

Original Investigation

Potential Policies and Laws to Prohibit
Weight Discrimination: Public Views from
4 Countries

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Policy Points:

- Policies and legal protections against weight-based discrimination have broad public support in 4 nations where this discrimination is widely documented.
- Public support was strongest for policies and laws that would prohibit employers from denying employment, assigning lower wages, and refusing promotion to people based on their weight status. Women and individuals with higher weight expressed the greatest support.
- Weight discrimination is common in numerous life settings, creating social and economic inequities and adverse health outcomes. Policies and legal measures protecting against such discrimination need to be developed and implemented in the United States and elsewhere and would have considerable public support.

Context: People viewed as “overweight” or “obese” are vulnerable to weight-based discrimination, creating inequities and adverse health outcomes. Given the high rates of obesity recorded globally, studies documenting weight discrimination in multiple countries, and an absence of legislation to address this form of discrimination, research examining policy remedies across different

countries is needed. Our study provides the first multinational examination of public support for policies and legislation to prohibit weight discrimination.

Methods: Identical online surveys were completed by 2,866 adults in the United States, Canada, Australia, and Iceland. We assessed public support for potential laws to prohibit weight-based discrimination, such as adding body weight to existing civil rights statutes, extending disability protections to persons with obesity, and instituting legal measures to prohibit employers from discriminating against employees because of body weight. We examined sociodemographic and weight-related characteristics predicting support for antidiscrimination policies, and the differences in these patterns across countries.

Findings: The majority of participants in the United States, Canada, and Australia agreed that their government should have specific laws in place to prohibit weight discrimination. At least two-thirds of the participants in all 4 countries expressed support for policies that would make it illegal for employers to refuse to hire, assign lower wages, deny promotions, or terminate qualified employees because of body weight. Women and participants with higher body weight expressed more support for antidiscrimination measures. Beliefs about the causes of obesity were also related to support for these laws.

Conclusions: Public support for legal measures to prohibit weight discrimination can be found in the United States, Canada, Australia, and Iceland, especially for laws to remedy this discrimination in employment. Our findings provide important information for policymakers and interest groups both nationally and internationally and can help guide discussions about policy priorities to reduce inequities resulting from weight discrimination.

Keywords: discrimination, obesity, legislation, culture.

WEIGHT-BASED DISCRIMINATION HAS BEEN DOCUMENTED as a common form of mistreatment across multiple domains of life.^{1,2} Often this form of discrimination is fueled by negative stereotypes that people who are perceived to be “overweight” or “obese” are lazy, weak willed, sloppy, noncompliant, unintelligent, or lacking in self-control and personally to blame for their weight.^{1,3} These stereotypes reinforce societal bias and stigma toward this population, which in turn perpetuate discriminatory practices in settings such as the workplace, health care settings, and educational institutions.^{2,4,5} National studies indicate that rates of weight discrimination in the United States increased by 66% between 1995 and 2005 and are as high

as reported rates of racial discrimination, especially among women.^{2,6} With two-thirds of Americans now overweight or obese,⁷ many people are vulnerable to discrimination and unfair treatment.

Weight stigma and discrimination pose numerous consequences for emotional and physical health⁸⁻¹⁰ and predict increased weight gain over time among those who are targeted.¹¹⁻¹³ Beyond these negative health outcomes, social and economic inequalities resulting from weight discrimination are also prevalent, especially in employment settings. Several decades of research show that compared with thinner employees, adults with obesity face unfair hiring practices, lower wages, denial of promotions, and job termination because of their weight.^{4,5,14} Obesity-related wage penalties and workplace discrimination have been documented nationally,¹⁵⁻¹⁷ and employees within the obese body mass index (BMI) range are 37 times more likely to report employment discrimination than are thinner employees.¹⁸ Experimental studies further indicate that these inequities remain even when lower weight and higher weight applicants have identical job qualifications and credentials and, in some cases, even when thinner applicants are less qualified.^{4,19,20}

Despite substantial research documenting weight discrimination and its negative impact on the lives of those targeted, under the US Constitution and federal law, it is legal to discriminate on the basis of weight.²¹ With the exception of the state of Michigan²² and several localities (ie, San Francisco²³ and Santa Cruz²⁴ in California; Washington, DC²⁵; Urbana, Illinois²⁶; Binghamton, New York²⁷; and Madison, Wisconsin²⁸) that have passed legislation explicitly prohibiting weight-based discrimination, Americans have no viable means for seeking legal recourse in the face of weight discrimination, and existing US civil rights laws prohibit discrimination only on the basis of race, color, religion, sex, and national origin.²⁹ Some individuals have attempted to file discrimination lawsuits under the Americans with Disabilities Act (ADA),³⁰ but plaintiffs must prove that their weight is a disability or perceived to be a disability according to ADA definitions, which is not the case for many people. Thus, few cases have been successful under this law,^{21,31,32} and most of these successes have occurred since 2009, after Congress passed the ADA Amendments Act, which expanded the definitions of disability to include “severe obesity” (but not moderate obesity or overweight) as an impairment.³³ For example, in 2012, the US Equal Employment Opportunity Commission (EEOC) successfully settled 2 cases for employees who were terminated from their jobs

because their employers regarded them to be disabled based on their obesity and their severe obesity was now a covered disability under the new amendment.^{34,35} Despite these few recent successes, not all weight discrimination occurs in the context of disability or perceived disability, and legal remedies that can directly address weight discrimination as a legitimate social injustice remain absent.

Outside the United States, similar negative employment outcomes for higher-weight employees have been documented in several countries, such as Iceland,³⁶ Korea,³⁷ Sweden,³⁸ Denmark,³⁹ and the United Kingdom.^{40,41} Research in European countries has documented that a 10% increase in average BMI was associated with a 1.86% reduction in actual hourly earnings for men and a 3.27% reduction for women, with the most severe pay decreases taking place in southern European countries (ie, Spain, Greece, Italy and Portugal).⁴²⁻⁴⁴ Weight discrimination in hiring practices, documented in experimental studies from Sweden³⁸ and Germany,⁴⁵ may perpetuate these disparities in earnings.

Similar to the United States, many countries have no national laws that specifically prohibit weight discrimination, despite comparable human rights statutes in place that prohibit discrimination based on other characteristics. For example, under the Canadian Human Rights Act, discrimination is prohibited on the basis of race, national or ethnic origin, color, religion, age, sex, sexual orientation, marital status, family status, or disability.⁴⁶ In Australia, human rights laws prohibit discrimination on the basis of age, disability, race, and sex,⁴⁷ and in 2013, sexual orientation was added as a protected class from discrimination.⁴⁸ In Iceland, a country that recently underwent constitutional reform, it is unlawful to discriminate on the basis of sex, religion, national origin, race, color, property, disability, sexual orientation, or birth status.^{49,50} Despite published studies and an increasing number of media reports documenting weight discrimination in countries outside the United States,^{51,52} legal sanctions have not been put in place to protect against unfair treatment based on body weight. In light of the high global rates of obesity,⁵³ it is likely that in many countries, individuals with high body weight are experiencing inequities because of their weight but have no possible legal recourse for corrective action.

Public support is crucial to fostering the political will to enact legislation to prohibit weight discrimination. Few studies, however, have examined public support for anti-weight-discrimination policies, with most of these few conducted in the United States and of limited scope.⁵⁴⁻⁵⁸

Preliminary work in this area has found some support from US citizens (33%-48% agreed) for very general antidiscrimination measures (eg, "The government should play a more active role in protecting overweight people from discrimination").⁵⁴ Recent studies have examined support for more specific laws that would prohibit weight discrimination. For example, a 2010 national study found little public support for laws that would provide people with obesity the same protections as individuals with physical disabilities (27% of men and 32% of women); moderate support for laws that would add body weight as a protected category in civil rights statutes (47% of men and 61% of women); and majority support (65% of men and 81% of women) for laws that would prohibit weight discrimination in the workplace, including in hiring practices, wages, and termination of employees based on body weight.⁵⁶ A longitudinal study comparing levels of public support for these types of laws found that support for extending disability protections to individuals with obesity (62% in 2011 to 69% in 2013) and for adding body weight as a protected class in civil rights statutes (70% in 2011 to 76% in 2013) increased over time.⁵⁸ Outside the United States, research examining support for these types of antidiscrimination measures is even more sparse. One British study found public opposition to policies to protect overweight individuals from discrimination,⁵⁹ as did a Canadian study.⁶⁰ This research, however, assessed support only for extending legal disability protections and benefits to individuals with obesity.

Even though this research provides some insights into the public mind-set on legal measures to address weight discrimination in the United States, more research is needed. The nature and extent of public support for antidiscrimination legislation in different countries where weight discrimination also is an issue needs to be explored. The sociodemographic and weight-related factors that predict policy support across different cultural contexts must be established. Little research on public support for antidiscrimination policies or laws in countries other than the United States has been conducted. Although high rates of overweight and obesity have been documented globally, with associated research showing significant weight bias in several countries, these countries offer no legislation to address this form of discrimination. Further research from different countries with high rates of obesity is needed to help inform policy-level discussions and decision making about measures to address weight discrimination both nationally and internationally.

Our study explored support for weight discrimination laws in samples from the United States, Canada, Australia, and Iceland. Although most of the research on weight bias and discrimination has been restricted to the United States, research from Australia, Canada, and Iceland shows weight bias and discrimination in settings such as employment,^{36,61,62} and where human rights laws have been enacted for other stigmatized groups. Ultimately, a better understanding of the nature and extent of public support for antidiscrimination laws in different countries could inform policy and educational efforts to reduce weight-based discrimination and improve the quality of life for people with obesity. With this in mind, we conducted a multinational examination of public support for policies and legislation to prohibit weight discrimination. Our specific aims were (1) to assess the degree of public support across these countries for a range of potential policies and laws to prohibit weight discrimination and (2) to identify in these countries the sociodemographic characteristics and weight-related attributes predicting support for antidiscrimination measures.

Method

Samples and Procedure

During 6 consecutive months in 2013 (February to July), we invited individuals from 4 countries to complete an anonymous, online, self-report survey. The initial sample consisted of 2,866 adults (≥ 18 years old) recruited from the United States ($n = 1,261$), Canada ($n = 621$), Iceland ($n = 802$), and Australia ($n = 182$). We chose these countries for their comparable prevalence rates (at least 50%) for adult overweight/obesity (eg, 59% in Canada,⁶³ 60% in Iceland,⁶⁴ 63.4% in Australia,⁶⁵ and 68% in the United States⁶⁶), as well as their similar sociocultural values of thinness, per capita incomes, and governance structures (all are parliamentary or congressional democracies with representative institutions). In addition, as noted earlier, these countries have similar human rights laws that prohibit discrimination based on specifically enumerated protected characteristics. The participants completed the identical survey, hosted by the survey company Qualtrics (www.qualtrics.com). The survey was translated into Icelandic for the participants in Iceland, using established methods for translation.⁶⁷ In each country, the study and an accompanying web link to the survey were advertised as a “survey

	Adult Samples		
	United States	Canada	Iceland
<i>Gender</i>			
Male	54.0%	16.8%	45.4%
Female	46.0%	83.2%	54.6%
<i>Age, M (SD)</i>	40.9 (15.6)	41.0 (12.0)	46.1 (5.5)
<i>Race/Ethnicity</i>			
Caucasian	72.6%	89.9%	98.9%
African American	9.5%	0.5%	0.0%
Hispanic	8.5%	1.6%	0.0%
Asian/Asian American	5.9%	2.8%	1.1%
Pacific Islander/Hawaiian	0.3%	0.2%	0.0%
Other	3.1%	5.1%	0.0%
<i>Education</i>			
High school or less	22.5%	2.1%	58.8%
Vocational training/some college	39.1%	9.8%	
College	29.0%	45.5%	39.8%
Postgraduate	9.4%	42.6%	1.4%
<i>BMI, M (SD)</i>	28.9 (8.0)	28.1 (8.8)	27.5 (5.4)
<i>BMI, classified</i>			
Underweight	2.9%	1.5%	0.8%
Normal weight	32.9%	45.8%	36.2%
Overweight	28.7%	25.8%	36.2%
Obese	35.5%	26.9%	26.9%
<i>n</i>	893	613	658

BMI = body mass index.

of attitudes toward body weight.” The online survey first described the survey and consent requirements that the participants had to be at least 18 years of age and that only after consenting could they proceed to the survey. Tables 1 and 2 list sample characteristics.

Table 2. Characteristics of University Student Samples in the United States, Australia, and Iceland

	Student Samples			
	Hawaii	Australia	Iceland	Mainland United States
<i>Gender</i>				
Male	29.9%	19.9%	12.9%	59.2%
Female	70.1%	80.1%	87.1%	40.8%
<i>Age, M (SD)</i>	20.8 (5.2)	20.4 (3.5)	30.6 (10.9)	26.8 (9.5)
<i>Race/Ethnicity</i>				
Caucasian	16.4%	57.5%	99.3%	51.6%
African American	1.5%	0.6%	0.0%	18.5%
Hispanic	3.5%	0.6%	0.0%	12.7%
Asian/Asian American	58.2%	36.5%	0.7%	12.7%
Pacific Islander/Hawaiian	12.9%		0.0%	0.6%
Other	7.5%	5.0%	0.0%	3.8%
<i>Education</i>				
High school or less	35.0%	44.8%	87.9%	13.4%
Vocational training/some college	59.5%	40.9%		60.5%
College	5.0%	12.7%	12.1%	21.0%
Postgraduate	0.5%	1.7%		5.1%
<i>BMI, M (SD)</i>	23.6 (5.1)	22.7 (5.1)	26.7 (6.5)	26.3 (6.6)
<i>BMI, classified</i>				
Underweight	7.5%	9.4%	0.7%	3.8%
Normal weight	59.2%	69.1%	51.4%	46.5%
Overweight	24.9%	15.5%	23.6%	25.5%
Obese	8.5%	6.1%	24.3%	24.2%
<i>n</i>	201	181	140	157

BMI = body mass index.

Adult Samples

United States. We recruited a national sample of US adults through an online survey panel administered by Survey Sampling International (SSI; www.surveysampling.com). This sample approximated US adult census demographics for gender, race, household income, and body weight distribution.⁶⁸ In total, 1,374 adults participated in the survey, of which 35% were excluded owing to missing item and survey nonresponse data, resulting in a final sample of $n = 899$. Those participants who identified themselves as students currently enrolled in college or university ($n = 159$) were separated from the total sample and instead were included as a comparison sample for 3 other college samples in Australia, Iceland, and Hawaii.

Iceland. We recruited a national sample of adults in Iceland from an online panel of the general population hosted by the Social Science Research Institute (SSRI) in Iceland. The panel represents a random sample of the general population taken from the Icelandic National Register, includes more than 7,000 members, and is nationally representative with respect to gender, age, residence, and other sociodemographic factors. We invited a random subsample of 1,476 individuals from the panel to participate, for which the SSRI offered them monetary compensation. In total, 981 participants entered the survey, with 33% excluded owing to missing item and survey nonresponse data, resulting in a final sample of $n = 659$.

Canada. We recruited our sample from the Canadian Obesity Network (CON) national membership database, which contains more than 10,150 individuals, including allied health professionals, policymakers, industry stakeholders, teachers, research trainees, media representatives, mental health professionals, and administrators. All members of CON were sent the survey link electronically, which was further distributed through CON's social media outreach (eg, Twitter, blogs). In total, 911 participants entered the survey, of which 32% were excluded owing to missing item and survey nonresponse data, resulting in a final sample of $n = 621$.

In these 3 countries, the adults' body weight distribution (percentage of overweight and obese individuals) was highly similar to national prevalence rates. Both the Icelandic and US sample characteristics were similar to the census demographic distributions in their own countries. The Canadian sample was primarily composed of educated Caucasian women.

University Student Samples

Australia. We invited undergraduate students ($n = 418$) at Australia's Monash University from a large introductory behavioral studies course to participate in our study ($n = 182$; 44% response rate). The study invitation was posted on the course website and was also emailed to all students enrolled in the course. Students received 2 email reminders following the initial invitation, with a web link to the online survey, along with the offer of an AUS\$10 gift voucher for participation. In total, 227 participants entered the survey, with 20% excluded owing to missing item and survey nonresponse data, resulting in a final sample of $n = 182$.

Iceland. We invited undergraduate students in psychology at the University of Akureyri ($n = 229$) and the University of Reykjavik ($n = 129$) to participate in our study through an online invitation from faculty teaching their psychology courses. Two reminders were emailed to students following the initial invitation with a web link to the online survey. In total, 213 participants entered the survey, of which 33% were excluded owing to missing item and survey nonresponse data, resulting in a final sample of $n = 143$.

United States. A total of 159 students (through the SSI's online survey panel, described earlier) enrolled in an American college or university completed the survey. Specifically, participants in the SSI's panel were asked whether they were currently enrolled as a student in a college or university, with current students separated from the rest of the sample and included in university student sample analyses.

An additional subsample from the United States was drawn from Hawaii and included in comparisons of student samples from the countries covered in the study. The professors of 4 undergraduate psychology courses at the University of Hawaii invited their students to participate in this study in exchange for extra course credit. In total, 655 undergraduate students were sent the survey link and invited to participate. A total of 286 students entered the survey, of which 29% were excluded because of missing item and survey nonresponse data, yielding a final sample of $n = 203$. This sample was analyzed separately from the mainland US sample in light of Hawaii's unique population and the paucity of research on Asian/Pacific Islander support for public policies against weight discrimination. It is important to study the views of this population in light of their high levels of obesity (primarily in Native

Hawaiians and Pacific Islanders)⁶⁹ and their potentially unique attitudes toward body shape.⁷⁰

In the college student samples in each country, we found a lower percentage of students classified as either overweight or obese according to BMI, compared with the national population rates.

Measures

Demographic Information. The participants reported their gender, age, height and weight, race/ethnicity, and highest educational qualification obtained.

Support for Policies/Laws to Prohibit Weight Discrimination. After answering these demographic questions, the participants were told: "Currently, there are no laws to protect fat people from discrimination based on their body weight. Different types of laws are being considered to help protect fat individuals from discrimination based on their weight. We are interested in your opinion about these proposed laws." They then were asked to respond to 13 questions (presented in random order) regarding their level of support for different legislative measures to prohibit weight discrimination. The content and wording of these questions were based partly on items that we had developed and tested previously^{56,57} and partly on items that we adopted from other published research pertaining to proposed legislation to prohibit weight discrimination.^{21,54,55} Items included legal measures related to employment discrimination, civil rights, protections for people with disabilities, and more general government protections against weight discrimination. Table 3 lists each proposed legal measure.

Given that most people likely differ in their familiarity with and knowledge of antidiscrimination laws, we explained the various legal measures to them (in an identical format across countries). For example, before asking the participants whether or not they would support the inclusion of body weight in their country's civil or human rights law to protect people from weight discrimination, we explained that such laws exist to protect people from being discriminated against because of their race, color, religion, sex, and national origin and that body weight is not a protected category in existing laws. Likewise, we offered similar explanations before asking them questions about the extent of their support for a specific proposed law. For example, before asking the participants whether they would support their government's enacting

Table 3. Agreement with Potential Policies and Laws to Address Weight Discrimination, Adult Samples

Proposed Policy Action/Legal Measure to Address Weight-Based Discrimination	Support/Agreement with Policies (%)		
	United States	Canada	Iceland
1. My country should include body weight in our civil rights law in order to protect people from discrimination based on their body weight.	50.6	64.2	21.2
2. The government should have specific laws in place to protect people from weight discrimination.	56.5	69.7	38.2
3. The government should penalize (or fine) those who discriminate against persons because of their weight.	59.1	69.7	45.0
4. Obesity should be considered a disability so that people will be protected from weight discrimination in the workplace.	32.5	28.9	22.2
5. Fat persons should be subject to the same legal protections and benefits offered to people with physical disabilities.	40.1	42.3	14.9
6. The government should pass the Weight Discrimination in Employment Act to protect employees from discrimination in the workplace based on their body weight.	58.9	74.7	41.4
7. It should be illegal for an employer to refuse to hire a qualified person because of his or her body weight.	70.4	84.8	71.1
8. It should be illegal for an employer to assign lower wages to a qualified employee because of his or her body weight.	79.6	91.5	80.2

Continued

Table 3. *Continued*

Proposed Policy Action/Legal Measure to Address Weight-Based Discrimination	Support/Agreement with Policies (%)		
	United States	Canada	Iceland
9. It should be illegal for an employer to terminate or fire a qualified employee because of his or her body weight.	74.1	85.3	75.2
10. It should be illegal for an employer to deny a promotion or appropriate compensation to a qualified employee because of his or her body weight.	76.2	87.8	77.1
11. Individual companies should have the right to determine whom to hire based on an employee's personal body weight.	21.5	12.6	22.1
12. Employers should be allowed to assign different salaries to employees based on their body weight.	10.5	5.5	9.5
13. My country should pass a Healthy Workplace Law to address workplace bullying.	71.1	87.4	85.2

The percentage of agreement or support with potential policies and laws is based on response categories 4 (support or agree) and 5 (definitely would support or strongly agree) of the original 5-point Likert scale.

a so-called Weight Discrimination in Employment Act, they read the following information:

Certain laws already exist to protect older adults from age-based discrimination in the workplace. These laws make it illegal for an employer to refuse to hire, pay less wages, or fire an employee because of their age. The government could enact a similar law so that employers cannot refuse to hire, pay less wages, or terminate an obese person because of his/her body weight. The proposed law could be called the Weight Discrimination in Employment Act (WDEA), and would make it illegal for employers to discriminate against employees based on their weight.

The participants indicated their level of support of agreement with the 13 proposed laws and policies based on a 5-point Likert scale (from 1 = Definitely would oppose/Strongly disagree to 5 = Definitely would support/Strongly agree). Cronbach's alphas for this measure across all the samples ranged from 0.73 to 0.89.

Predictors of Public Support for Antidiscrimination Measures. Besides examining sociodemographic factors related to public support for laws in each country, we included several measures to assess attributes related to body weight that could also influence public support. Previous research has demonstrated that support for obesity-related policies can be influenced by weight-related attributes, including (1) one's own weight status, (2) personal history of experiencing weight stigmatization, (3) beliefs about the causes of obesity, and (4) attributions of blame and willpower related to excess body weight. For example, several studies have shown that beliefs in biological or environmental causes of obesity may lead to higher support for government policies addressing obesity^{55,71} and that personal experiences of weight stigmatization are related to higher support for antidiscrimination laws.⁵⁷ (We describe later the measures used to assess these constructs.)

Weight Status. In order to calculate each participant's body mass index (BMI), we asked the participants to report their current height and weight. BMI was stratified using clinical guidelines by the National Heart, Lung, and Blood Institute of the National Institutes of Health,⁷² which establishes 4 body weight categories using BMI cutoff points: underweight (BMI < 18.5), normal weight (BMI 18.5-24.9), overweight (BMI 25.0-29.9), and obese (BMI ≥ 30).

Beliefs About the Causes of Obesity. For our study, we used a modified version of a self-report measure to assess perceived causes of obesity.⁷³

The original measure contains 11 factors that contribute to obesity (eg, genetic factors, overeating, physical inactivity).⁷³ Three additional contributors that have received increasing scientific attention in the past decade were added: the pricing of foods (eg, inexpensive unhealthy foods), the marketing/advertising of unhealthy foods, and food addiction. The participants were asked to assess the importance of each factor as a cause of obesity on a 5-point Likert scale (1 = Not at all important to 5 = Extremely important). This modified version has several subscales reflecting distinct factors identified through factor analysis and tested in recent studies.^{74,75} These subscales include physiological causes, behavioral causes, psychological causes, and environmental causes. Cronbach's alphas for these subscales across all the samples ranged from 0.70 to 0.88.

Personal Experiences of Weight Bias. Personal experiences of weight bias were assessed with 3 questions using binary response options (yes/no). Specifically, the participants were asked if they had ever been teased, treated unfairly, or discriminated against because of their weight. These 3 items were then combined into one measure of weight-based victimization (WBV), which was coded 1 if any of the items was answered with yes and 0 if not. The participants were also asked whether their family members or friends had been teased or treated unfairly because of their weight. These 2 items were combined into one measure (WBV family/friends), which was coded 1 if any of the items was answered with yes and 0 if not. (We had developed and tested these questions in previous studies.)⁷⁴

Attributions of Blame and Willpower. To assess attributions of blame in relation to body weight, we asked the participants 3 questions regarding (1) the extent to which people with obesity are to blame for their weight, (2) the extent to which they are personally responsible for their weight, and (3) the extent to which a person's body weight is within personal control. Their responses were rated on a 7-point scale from 1 (*Not at all* responsible/to blame/under personal control) to 7 (*Completely* responsible/to blame/within personal control), with the higher scores reflecting stronger attributions of blame and personal control for weight. (We also had developed and tested these questions in previous studies).⁷⁶ Cronbach's alpha for this scale across the 5 samples ranged from 0.80 to 0.87.

We measured attributions of willpower related to body weight using the Willpower subscale of Crandall's (1994) 13-item Anti-fat Attitudes

Scale (AFA).⁷⁷ This measure examines beliefs that body weight is a matter of willpower and personal control. It has 3 items (eg, “Some people are fat because they have no willpower”), scored on a 10-point Likert scale (0 = Very strongly disagree, 9 = Very strongly agree). Higher scores reflect stronger beliefs that obesity results from personal responsibility or lack of willpower. This measure has demonstrated very good reliability and internal consistency.⁷⁸ Cronbach’s alpha for this subscale across the 5 samples ranged from 0.70 to 0.81.

Results

Statistical Analysis

To analyze the data, we used descriptive statistics and regression models for censored data (Tobit model),⁷⁹ and we also used Tobit models to account for the clustering of values at the lowest and highest scores of the outcome variables. We separately analyzed the student samples (recruited at universities) and nonstudent samples (recruited from online survey panels) based on an earlier decision regarding these different sampling procedures. All analyses were performed using Stata, version 13.1.

Support for Antidiscrimination Measures Across Countries

Adult Samples (Canada, Iceland, United States). Table 3 shows the percentages of participants who supported policies and laws to address weight discrimination among the adult samples in the United States, Canada, and Iceland. Canadians expressed more support for all the proposed laws than did the participants in both Iceland and the United States. Public support was variable for the general antidiscrimination measures (Items 1-5). Whereas the majority of US and Canadian participants agreed that their government should have specific laws to protect people from weight discrimination and expressed support for legislation that would add body weight as a protected category to civil rights statutes, only a minority of Icelandic participants expressed support for these antidiscrimination measures. The proposed laws with the least support were those considering obesity as a disability and extending disability protections to persons with obesity. Support for these laws

was again lowest among participants from Iceland compared with those from the United States and Canada.

In all 3 countries, public support was considerably higher for antidiscrimination laws specific to employment (Items 6-13). Specifically, 70% to 91% of participants supported laws that would make it illegal for employers to refuse to hire, assign lower wages, deny promotion, or terminate qualified employees because of their body weight. The highest support was for laws that would make it illegal for an employer to assign lower wages to a qualified employee because of his or her body weight. In all 3 countries, almost all participants (90%-95%) indicated that employers should not be allowed to assign different salaries to employees based on body weight, and 78%-87% indicated that companies should not have the right to determine whom to hire based on an employee's personal body weight. Finally, 71% to 87% of the participants in all 3 countries were in favor of passing laws that would require employers to prevent workplace bullying by means of policies and procedures applying to all employees (eg, not specific to body weight).

Student Samples (Australia, Hawaii, Iceland, and Mainland United States). Table 4 shows the percentages of the college student participants supporting policies and laws to address weight discrimination in Australia, Hawaii, Iceland, and the mainland United States. The students' patterns of support were similar to those in the adult samples. Regarding the general antidiscrimination measures, the least support, especially among Icelandic students, was observed for extending disability protections to persons with obesity. In contrast, at least half the students (50%-70%) in all countries agreed that their government should have specific laws to protect people from weight discrimination and should penalize those who discriminate against persons because of their weight. Adding body weight to civil rights statutes was supported by the majority of Australian and mainland US students, but by less than half the students from Hawaii and Iceland. Across these general antidiscrimination measures, support was highest among students from Australia.

Students' support for laws specific to prohibiting weight discrimination in the workplace was consistently higher (65%-92%) than for general antidiscrimination measures. The greatest support (89%-92% of students from Hawaii, Australia, and Iceland) was for laws that would make it illegal for an employer to assign lower wages to a qualified employee because of his or her body weight. Although the mainland US

Table 4. Agreement with Potential Policies and Laws to Address Weight Discrimination, Student Samples

Proposed Policy Action/Legal Measure to Address Weight-Based Discrimination	Support/Agreement with Policies (%)			
	Hawaii	Australia	Iceland	Mainland United States
1. My country should include body weight in our civil rights law in order to protect people from discrimination based on their body weight.	49.0	62.4	44.3	52.9
2. The government should have specific laws in place to protect people from weight discrimination.	58.5	70.2	50.7	55.8
3. The government should penalize (or fine) those who discriminate against persons because of their weight.	55.2	60.8	50.0	51.6
4. Obesity should be considered a disability so that people will be protected from weight discrimination in the workplace.	20.0	20.4	11.4	36.5
5. Fat persons should be subject to the same legal protections and benefits offered to people with physical disabilities.	29.9	28.9	10.8	36.9
6. The government should pass the Weight Discrimination in Employment Act to protect employees from discrimination in the workplace based on their body weight.	66.2	76.7	57.1	55.1

Continued

Table 4. *Continued*

Proposed Policy Action/Legal Measure to Address Weight-Based Discrimination	Support/Agreement with Policies (%)			
	Hawaii	Australia	Iceland	Mainland United States
7. It should be illegal for an employer to refuse to hire a qualified person because of his or her body weight.	73.6	75.1	76.3	65.0
8. It should be illegal for an employer to assign lower wages to a qualified employee because of his or her body weight.	89.1	92.2	91.4	72.0
9. It should be illegal for an employer to terminate or fire a qualified employee because of his or her body weight.	79.6	85.1	85.0	66.9
10. It should be illegal for an employer to deny a promotion or appropriate compensation to a qualified employee because of his or her body weight.	78.1	86.2	87.1	66.9
11. Individual companies should have the right to determine whom to hire based on an employee's personal body weight.	14.9	15.0	15.8	24.2
12. Employers should be allowed to assign different salaries to employees based on their body weight.	7.5	6.1	7.1	14.0
13. My country should pass a healthy workplace law to address workplace bullying.	82.1	91.7	92.8	68.8

The percentage of agreement or support with potential policies and laws is based on response categories 4 (support or agree) and 5 (definitely would support or strongly agree) of the original 5-point Likert scale.

student sample also expressed more support for this law than for all other laws, the percentage of support (72%) was noticeably lower than that of the other student samples. Similar to the adult samples, a considerable majority of students (76%-85%) across the countries agreed that companies should not have the right to determine whom to hire based on an employee's personal body weight. The students in Hawaii, Australia, and Iceland (82%-92%) indicated significant support for legislation to address bullying in the workplace. Although the majority of mainland US students (68%) also supported this law, their level of support was considerably lower than the other student samples.

Predictors of Public Support Across Countries

Adult Samples (Canada, Iceland, United States). Table 5 summarizes the results from separate Tobit regressions in the adult samples for 2 outcome variables measuring support for antidiscrimination laws specific to employment (the mean of Items 6-13) versus broader antidiscrimination laws and policies (the mean of Items 1-5). In all 3 countries, women showed significantly greater support than men did for the proposed laws. In the United States, African Americans and participants of Hispanic origin supported broader antidiscrimination laws more strongly than Caucasians did, but no racial or ethnic differences emerged with respect to laws specific to employment.

Weight-related attributes were associated with public support for laws across these countries. In all 3 countries, participants classified in the obese BMI range expressed greater support for general antidiscrimination laws than did nonoverweight individuals, and Icelanders also showed greater support for laws specific to employment. Beliefs in the physiological causes of obesity were associated with higher support for all laws in all 3 countries. In Canada only, beliefs in psychological causes of obesity were positively associated with greater support for laws. Finally, beliefs in environmental causes of obesity were associated with greater support for general antidiscrimination laws and, by Icelanders, for laws specific to employment. Attributions of blame and willpower for obesity were negatively associated with support for laws, with willpower being the stronger predictor in the United States and blame being the stronger predictor in Canada and Iceland.

Table 5. Predicting Agreement with Potential Policies and Laws to Address Weight Discrimination, Adult Samples

	Broad Policies/Laws			Laws Specific to Employment		
	United States	Canada	Iceland	United States	Canada	Iceland
<i>Gender</i>						
Female	0.172*	0.439***	0.212*	0.426***	0.666***	0.390***
<i>Age (10-year units)</i>						
Age	0.079**	0.016	0.023	0.048	-0.118*	-0.024
<i>Race/Ethnicity (United States)</i>						
Caucasian	-			-		
African American	0.313**			0.008		
Hispanic	0.283*			-0.066		
Other	0.132			-0.019		
<i>Race/Ethnicity (Canada)</i>						
Caucasian		-			-	
Other		-0.168			-0.282	
<i>BMI, classified</i>						
Underweight	-0.096	0.055	0.297	-0.167	-0.846*	-0.068
Normal weight	-	-	-	-	-	-
Overweight	0.088	0.066	0.110	-0.025	0.176	0.162
Obese	0.243**	0.237*	0.336**	0.085	0.212	0.277*

Continued

Table 5. *Continued*

	Broad Policies/Laws			Laws Specific to Employment		
	United States	Canada	Iceland	United States	Canada	Iceland
<i>Education (United States, Canada)</i>						
High school or less	—	—	—	—	—	—
Vocational training/some college	-0.135	0.006	—	-0.115	0.092	—
College	-0.223*	-0.080	—	-0.220*	0.143	—
Postgraduate	-0.040	-0.066	—	-0.087	0.204	—
<i>Education (Iceland)</i>						
High school or less	—	—	—	—	—	—
College	—	—	-0.221**	—	—	-0.059
<i>Causes of Obesity</i>						
Physiological	0.291***	-0.004	0.166***	0.217***	0.113*	0.084
Behavioral	-0.043	-0.057	-0.042	0.125*	-0.083	0.033
Environmental	0.126*	0.200***	0.110*	0.010	0.094	0.116**
Psychological	0.078	0.137**	0.033	-0.042	0.226***	-0.014
<i>Weight-Related Attributions</i>						
Blame	-0.121*	-0.309***	-0.203***	-0.062	-0.209**	-0.190**
Willpower	-0.201***	-0.092	-0.133*	-0.337***	-0.156*	-0.026
WBV experienced (self)	0.144	-0.018	-0.165	-0.001	0.055	-0.117
WBV experienced (family, friends)	0.278***	0.340***	0.190*	0.353***	0.148	-0.040

Continued

Table 5. *Continued*

	Broad Policies/Laws			Laws Specific to Employment		
	United States	Canada	Iceland	United States	Canada	Iceland
Constant	2.728***	3.000***	2.358***	3.802***	4.487***	4.104***
Sigma (error)	1.000***	0.845***	0.994***	1.041***	1.038***	1.025***
<i>n</i>	893	613	655	893	613	655
<i>n</i> (uncensored)	791	557	606	642	332	483
<i>n</i> (left censored)	33	15	37			
<i>n</i> (right censored)	69	41	12	251	281	172
Pseudo-R ²	0.108	0.167	0.067	0.073	0.135	0.043

Coefficients are estimated with Tobit regression models.
 Significance levels: **p* < 0.05, ***p* < 0.01, ****p* < 0.001.
 BMI = body mass index; WBV = weight-based victimization.

Participants who had a family member or friend who had experienced weight bias expressed more support for general antidiscrimination laws across all countries and for laws specific to employment in the United States. But in all countries, the participants' personal experiences of weight bias were not significantly associated with support for antidiscrimination laws.

Student Samples (Australia, Hawaii, Iceland, and Mainland United States). Table 6 reports results from the Tobit regression from the student samples. Here, differences between women and men were significant only in the mainland US sample, in which women expressed greater support than men did for antidiscrimination laws specific to employment. Students classified in the obese BMI range expressed greater agreement with the proposed laws and policies in Iceland only. In Hawaii and Iceland, beliefs in physiological causes of obesity were associated with higher support for both general and employment-specific antidiscrimination laws, and beliefs in environmental causes of obesity were associated with more support for general antidiscrimination laws in Iceland only. Across the student samples, beliefs about the behavioral and psychological causes of obesity were not significantly related to support for laws. Attributions of willpower, however, were negatively associated with support for laws across all countries except Iceland.

Discussion

The high rates of obesity both in the United States and globally have given rise to increasing reports of weight discrimination and accumulating research documenting its prevalent nature and negative impact on health. Inequities resulting from weight discrimination have also promoted discourse about policies and laws that could help remedy this problem.^{80,81} To our knowledge, our study is the first examination of public support for legal measures to address weight discrimination in different countries. Our findings indicate considerable public support in different nations for laws that would specifically prohibit weight discrimination in the workplace. At least two-thirds of the participants in each country expressed support for legal measures that would make it illegal for employers to refuse to hire, assign lower wages, deny promotions, or terminate qualified employees because of their body weight. In both the adult and student samples in the 4 countries we studied,

	Broad Policies/Laws				Laws Specific to Employment			
	Hawaii	Australia	Iceland	Mainland United States	Hawaii	Australia	Iceland	Mainland United States
<i>Gender</i>								
Female	-0.098	0.135	-0.200	0.232	0.196	0.129	-0.100	0.522**
<i>Age (10-year units)</i>	0.050	0.299	-0.117	0.209*	-0.066	0.336	-0.136	0.040
<i>Race/Ethnicity (Australia)</i>								
Caucasian		-				-		
Asian		0.155				-0.214		
Other		-0.448				-0.107		
<i>Race/Ethnicity (United States)</i>								
Caucasian				-				-
African American				0.204				0.032
Hispanic				0.132				-0.335
Other				-0.298				-0.069

Continued

Table 6. *Continued*

	Broad Policies/Laws					Laws Specific to Employment						
	Hawaii	Australia	Iceland	Mainland United States	Hawaii	Australia	Iceland	Mainland United States	Hawaii	Australia	Iceland	Mainland United States
<i>Race/Ethnicity (Hawaii)</i>												
Caucasian	—								0.386*			
Asian	0.366*								0.622*			
Pacific Islander	0.507*								0.370			
Other	0.321											
<i>BMI, classified</i>												
Underweight	-0.129	-0.050	0.630	-0.074	0.124	0.082	0.287	-0.466				
Normal weight	—	—	—	—	—	—	—	—	—	—	—	—
Overweight	0.092	-0.075	0.232	0.111	0.168	0.296	0.350	0.219				
Obese	0.100	0.194	0.565**	-0.034	0.370	-0.252	0.763**	0.220				
<i>Causes of Obesity</i>												
Physiological	0.218**	0.019	0.161*	0.186	0.261*	0.047	0.229*	0.051				
Behavioral	-0.066	0.036	-0.003	-0.128	0.119	0.166	-0.075	0.218				
Environmental	0.169	0.113	0.285***	0.182	0.133	0.042	0.151	0.080				
Psychological	-0.025	0.032	0.044	-0.072	-0.152	-0.097	0.100	-0.066				

Continued

Table 6. Continued

	Broad Policies/Laws				Laws Specific to Employment			
	Hawaii	Australia	Iceland	Mainland United States	Hawaii	Australia	Iceland	Mainland United States
<i>Weight-Related Attribution</i>								
Blame	0.110	-0.112	-0.224*	0.014	0.196	0.004	0.103	0.107
Willpower	-0.414***	-0.182*	-0.125	-0.356**	-0.356***	-0.280**	-0.196	-0.450***
WBV experience (self)	0.172	-0.083	-0.023	0.086	-0.042	0.071	-0.056	-0.013
WBV experience (family, friends)	0.122	0.294*	0.047	0.422*	0.225	0.000	0.001	0.448*
Constant	2.793***	2.466***	3.269***	2.385***	3.874***	3.611***	4.893***	3.358***
Sigma (error)	0.828***	0.714***	0.720***	0.880***	0.991***	0.758***	0.891***	0.921***
<i>n</i>	201	181	140	157	201	181	140	157
<i>n</i> (uncensored)	190	178	135	144	137	137	89	122
<i>n</i> (left censored)	4	1	5	4	0	0	0	0
<i>n</i> (right censored)	7	2	0	9	64	44	51	35
Pseudo-R ²	0.117	0.111	0.193	0.144	0.076	0.065	0.111	0.129

Coefficients are estimated with Tobit regression models. Significance levels: **p* < 0.05, ***p* < 0.01, ****p* < 0.001. BMI = body mass index; WBV = weight-based victimization.

support was highest for laws that would prohibit employers from assigning lower wages to qualified employees because of their weight. Given the empirical evidence documenting obesity wage penalties,¹⁵⁻¹⁷ this may be an issue to emphasize as a policy priority.

Implications for Human Rights, Disability, and Anti-bullying Legislation

In the countries in this study, participants' support for broader measures to address weight discrimination was more variable than for laws specific to employment. The majority of participants (both adult and student samples) in the United States, Canada, and Australia agreed that their government should have specific laws prohibiting weight discrimination, and they supported laws that would include body weight in existing human rights statutes. Attempts have recently been made in the United States to introduce legislation adding body weight as a protected class in state-level civil rights statutes. For example, in 2013 Massachusetts proposed a bill (Bill H.1758) to add body weight as a protected class in the state's antidiscrimination law, and for the first time in several attempts, the Labor and Workforce Development Committee moved the bill forward in the legislature, with a 7-to-1 vote in favor of advancing the bill.⁸² Although no further action was taken during the legislative session, this example suggests that such efforts might be successful and that in addition to public support for such measures, legislators and policymakers might be increasingly willing to sponsor and support new legislation on this issue. A new bill is now advancing through the legislative process following a favorable vote at a Massachusetts state hearing held on July 21, 2015.

Adding body weight as a protected class in existing human rights laws could also be feasible in Canada and Australia, as both countries have precedents for adding new protected classes to existing human rights laws. Specifically, sexual orientation was added as a protected class from discrimination to Canada's Human Rights Act in 1996⁸³ and as an amendment to Australia's Sex Discrimination Act in 2013.⁴⁸ In addition, the increasing national discourse on weight discrimination could promote legislative initiatives on this issue. For example, in 2011 Canada held its first national summit on weight bias and discrimination, convening an expert advisory council (including legal scholars) to

recommend remedies for this issue,^{84,85} which included specific strategies to protect individuals from weight discrimination under the Ontario Human Rights Code.⁸⁶ Thus, increasing the national discourse on weight discrimination, coupled with a precedent of adding new protected categories to existing human rights laws, suggests that such legislation might be feasible in the future. Whether such precedents in human rights laws are necessary to motivate political will, however, remains to be seen. For example, although the United States is the only country of those included in this study not to have added protected classes (eg, sexual orientation) to antidiscrimination measures over time, it also is the only country to have introduced legislation to prohibit weight discrimination, albeit on a state level.

It is noteworthy that public support for these antidiscrimination measures was considerably lower among adults and students in Iceland. This finding is somewhat surprising, given that of the 4 countries in this study, Iceland is the only one to consider a proposal to prohibit weight discrimination as part of its constitution, which would help reduce weight-based inequities in workplaces, education, and medical environments.⁸⁷ In 2013, as part of Iceland's attempt to redraft its constitution, citizens were encouraged to submit comments and proposals for ideas to be embedded in the constitution, including amendments to human rights, which yielded thousands of comments and suggestions.⁸⁸ Weight discrimination was proposed as a category to be included among the existing provisions listed for protected classes from discrimination.⁸⁷ But public opinions differed regarding whether the constitution should include any protected classes. Some people felt that no list of classes should be included because any stigmatized groups that were excluded would remain vulnerable to discrimination.⁸⁹ Thus, the lower support we observed among Icelandic participants for anti-weight-discrimination policies may not necessarily reflect a lack of support to protect people of higher body weight from unfair treatment but instead may be the view that no specific groups should be protected, in order to promote fair treatment for all citizens. Future work in this area might examine these different perspectives regarding the enumeration of protected classes for antidiscrimination laws. After we collected the data for our study, the proposed Icelandic constitution came close to being passed, but was halted when the government's term ended before the bill could be passed.⁹⁰

In our study, laws that would consider obesity as a disability or would provide people with obesity the same legal protections afforded to individuals with physical disabilities received the least support of all laws, a finding that was consistent in both the adult and the student samples in each country. Overall, these patterns of findings are similar to previous research in the United States showing that public support is typically most favorable to laws addressing weight discrimination in employment and less favorable to laws considering obesity as a disability and extending to people with obesity the same legal protections afforded to individuals with physical disabilities,⁵⁶ a finding that also was demonstrated in a Canadian study.⁶⁰ Whether labeling obesity as a disability would provide protection or reinforce the stigma has been a subject for debate,⁸⁷ so further research to determine the effect of such labeling is needed. In the United States, pursuing legal recourse for weight discrimination through existing disability laws (the American with Disabilities Act [ADA]) has not proved to be an effective strategy for most people.²¹ But the recently passed ADA Amendments Act expands the definition of what constitutes a disability and could increase protection for individuals with severe obesity who experience discrimination based on actual or perceived disability.³³ In addition, the American Medical Association's 2013 classification of obesity as a "disease"⁹¹ could begin to shift societal and political perceptions of obesity and its debilitating consequences. Future research might look at whether this recent disease classification affects public support for antidiscrimination measures and, in particular, for increasing protections for people with obesity under existing disability legislation. Still, most individuals with obesity are not disabled because of their weight and do not wish to be perceived as disabled. Awareness of this may be one reason for the lower public support for disability-related legal measures to address weight discrimination.

Finally, we found that 71% to 87% of adults and 69% to 93% of students in all the countries in our study were in favor of passing laws to address bullying in the workplace. No such laws currently exist in the United States, although more than 20 states have introduced anti-bullying legislation, called The Healthy Workplace Bill.⁹² Although this legislation has not yet passed, the topic is gaining national attention,⁹³ and several other nations, including Australia and Canada, have already enacted laws prohibiting workplace bullying.⁹⁴ The substantial support for this law in our study suggests that there is a perception that adults are bullied in employment settings and that this is sufficiently problematic to justify legislation. Given the particularly high

levels of weight bias and discrimination documented in employment,¹⁸ anti-bullying legislation could be a novel policy approach to help reduce weight bias and discrimination experienced by employees.

The Importance of Gender, Body Weight, and Beliefs About Obesity

Some consistent patterns in the variables associated with public support for laws to address weight discrimination emerged across the countries we studied. First, in the adult samples in the United States, Canada, and Iceland, women were significantly more likely to support antidiscrimination measures than men were. This finding parallels previous research in the United States, which has similarly indicated that women are more supportive of laws to prohibit weight discrimination. These gender differences may be due in part to more reports of weight discrimination against women than men,² perhaps leading women to be more sensitive to weight-based inequities and justifying measures to address this issue. Likewise, support for laws across countries was higher among participants in the obese BMI range than among thinner individuals, especially for broader antidiscrimination measures that go beyond the employment setting. Given that higher weight individuals are vulnerable to weight discrimination in several settings, this finding is in line with previous research in the United States, which now extends to the other countries in this study.

Beliefs about the causes of obesity were related to public support for laws to address weight discrimination in the United States, Canada, and Iceland. Beliefs that obesity is caused by factors outside of personal control, such as physiological and environmental factors, were particularly related to increased support for laws, especially in the United States and Iceland. It is unclear why beliefs in psychological causes of obesity were related to support for laws among Canadian participants, but these participants (primarily health professionals) might be more aware of the psychological contributors to eating and physical activity, such as emotional triggers for overeating or avoidance of exercise because of body shame. It is also interesting that the perceived causes of obesity were not related to Australian students' support for laws. But the finding that attributions of personal blame for obesity were negatively associated with Australian students' support for laws suggests that at the very least, support for such laws is more likely among individuals

who place less personal blame on higher weight individuals. This was also the case for participants in the other countries, where attributions of blame and willpower for body weight were negatively associated with support for antidiscrimination measures. One feature that has been documented in all 4 countries we studied is a societal sentiment of blame and personal responsibility for excess body weight.⁹⁵⁻⁹⁸ Given the findings of our study and previous research linking weight-related attributions of blame with expressions of weight bias,^{99,100} future research should look at public perceptions of the causes of obesity in other cultures and countries.

Limitations of Our Study

We should note several limitations of our study and directions for future research. First, although participants in all 4 countries completed identical surveys, their self-reported attitudes may not necessarily reflect their actual voting behavior or supportive actions for legal measures to address weight discrimination. Without legislation to address weight discrimination in different countries, it is impossible to assess public reactions to such measures or their impact on persons with obesity in different cultural contexts. As efforts continue to introduce antidiscrimination measures, it will be important to determine how these processes and outcomes differ across cultures. Based on research indicating that the way messages about weight discrimination are framed to the public can influence their attitudes toward legislation,⁵⁸ it would be helpful to identify whether messages framed differently influence public opinions about antidiscrimination measures across diverse cultures and countries.

Second, most of the measures in this study used the descriptor “fat” rather than “obese” in order to maintain consistency in questions assessing policy support with existing validated anti-fat attitudes measures of weight bias that typically use “fat” as the appearance descriptor. In addition, “fat” is more broadly understood across cultures and does not fall prey to the common challenges and inaccuracies of perceptions about whether a person’s body weight status falls into a particular body mass index (BMI) category, such as “overweight” or “obese.” When making decisions or judgments about individuals based on their body size, these inferences do not refer to a specific body weight category (eg, obesity) but to the appearance of fatness. Because recent studies examining public perceptions and preferences of weight-related terminology indicate that both “fat” and “obese” elicit similar negative reactions,^{101,102} it is

unlikely that the use of “fat” rather than “obese” would affect the results of this study. Future research might usefully examine whether policy support differs according to the body weight/appearance terminology used.

Finally, although 2 of our samples (United States and Iceland) reflect large diverse samples that approximate national census demographics, the remaining adult sample (Canada) and student samples (Australia, Hawaii, and Iceland) were not randomly selected and are not intended to be representative. It is important to note, though, that this study focused on associations among key variables of policy support, weight-related attitudes, and sociodemographic factors, rather than on prevalence estimates of public support for policies/laws.

Future policy research in this area should identify and examine both the feasibility and effectiveness of different legal measures to address weight discrimination, including the financial implications of such measures as well as the conditions necessary for building political will for policy change in different countries. It also would be helpful to study how proposed laws and policies addressing weight discrimination might influence other emerging policies related to obesity, such as workplace wellness programs, some of which have been criticized for imposing unfair financial penalties on employees with obesity.¹⁰³

Conclusion

Public support is one of the key conditions required to foster the political will necessary for policy change. We found public support in the United States, Canada, Australia, and Iceland for legal measures to address weight discrimination. This support appears to be especially strong for laws to remedy this problem specifically in the employment setting. Our findings can inform policymakers and interest groups both nationally and internationally and offer new insights to guide discussions about policy priorities to reduce inequities and disparities resulting from weight discrimination.

References

1. Puhl H. The stigma of obesity: a review and update. *Obesity*. 2009;17(5):941-964.

2. Puhl R, Andreyeva T, Brownell K. Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America. *Int J Obes*. 2008;32:992-1000.
3. Puhl RM, Brownell KD. Bias, discrimination, and obesity. *Obes Res*. 2001;9(12):788-905.
4. Rudolph CW, Wells CL, Weller MD, Baltes BB. A meta-analysis of empirical studies of weight-based bias in the workplace. *J Vocat Behav*. 2009;74(1):1-10.
5. Roehling MV, Pichler S, Bruce TA. Moderators of the effect of weight on job-related outcomes: a meta-analysis of experimental studies. *J Appl Soc Psychol*. 2013;43(2):237-252.
6. Andreyeva T, Puhl RM, Brownell KD. Changes in perceived weight discrimination among Americans: 1995-1996 through 2004-2006. *Obesity*. 2008;16(5):1129-1134.
7. Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. *JAMA*. 2012;307(5):491-497.
8. Hatzenbuehler ML, Keyes KM, Hasin DS. Associations between perceived weight discrimination and the prevalence of psychiatric disorders in the general population. *Obesity*. 2009;17(11):2033-2039.
9. Almeida L, Savoy S, Boxer P. The role of weight stigmatization in cumulative risk for binge eating. *J Clin Psychol*. 2011;67(3):278-292.
10. Puhl H. Obesity stigma: important considerations for public health. *Am J Public Health*. 2010;100(6):1019-1028.
11. Sutin AR, Terracciano A. Perceived weight discrimination and obesity. *PLoS One*. 2013;8(7):e70048.
12. Jackson SE, Beeken RJ, Wardle J. Perceived weight discrimination and changes in weight, waist circumference, and weight status. *Obesity*. 2014;22(12):2485-2488.
13. Tsenkova VK, Carr D, Schoeller DA, Ryff CD. Perceived weight discrimination amplifies the link between central adiposity and nondiabetic glycemic control (HbA1c). *Ann Behav Med*. 2011;41:243-251.
14. Carr D, Friedman MA. Is obesity stigmatizing? Body weight, perceived discrimination, and psychological well-being in the United States. *J Health Soc Behav*. 2005;46(3):244-259.
15. Baum CL, Ford WF. The wage effects of obesity: a longitudinal study. *Health Econ*. 2004;13:885-899.
16. Cawley J. The impact of obesity on wages. *J Hum Resources*. 2004;39(2):451-474.

17. Maranto CL, Stenoien AF. Weight discrimination: a multidisciplinary analysis. *Employee Responsibilities and Rights Journal*. 2000;12(1):9-24.
18. Roehling MV, Roehling PV, Pichler S. The relationship between body weight and perceived weight-related employment discrimination: the role of sex and race. *J Vocat Behav*. 2007;71:300-318.
19. Sartore ML, Cunningham GB. Weight discrimination, hiring recommendations, person–job fit, and attributions: fitness-industry implications. *J Sport Manage*. 2007;21(2):172-193.
20. O'Brien KS, Latner JD, Halberstadt J, Hunter JA, Anderson J, Caputi P. Do antifat attitudes predict antifat behaviors? *Obesity*. 2008;16(S2):S87-S92.
21. Pomeranz JL. A historical analysis of public health, the law, and stigmatized social groups: the need for both obesity and weight bias legislation. *Obesity*. 2008;16:S93-S102.
22. Mich. Comp. Laws Ann. §37.2202(1)(a) (West Supp. 2001).
23. San Fran. Admin. Code Chaps 12A, 12B, & 12C; San Fran. Municipal/Police Code Art. 33.
24. Santa Cruz, CA. Mun. Code §9.83.010 (2004).
25. DC Code Ann. §1–2501 (1987 & supp. 1993).
26. Urbana, IL Code of Ordinances §12–39 (2014).
27. Binghamton Human Rights Law, §§45-1-10 (2008).
28. Madison, WI General Ordinances §39.03(2)(bb) (2014).
29. Civil Rights Act of 1964, art. VII. <http://www.eeoc.gov/laws/statutes/titlevii.cfm>. Accessed September 15, 2015.
30. Americans with Disabilities Act of 1990, 42 USCS, §§12101 et seq.
31. Theran EE. Legal theory on weight discrimination. In: Brownell KD, Puhl RM, Schwartz MB, Rudd L, eds. *Weight Bias: Nature, Consequences, and Remedies*. New York, NY: Guilford Press; 2005:195-211.
32. Kirkland A. *Fat Rights: Dilemmas of Difference and Personhood*. New York, NY: New York University Press; 2008.
33. Pomeranz JL, Puhl RM. New developments in the law for obesity discrimination protection. *Obesity*. 2013;21(3):469-471.
34. EEOC Press Release. July 24, 2012. <http://www.eeoc.gov/eeoc/newsroom/release/7-24-12c.cfm>. Accessed September 15, 2015.
35. EEOC Press Release. April 10, 2012. <http://www.eeoc.gov/eeoc/newsroom/release/4-10-12a.cfm>. Accessed September 15, 2015.

36. Asgeirsdottir T. Do body weight and gender shape the work force? The case of Iceland. *Econ Hum Biol.* 2011;9(2):148-156.
37. Park HA, Cho JJ. Economic activities and socioeconomic status of morbidly obese Korean adults. *Korean J Obes.* 2011;20(4):210-218.
38. Rooth DO. Obesity, attractiveness, and differential treatment in hiring; a field experiment. *J Hum Resources.* 2009;44(3):710-735.
39. Greve J. Obesity and labor market outcomes in Denmark. *Econ Hum Biol.* 2008;6(3):350-362.
40. Morris S. Body mass index and occupational attainment. *J Health Econ.* 2006;25:347-364.
41. Sargent RG, Blanchflower DG. Obesity and stature in adolescents and earnings in young adulthood: analysis of a British cohort. *Arch Pediatr Adolesc Med.* 1994;148:681-687.
42. Brunello G, D'Hombres B. Does body weight affect wages? Evidence from Europe. *Econ Hum Biol.* 2007;5:1-19.
43. Lundborg P, Bolin K, Cawley JH. Obesity and occupational attainment among the 50+ of Europe. *Econ Obesity.* 2007;17:219-251.
44. García Villar J, Quintana-Domeque C. Income and body mass index in Europe. *Econ Hum Biol.* 2009;7(1):73.
45. Giel KE, Zipfel S, Alizadeh M, et al. Stigmatization of obese individuals by human resource professionals: an experimental study. *BMC Public Health.* 2012;12(1):525.
46. Minister of Justice. Canadian Human Rights Act. (2015). <http://laws-lois.justice.gc.ca/PDF/H-6.pdf>. Accessed March 12, 2015.
47. Australian Government: Attorney-General's Department. (2014). Human Rights. <http://www.ag.gov.au/RightsAndProtections/HumanRights/Pages/default.aspx>. Accessed March 12, 2015.
48. Sex Discrimination Amendment (Sexual Orientation, Gender Identity and Intersex Status) Bill Act 2013 (Cth) amended the Sex Discrimination Act 1984 (Cth). <https://www.humanrights.gov.au/our-work/sexual-orientation-sex-gender-identity/projects/new-protection>. Accessed March 2015.
49. Government Offices of Iceland. (1999). Constitution of the Republic of Iceland. http://www.government.is/media/Skjol/constitution_of_iceland.pdf. Accessed March 12, 2015.
50. US Department of State, Bureau of Democracy. (2013). Human rights, and labor. Country reports on human rights practices 2013: Iceland. <http://www.state.gov/documents/organization/220500.pdf>. Accessed March 12, 2015.

51. Luther E. Justice for all shapes and sizes: combatting weight discrimination in Canada. *Alberta Law Rev.* 2010;48:167.
52. Ierodionou MA, Douglas L. Fattism: a new legal risk at work. January 29, 2013. http://www.afr.com/p/national/work_space/fattism_new_legal_risk_at_work_11OKwV7Lm7IkRItrR63ckO. Accessed July 29, 2014.
53. Swinburn BA. The global obesity pandemic: shaped by global drivers and local environments. *Lancet.* 2011;378(9793):804.
54. Oliver JE, Lee T. Public opinion and the politics of obesity in America. *J Health Polit Policy Law.* 2005;30:923-954.
55. Barry CL, Brescoll VL, Brownell KD, Schlesinger M. Obesity metaphors: how beliefs about the causes of obesity affect support for public policy. *Milbank Q.* 2009;87(1):7-47.
56. Puhl RM, Heuer CA. Public opinion about laws to prohibit weight discrimination in the United States. *Obesity.* 2011;19(1):74-82.
57. Puhl R, Heuer C, Sarda V. Framing messages about weight discrimination: impact on public support for legislation. *Int J Obes.* 2011;35(6):863-872.
58. Suh Y, Puhl R, Liu S, Fleming Milici F. Support for laws to prohibit weight discrimination in the United States: public attitudes from 2011 to 2013. *Obesity.* 2014;22(8):1872-1879.
59. Chambers SA, Traill WB. What the UK public believes causes obesity, and what they want to do about it: a cross-sectional study. *J Public Health Policy.* 2011;32(4):430-444.
60. Lange R, Faulkner G. Support for obesity policy: the effect of perceptions of causes for obesity and national identity in Canada. *Open J Prev Med.* 2012;2:478.
61. O'Brien KS, Latner JD, Ebner D, Hunter JA. Obesity discrimination: the role of physical appearance, personal ideology, and anti-fat prejudice. *Int J Obes.* 2013;37(3):455-460.
62. Marini M, Sriram N, Schnabel K, et al. Overweight people have low levels of implicit weight bias, but overweight nations have high levels of implicit weight bias. *PLoS One.* 2013;8(12):e83543.
63. Janssen I. The public health burden of obesity in Canada. *Can J Diabetes.* 2013;37(2):90-96.
64. World Health Organization. Global health observatory data repository. <http://apps.who.int/gho/data/view.main>. Accessed July 10, 2014.
65. Australian Bureau of Statistics. Australian Health Survey: first results, 2011–12. Catalog no. 4364.0.55.001. 2012. Canberra.

66. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*. 2014;311(8):806-814.
67. Lonner WJ, Berry JW. *Field Methods in Cross-Cultural Research*. Beverly Hills, CA: Sage Publications; 1986.
68. US Census Bureau. Profile of general population and housing characteristics. <http://www.census.gov/prod/www/decennial.html>. Accessed July 14, 2014.
69. Davis J, Busch J, Hammatt Z, et al. The relationship between ethnicity and obesity in Asian and Pacific Islander populations: a literature review. *Ethnicity Dis*. 2004;14(1):111-118.
70. Latner JD, Knight T, Illingworth K. Body image and self-esteem among Asian, Pacific Islander, and white college students in Hawaii and Australia. *Eating Disord*. 2011;19(4):355-368.
71. Pearl RL, Lebowitz MS. Beyond personal responsibility: effects of causal attributions for overweight and obesity on weight-related beliefs, stigma, and policy support. *Psychol Health*. 2014;29(10):1176-1191.
72. Centers for Disease Control and Prevention (CDC). Defining overweight and obesity. Overweight and obesity. <http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm>. Accessed June 30, 2014.
73. Foster GD, Wadden TA, Makris AP, et al. Primary care physicians' attitudes about obesity and its treatment. *Obes Res*. 2003;11(10):1168-1177.
74. Puhl RM, Latner JD, King KM, Luedicke J. Weight bias among professionals treating eating disorders: attitudes about treatment and perceived patient outcomes. *Int J Eating Disord*. 2014;47(1):65-75.
75. Puhl RM, Luedicke J, Grilo CM. Obesity bias in training: attitudes, beliefs, and observations among advanced trainees in professional health disciplines. *Obesity*. 2014;22(4):1008-1015.
76. DePierre JA, Puhl RM, Luedicke J. A new stigmatized identity? Comparisons of a "food addict" label with other stigmatized health conditions. *Basic Appl Soc Psychol*. 2013;35(1):10-21.
77. Crandall CS. Prejudice against fat people: ideology and self-interest. *J Pers Soc Psychol*. 1994;66(5):882-894.
78. O'Brien KS, Hunter JA, Halberstadt J, Anderson J. Body image and explicit and implicit anti-fat attitudes: the mediating role of physical appearance comparisons. *Body Image*. 2007;4(3):249-256.
79. McDonald JF, Moffitt RA. The uses of Tobit analysis. *Rev Econ Stat*. 1982;62:318-321.

80. Horner K. A growing problem: why the federal government needs to shoulder the burden in protecting workers from weight discrimination. *Catholic University Law Rev.* 2005;54:589-625.
81. Goldberg C. Anti-fat bias at work: should it be banned by law? wbur's CommonHealth. 2013. <http://commonhealth.wbur.org/2013/11/anti-fat-bias-workplace>. Accessed July 7, 2014.
82. Quinn C. State House News: Committee backs bill adding height, weight to anti-discrimination law. *Wickedlocal.com*. October 8, 2013. <http://www.wickedlocal.com/article/20131008/News/310089742>. Accessed March 2015.
83. Canadian Human Rights Commission. The Canadian Human Rights Act: Everyday People Making Canada Better. Modified May 9, 2013. <http://www.chrc-ccdp.gc.ca/eng/content/milestones-human-rights-canada>. Accessed March 2015.
84. Canadian Obesity Network. First Canadian Summit on Weight Bias and Discrimination. <http://www.obesitynetwork.ca/weight-bias-summit>. Accessed March 2015.
85. Canadian Obesity Network. Canadian Summit on Weight Bias and Discrimination summit report. 2011. http://www.obesitynetwork.ca/files/Weight_Bias_Summit_Report.pdf. Accessed March 2015.
86. Azmi A. The Ontario Human Rights Code and protection from discrimination related to weight. Canadian Obesity Network presentation portal. <http://hosting.epresence.tv/obesitynetwork/1/Watch/68.aspx>. Accessed March 2015.
87. Claydon E. Iceland's new constitution may prohibit weight discrimination. *Examiner*. December 4, 2012. <http://www.examiner.com/article/iceland-s-new-constitution-may-prohibit-weight-discrimination>. Accessed July 28, 2014.
88. Landemore H. We, all of the people: five lessons learned from Iceland's failed experiment in creating a crowdsourced constitution. *Slate*. July 31, 2014. http://www.slate.com/articles/technology/future_tense/2014/07/five_lessons_from_iceland_s_failed_crowdsourced_constitution_experiment.html. Accessed September 15, 2015.
89. Agustsdottir, M. Icelandic council candidate comments on inclusion of protected classes in discrimination section of Iceland's constitution. <http://www.dv.is/stjornlagathing/maria-agustsdottir/grein/309/>. Accessed March 30, 2015.
90. Spitz L. Iceland: end of the constitutional saga? *Huffington Post*. April 5, 2013. http://www.huffingtonpost.com/tom-ginsburg/iceland-end-of-the-consti_b_3018127.html. Accessed March 2015.

91. Pollack, A. AMA recognizes obesity as a disease. *New York Times*. June 18, 2013. http://www.nytimes.com/2013/06/19/business/ama-recognizes-obesity-as-a-disease.html?_r=0. Accessed July 25, 2013.
92. Healthy Workplace Bill. <http://www.healthyworkplacebill.org>. Accessed July 14, 2014.
93. English B. Dealing with bullies in the workplace. *Boston Globe*. July 29, 2014. <http://www.bostonglobe.com/lifestyle/2014/07/29/dealing-with-workplace-bullies/nWqpS2i9RTE7DyHSgmTieM/story.html>. Accessed July 30, 2014.
94. International legislative movement. <http://www.healthyworkplacebill.org/international.php>. Accessed July 30, 2014.
95. Ata RN, Thompson JK. Weight bias in the media: a review of recent research. *Obesity Facts*. 2010;3(1):41-46.
96. Bonfiglioli MF, Smith BJ, King LA, Chapman SF, Holding SJ. Choice and voice: obesity debates in television news. *Med J Aust*. 2007;187(8):442-445.
97. Daníelsdóttir S. The obesity war in Iceland: health at every size. April 19, 2006. <http://www.moreofmetolove.com/resources/article/the-obesity-war-in-iceland/>. Accessed July 30, 2014.
98. Kirk SF, Price SL, Penney TL, et al. Blame, shame, and lack of support: a multilevel study on obesity management. *Qual Health Res*. Apr. 11;2014. doi:1049732314529667.
99. Crandall CS, Martinez R. Culture, ideology, and anti-fat attitudes. *Pers Soc Psychol Bull*. 1996;22:1165-1176.
100. Puhl RM, Schwartz MB, Brownell KD. Impact of perceived consensus on stereotypes about obese people: a new approach for reducing bias. *Health Psychol*. 2005;24(5):517-525.
101. Vartanian LR. "Obese people" vs "fat people": impact of group label on weight bias. *Eating Weight Disord*. 2010;15:e195-e198.
102. Smith CA, Schmoll K, Konik J, Oberlander S. Carrying weight for the world: influence of weight descriptors on judgments of large-sized women. *J Appl Soc Psychol*. 2007;37(5):989-1006.
103. Lesser LI, Puhl RM. Alternatives to monetary incentives for employee weight loss. *Am J Prev Med*. 2014;46(4):429-431.

Funding/Support: This study was funded by a donation from the Rudd Foundation.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. No disclosures were reported.

Acknowledgments: The authors would like to thank the Canadian Obesity Network, the Directorate of Health in Iceland, and all participating universities for their collaboration on this project. The authors would also like to thank Mary Forhan for reading an earlier version of this article and for her assistance in recruiting the CON participants.

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