Perception of “Healthy” Body Weight by Patients With Diabetes

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Although weight management is important to diabetes treatment (1–3), obesity remains common among adults with diabetes (4). This may reflect the difficulty of promoting weight loss (5) or inattention to obesity management during routine clinical practice (6). Since self-management is a major tenet of diabetes care (4), patient understanding of weight-related health risk may be an important step toward setting healthy lifestyle goals and effective weight management. We sought to understand how well patients with diabetes who receive care in primary care practices could identify healthy body weight.

RESEARCH DESIGN AND METHODS — During a diabetes education initiative, a survey was mailed to 2,607 patients with diabetes from three university-based general medicine practices in a single urban area. It included questions on knowledge (diabetes knowledge test, general knowledge subscale [7]) and behaviors related to diabetes. Participants were also asked to report their perceived heights and weights in the normal-BMI range as “healthiest” using \( x^2 \) and \( t \)-tests. We used multivariate logistic regression to identify factors related to specifying a weight in the normal-BMI range as “healthiest” while adjusting for possible confounders.

RESULTS — The survey could not be delivered to 5.6% of potential participants due to address changes (5.3%) or death (0.3%). Of the remaining 2,461 people, 573 responded (23.3%); 94–100% answered each question examined here. The sample was primarily female and white (Table 1). Average current BMI was 31.8 kg/m\(^2\) among women and 29.6 kg/m\(^2\) among men, and half were obese.

Most overweight (95%) or obese (99%) respondents reported perceived overweight, as did 63% of those with normal current BMI. Among respondents, 41% reported a “healthiest body weight for [their] height” corresponding with an overweight BMI, and 6% reported a “healthiest” weight that was obese (Table 1). One participant selected a weight in the underweight range as “healthiest.”

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Men (35%) were less likely than women (65%) to specify a normal-BMI weight as “healthiest” (\( P < 0.001 \)). People with higher degrees of excess weight were generally less likely to specify weights in the normal-BMI range as “healthiest” (\( P < 0.001 \)). For example, 66% of obese participants, 41% of overweight participants, and 4% of those with normal BMI identified overweight or obese measurements as ideal for health. Patients who specified a normal-BMI weight as “healthiest” demonstrated higher general diabetes knowledge (70.9 vs. 64.8% correct; \( P = 0.01 \)). Time since diabetes diagnosis showed a borderline-significant relationship (\( P = 0.05 \)) with specifying a normal-BMI weight as “healthiest.”

Most patients with a recent (e.g., within 1 year; 60%) or remote (e.g., >10 years ago; 59%) diabetes diagnosis selected a normal-BMI weight; accurate identification of a “healthiest” BMI was 50, 49, and 43% for those diagnosed 1 to <2 years ago, 2 to <5 years ago, and 5 to <10 years ago, respectively. The specification of a normal-BMI weight as “healthiest” did not differ between black and white participants (50 vs. 54%, \( P = 0.44 \)).

Logistic regression analyses showed that female sex (odds ratio 6.66 [95% CI 4.02–11.03]) was associated with a higher odds of specifying a normal-BMI weight as “healthiest,” while reporting current overweight (0.08 [0.03–0.22]) or obesity (0.15 [0.01–0.04]) was associated with lower odds of accurately identifying a healthy weight. Age, race/ethnicity, diabetes knowledge, years since diagnosis, and physician practice were not significant predictors.

CONCLUSIONS — Although most overweight or obese patients in this group accurately perceived their weight as higher than ideal for health, many overestimated the weight that would be healthiest for their height.

Men and those with more severe excess weight were particularly unlikely to report weights in the normal-BMI range as “healthiest.” Possibly, some participants may have confused the standard 10% initial weight loss goal (5) with a
Perception of “healthy” body weight

Table 1—Descriptive features of the sample

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Age (years)</td>
<td>61.2 ± 12.2</td>
<td>58.7 ± 14.8</td>
</tr>
<tr>
<td>Diabetes knowledge*</td>
<td>68.6 ± 27.0</td>
<td>66.7 ± 29.5</td>
</tr>
<tr>
<td>Race/ethnicity (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Black</td>
<td>11.9</td>
<td>23.8</td>
</tr>
<tr>
<td>White</td>
<td>78.0</td>
<td>67.0</td>
</tr>
<tr>
<td>Native American</td>
<td>6.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Clinical status of “healthiest” weight (%)†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Normal</td>
<td>17.3</td>
<td>20.0</td>
</tr>
<tr>
<td>Overweight</td>
<td>40.2</td>
<td>24.4</td>
</tr>
<tr>
<td>Obese: class 1</td>
<td>30.4</td>
<td>25.3</td>
</tr>
<tr>
<td>Obese: class 2</td>
<td>7.5</td>
<td>17.1</td>
</tr>
<tr>
<td>Obese: extreme</td>
<td>4.7</td>
<td>12.9</td>
</tr>
<tr>
<td>Clinical status of “healthiest” weight (%)†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Normal</td>
<td>34.8</td>
<td>64.6</td>
</tr>
<tr>
<td>Overweight</td>
<td>57.1</td>
<td>30.2</td>
</tr>
<tr>
<td>Obese: class 1</td>
<td>7.6</td>
<td>4.0</td>
</tr>
<tr>
<td>Obese: class 2</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Obese: extreme</td>
<td>0.5</td>
<td>0.3</td>
</tr>
</tbody>
</table>

The current clinical weight status reflects BMI calculated from current self-reported height and weight, while “healthiest” clinical weight status reflects BMI calculated from current self-reported height and “the healthiest weight for [the respondent’s] height.” *The score reflects the percentage of correct answers on the diabetes knowledge test, general knowledge subscale; skipped questions were coded as incorrect answers (7). †Clinical weight categories are defined by BMI (kg/m²): normal 18.5–24.9, overweight 25–29.9, and obesity ≥30, with three subclasses: class 1 30–34.9, class 2 35–39.9, and extreme ≥40.

References
