Weight Stigma and Discrimination: Definitions, Prevalence, and Consequences

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WCITD Congress
April 10, 2019
Weight bias & discrimination in adults

Impact of weight bias on public health

Addressing weight bias in health care

Addressing weight bias in the media

Policy & legislative remedies

School, state, & policy remedies

Impact on health

Weight-based bullying in youth

Broader societal factors (media)

Parental response & roles
**Definitions**

*Weight-based stereotypes*: generalizations that people with obesity have negative attributes because of their high body weight or large body size.

*Common stereotypes:*

- Lazy
- Gluttonous
- Lacking in willpower
- Lacking self-discipline
- Non-compliant with treatment
- Incompetent
- Sloppy
- Unmotivated to improve health
- Personally to blame for their weight
Weight-based stereotypes expressed by health care providers

Patients with obesity stereotyped as:

- Non-compliant
- Lazy
- Lacking in self-control
- Awkward
- Weak-willed
- Sloppy
- Unsuccessful
- Unintelligent
- Dishonest

Physicians
Physician Assistants
Nurses
Dietitians
Psychologists
Fitness Professionals
Students training in medicine, nursing, occupational therapy, psychology

Berryman et al., 2006; Brown, 2007; Ferrante et al., 2009; Hebl & Xu, 2001; Huizinga et al., 2009, 2010; Miller et al., 2013; Pantenburg et al., 2012; Phelan et al., 2014; Puhl et al., 2013, 2014; Swift et al., 2013; Vroman & Cote, 2011.
Definitions

**Weight stigma:**
- Social devaluation and denigration of people because of their body weight.
- Contributes to bullying, prejudice, unfair treatment, and/or discrimination.

**Weight discrimination:**
- Weight-based discrimination occurs in multiple life domains, including unfair treatment in the workplace, inequities in education, and prejudice in the health care setting.
Weight stigma exists in many life domains

**Social Relationships**
- Teasing
- Bullying
- Exclusion
- Shaming

**Educational Settings**
- Lower expectations
- Worse academic outcomes
- Teasing/stereotypes from teachers

**Employment**
- Hiring inequities
- Reduced salaries
- Job Termination
- Stigma from co-workers

**Health Care Settings**
- Bias from providers
- Lower quality of care
- Denied procedures
- Patients blamed/judged

**Mass Media**
- Stereotypical portrayals in entertainment & news media, TV, films, social media
Prevalence of Weight Discrimination in Adults

Rates of Reported Discrimination Among Adults Ages 25-74 (N = 2290)

- Women 2x more likely than men
- People with obesity reported rates of weight discrimination 3x higher than those with lower weight
- No difference in the relationship between obesity and weight discrimination by race, education, marital status

## Prevalence in Adults

<table>
<thead>
<tr>
<th>National U.S. Panel Studies</th>
<th>2012(^a) (N=1064)</th>
<th>2015(^b) (N=1115)</th>
<th>2015(^c) (N=2866)</th>
<th>2017(^d) (N=2378)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reported experiences of weight-based victimization, unfair treatment, or discrimination</td>
<td>41.4%</td>
<td>44.6%</td>
<td>43%</td>
<td>40.7%</td>
</tr>
</tbody>
</table>

*Percentages higher in women vs men

*Increased prevalence in people with obesity (2x higher) vs lower weight

9 Studies: Almost all U.S. national panels and nationally representative datasets (MIDUS, CARDIA); one Swedish study (ULF)

Pooled prevalence of perceived weight discrimination:

- 19.2% among individuals with class I obesity (BMI: 30-35)
- 41.8% among individuals with more severe obesity
- Higher prevalence in women than men
- Several studies found that younger adults and Caucasians were more vulnerable to weight discrimination

Spalholz et al., *Obes Rev*, 2016
Definitions: What about youth?

*Weight-based Victimization:*
- Being teased, bullied, harassed because of one’s weight

- Youth with overweight or obesity face weight-based victimization in multiple forms:
  - *verbal teasing*
  - *cyber-bullying*
  - *physical aggression*
  - *relational victimization*

- Youth face weight-based victimization from multiple sources:
  - *peers*  - *teachers*
  - *parents*  - *coaches*
Youth enrolled in weight loss programs:
90% teased/bullied about weight from peers
37-60% teased/bullied about weight from parents/family

Weight-based Bullying in Adolescents

Adolescent reports of why peers are teased/bullied (N = 1555)

<table>
<thead>
<tr>
<th>Reason for bullying</th>
<th>Primary reason peers are bullied</th>
<th>Observed by peers sometimes/often/very often</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>High body weight (OV/OB)</td>
<td>40.8</td>
<td>78.5</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>37.8</td>
<td>78.5</td>
</tr>
<tr>
<td>Ability in school</td>
<td>9.6</td>
<td>61.2</td>
</tr>
<tr>
<td>Race / ethnicity</td>
<td>6.5</td>
<td>45.8</td>
</tr>
<tr>
<td>Physical disability</td>
<td>3.3</td>
<td>35.8</td>
</tr>
<tr>
<td>Religion</td>
<td>1.2</td>
<td>20.8</td>
</tr>
<tr>
<td>Low income status</td>
<td>0.8</td>
<td>24.9</td>
</tr>
</tbody>
</table>

- 95% observed weight-based bullying toward peers
- 75% observed it at least “sometimes” or “often”
Internalized weight bias

Societal and/or interpersonal experiences of weight stigma

Negative external judgments that people face become an internalized process of negative self-judgment

Self-directed stigma
Prevalence of Weight Bias Internalization (WBI)

In general population samples:
- 18-20% endorsed *high WBI*

Among adults with obesity:
- 52% endorsed *high WBI*
- Levels of WBI similar to treatment samples of adults with obesity, BED, or seeking weight loss surgery
Increased vulnerability of WBI

- White
- Women
- High BMI
- High subjective weight
- Lower education and income
- Younger adults
- Currently trying to lose weight
- Experienced stigma

Puhl, Himmelstein, Quinn. *Obesity*. 2017
Weight Stigma

**Stress**

**Eating & Physical Activity Behaviors**
- Binge eating
- Increased caloric consumption
- Maladaptive weight control
- Disordered eating
- Lower motivation for exercise
- Less physical activity

**Physiological Reactivity**
- Increased levels of:
  - Cortisol
  - C-reactive protein
  - HbA1C
  - Elevated BP

**Health Care Quality**
- Poorer treatment adherence
- Less trust of health providers
- Avoidance of follow-up care
- Delay in preventive health screenings
- Poor communication

**Weight Gain**

**Psychological Distress**
- Depression
- Anxiety
- Low self-esteem
- Poor body image
- Substance abuse
- Suicidality

**Physiological Health**
- Poor glycemic control
- Less effective chronic disease self-management
- More advanced and poorly controlled chronic disease
- Lower health-related quality of life

Experiencing weight stigma is longitudinally associated with increases weight gain and obesity.

*Regardless of age, baseline BMI, race/ethnicity, and socioeconomic factors*

Sutin & Terracciano, 2013; Sutin et al., 2014; Quick et al., 2013; Schafer & Ferraro, 2011; Hunger & Tomiyama, 2014
Weight discrimination predicts weight gain in adults

Nationally representative study that followed 6,157 U.S. adults from 2006 to 2010:

Regardless of age, sex, ethnicity, education, and controlling for baseline BMI
Weight-based teasing predicts obesity 15 years later

- Project EAT-IV (*Eating & Activity in Teens and Young Adults*)
- 15-year study examining factors related to eating & weight outcomes in adolescents (1,830 adults)

### Weight-based Teasing in Early Adolescence

<table>
<thead>
<tr>
<th>From family and peers</th>
<th>From peers only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td><strong>Men</strong></td>
</tr>
<tr>
<td>- Odds of obesity 2x higher</td>
<td>- Odds of obesity over 2x higher</td>
</tr>
<tr>
<td>- Eating to cope with emotions</td>
<td>- Eating to cope with emotions</td>
</tr>
<tr>
<td>- Unhealthy weight control</td>
<td></td>
</tr>
</tbody>
</table>

*Adjusted for baseline race, body weight, SES, and age

Puhl, Wall, Chen, Austin, Eisenberg, Neumark-Sztainer. *Preventive Medicine*, 2017
Psychological Consequences

Weight Stigma

Increased Risk

- Depression
- Anxiety
- Low self-esteem
- Poor body image
- Substance use

## Lower Physical Activity

### Adults:
- Those who experience weight stigma have more:
  - Negative feelings towards exercise
  - Avoidance of exercise (*regardless of age, body dissatisfaction, self-esteem*)
  - Less willing/intention to exercise

### Youth:
- 85% of adolescents witness peers being teased about weight in *gym class*

  **Weight teasing leads to:**
  - Avoidance of PA
  - Lower levels of PA
  - Skipping gym class
  - Less self-efficacy for PA
  - Less enjoyment of sports

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Case et al. (2015); Desmet et al. (2014); Greenleaf et al. (2014); Pearl et al. (2014); Puhl & Luedicke, 2012; Vartanian & Shaprow (2010); Vartanian & Novak (2011); Seacat & Mickelson (2009); Schmaz (2010)
Weight stigma contributes to unhealthy eating behaviors

Brown et al., 2016; Jendryzca & Warschburger, 2016; Lampard et al., 2014; Olvera et al., 2013; Quick et al., 2013; Rojo-Moreno et al., 2013; Vartanian & Porter 2016; Zeeck et al., 2011.
Coping strategies may play a role...

2,449 women in a self-help weight loss support organization:
- How do they cope with weight stigma experiences?
79% reported eating - turning to food as coping mechanism

Stigma is a stressor:
- Both acute and chronic form of stress
- Eating is common coping strategy in response to stress

Puhl & Brownell, *Obesity*, 2006
Coping with weight stigma in unhealthy ways

Study: National sample of 2,378 American adults

More Weight Stigma (Experienced or Internalized)

Cope with stigma by engaging in:

- Disordered Eating Behaviors
- Increased Eating / Food Intake
- Avoidance of physical activity

Exposure to weight stigma in media increases calorie consumption

Figure 2 Total calories consumed by group (unadjusted means).

Schvey, Puhl, Brownell. *Obesity*, 2011
Media exposure to weight stigma increases physiological stress

N = 128 women. $F(1, 94) = 6.436, p = .013, \eta^2 = .06$

Physiological Risk Factors

Increased risk of cardiovascular disease, metabolic and endocrine disorders

Perceived weight stigma/discrimination predicts increased physiological risk factors independent of BMI

Himmelstein et al., 2015; Sutin et al. (2014); Schafer & Ferraro (2011); Schvey et al. (2014); Major et al. (2012); Tsenkova et al. (2011); Sutin et al. (2014); Tomiyama et al., 2014
Poor health linked to internalized weight bias

Internalized Weight Bias

- Psychological Distress
- Binge Eating & ED pathology
- Reduced quality of life
- Barrier to weight loss
- Cardiometabolic Risk

Findings persist after accounting for BMI and experienced stigma

Pearl & Puhl, *Obesity Reviews*, 2018
WBI & Weight Loss Maintenance

- National, community sample of 549 adults who reported intentional weight loss of $\geq 10\%$ in the past year
- 314 maintained weight loss, 235 re-gained weight
- *What factors are related to weight loss maintenance?*

**Demographics**
- Age
- Sex
- Race/ethnicity
- Education
- Income

**Behaviors linked with sustained WL**
- Eating breakfast
- Dietary monitoring
- Self-weighing
- Physical activity

**Weight Bias**
- Experienced bias
- Internalized bias

Some predictive value for WLM
Did not predict WLM outcomes
Unique predictive value to WLM

For every 1-unit increase in internalized weight bias, the odds of maintaining weight loss decreased by 28%.

- Internalized bias
- Self-blame
- Negative self-judgment

May interfere with efforts to sustain weight loss, independent of experienced stigma.

Prospective Findings

• National Weight Control Registry Participants (N=1,250)
• Assessed weight bias internalization (WBI) at baseline & 12 months

Although WBI was higher in women than men, higher baseline WBI predicted weight gain among men \((n = 254; t = -2.28; P = 0.02)\) but not women \((n = 608; t = 1.22; P = 0.22)\).

Weight loss was associated with a reduction in WBI in both women and men. A one-point reduction in WBI was associated with a 3% weight loss.

Olson et al., *Obesity*, 2018
Cardiometabolic risk

- 159 adults with obesity (88% women, 67% Black)
- WLM Study: Baseline medical screening and surveys
- 32% met criteria for metabolic syndrome

Odds of meeting criteria for metabolic syndrome were greater among participants with higher WBI

Higher WBI predicted greater odds of having high triglycerides (OR = 1.88, 95% CI = 1.14–3.09, \(P = 0.043\))

Analyzed categorically, high (vs. low) WBI predicted greater odds of metabolic syndrome and high triglycerides (\(Ps < 0.05\))

*Controlled for BMI, sociodemographic variables, depression, medication use

Pearl et al., *Obesity*. 2017
Weight stigma can impact quality of health care

Compared to providing care to thinner patients, when it comes to patients with obesity, providers demonstrate:

- Less time in appointments
- Less discussion with patients
- Less intervention
- Less respect for patients of higher body weight

Patients with obesity:

- Lower trust in providers
- Reluctant to discuss weight
- Perceive lack of empathy
- Believe they won’t be taken seriously
- Report that weight is blamed for unrelated medical problems
- More likely to switch doctors
- More likely to avoid health care

Amy et al., 2006; Gudzune et al., 2013; 2014; Mensinger et al., 2018; Mulherin et al., 2013; Phelan et al., 2015; Turner et al., 2012
Stigmatizing communication about weight from providers has implications for patients’ health care utilization.

<table>
<thead>
<tr>
<th>Reactions to Stigmatizing Language from Providers</th>
<th>Adults (intentions for self)</th>
<th>Parents (intentions for child)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upset/embarrassed</td>
<td>41%</td>
<td>37%</td>
</tr>
<tr>
<td>Seek new doctor</td>
<td>21%</td>
<td>35%</td>
</tr>
<tr>
<td>Avoid future medical appts</td>
<td>19%</td>
<td>24%</td>
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"Obesity Stigma as a Globalizing Health Challenge"

Brewis et al., *Globalization and Health*, 2018
Thinking big:
Must address weight stigma across multiple levels

How can we reduce weight stigma and support individuals with obesity at all levels?
Thank you

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