 2009). We also found that patients, whose PCPs discussed weight loss without leading to perceived patient judgment, more often achieved clinically significant weight loss than their other peers. These findings suggest that improved PCP communication skills regarding weight loss may lead to improved patient weight loss outcomes.

We found that patients who reported their PCP was obese were more likely to perceive judgment about their own weight by this provider, which we previously reported and discussed (Bleich et al, 2013). In brief, we hypothesized that this result could reflect an internalization of negative attitudes and experiences by obese providers, which are behaviors that they then spread to their patients (Garcia Coll et al, 2004). Future studies are needed to test this hypothesis.

Our study has several limitations. This study relied upon self-reported weights to calculate the percentage of weight lost, as well as BMI. Participants often underestimate their weights when self-reported (Merrill & Richardson, 2009). Therefore, our calculations for BMI and percent weight lost may be underestimated and may not take into account any weight regain patients may have experienced. We used a single question to determine whether an individual felt judged by their provider. Patients may have different interpretations of what they perceive as 'judgment.' We did not evaluate what particular attributes about the patients' encounters with their PCPs lead them to perceive that their PCP judged them because of their weight. Multiple factors likely influence this perception that we did not capture in our survey. Our overall survey included questions on other topics such as wellness programs and physician trust, which likely minimizes hypothesis guessing that may occur with self-reported data. We only included patients who were actively engaged in primary care, so our population likely excludes patients who switch providers due to dissatisfaction with care. A prior study found that overweight and obese patients were more likely to "doctor shop" (Gudzune et al, 2013), so our results may underestimate the prevalence of patient-perceived weight-related judgment by providers. We were only able to capture PCP attributes as perceived by the patients, which may not accurately reflect the true characteristics of their PCPs. We were unable to assess the PCPs' educational background, years of work experience, or prior training in weight management or communication skills. These factors may be important contributors to successful weight loss counseling (Smith et al, 2011). Finally, this was a cross-sectional study, which limits our ability to make causal inferences or examine temporal relationships between perceived provider attitudes and patient behaviors.

Conclusion

PCPs may need to consider additional training in preparation for the new Medicare benefit covering intensive behavioral counseling for weight loss. While seeking additional training on basic weight management will be essential to address knowledge deficiencies previously identified in this area (Block et al, 2003; Jay et al, 2008), our findings suggest that PCPs

should consider adding communication skills training to this experience. Building communication skills helps improve PCPs' capacity to show concern and empathy for patients' struggles, avoid judgment and criticism, and give emotional support and encouragement, which may all improve PCPs' ability to execute more sensitive weight loss discussions. Healthcare providers will need both the knowledge about obesity as well as the ability to considerably counsel obese patients for this benefit to facilitate patients' successful weight loss.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

KAG and SNB were supported by trainee awards from the National Heart, Lung, and Blood Institute's (NHLBI) Center for Population Health and Health Disparities (P50HL0105187). NHLBI also provided support through the following grants: KAG (K23HL116601); WLB (K23HL098476); LAC (K24HL083113); and SNB (K01HL096409).

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Highlights

- Patients who felt their PCP judged them were more likely to attempt weight loss
- However, they were not more likely to achieve a clinically significant weight loss
- Counseling may be more effective if patients do not perceive PCP judgment
- PCPs should receive training on how to approach weight loss discussions sensitively

Figure 1.

Comparison of predicted probabilities for attempting weight loss and achieving clinically significant weight loss in the past 12 months by whether or not patients perceived judgment by their primary care provider (PCP) about their weight. Patients who perceived judgment by their PCP were significantly more likely to report attempting weight loss; however, there were no significant differences in achieving clinically significant weight loss (10%) between the two groups. Predicted probabilities and p-values estimated from logistic regression model adjusted for patient age, patient sex, patient race, patient BMI, PCP relationship duration, PCP race and perceived PCP BMI. Estimates generated using survey weights.

Figure 2.

Predicted probabilities for attempting weight loss and achieving clinically significant weight loss in the past 12 months across different primary care provider (PCP) judgment-weight loss discussion groups. Patients who had PCPs that discussed weight loss, regardless of whether the patient perceived PCP judgment, were significantly more likely to attempt weight loss. Patients who had PCPs that discussed weight loss and did not perceive judgment were significantly more likely to achieve a clinically significant weight loss (10%), as compared to patients who did not perceive judgment but did not have weight loss discussed. Predicted probabilities and p-values estimated from logistic regression model adjusted for patient age, patient sex, patient race, patient BMI, PCP relationship duration, PCP race and perceived PCP BMI. Estimates generated using survey weights.

Table 1
Patient and PCP characteristics between patients who did and did not perceive weight-related judgment

	Not Judged (n=472)	Judged (n=127)	p-value
<i>Patient Characteristics</i>			
Mean age (years)	49.4	40.0	<0.01
Female	49%	41%	0.18
Race/ethnicity			<0.01
Non-Hispanic white	78%	66%	
Non-Hispanic black	14%	14%	
Other *	7%	20%	
Mean BMI (kg/m ²)	31.1	33.0	0.01
Insurance status			0.20
Private insurance	53%	61%	
Government insurance **	38%	27%	
Uninsured	8%	12%	
Education			0.49
High school or less	35%	29%	
Vocational or some college	40%	41%	
College or beyond	26%	31%	
PCP relationship 5 years	51%	29%	<0.01
<i>PCP Characteristics</i>			
Approximate PCP age			0.30
25-44 years	32%	38%	
45 years	68%	62%	
Female PCP	37%	34%	0.59
Perceived PCP race/ethnicity			0.06
Non-Hispanic white	69%	61%	
Non-Hispanic black	5%	7%	
Asian	10%	19%	
Other *	16%	13%	
Approximate PCP BMI			<0.01
Normal	19%	11%	
Overweight	56%	43%	
Obese	26%	45%	

PCP primary care provider.

* For patients, other race includes Asian, Native American, Pacific Islander, or Hispanic. For PCPs, other race includes Native American, Pacific Islander, or Hispanic.

** Government insurance includes Medicare, Medicaid, and military. Estimates generated using survey weights.

Table 2
Logistic regression analysis examining whether weight loss outcomes differ by PCP judgment-weight loss discussion groups

	N	OR*	95%CI
<i>Attempting Weight Loss</i>			
Not Judged + Not Discussed	188	REF	--
Judged + Not Discussed	15	1.58	0.42-5.92
Judged + Discussed	112	18.94	5.90-60.71
Not Judged + Discussed	284	4.22	2.24-7.96
<i>Achieving Clinically Significant Weight Loss (10%)</i>			
Not Judged + Not Discussed	188	REF	--
Judged + Not Discussed	15	1.71	0.34-8.49
Judged + Discussed	112	2.70	0.95-7.63
Not Judged + Discussed	284	4.36	1.99-9.56

PCP primary care provider.

* Logistic regression model adjusted for patient age, patient sex, patient race, patient BMI, duration of PCP relationship, pCp race and perceived PCP BMI. Estimates generated using survey weights.