

Descriptions and research study to access full versions of the measure are provided.

Measures to Assess Explicit Weight Bias

- *Anti-fat Attitudes Questionnaire (AFA)*
 - 13-item assessment of explicit anti-prejudice comprised of three subscales: (1) 'Dislike,' which assesses an individual's explicit antipathy toward fat people, (2) 'Fear of Fat,' which measures personal concern with weight, and (3) 'Willpower,' which assesses the belief that being overweight is a matter of personal control or lack thereof. Respondents indicate extent of agreement on a scale of 0 (very strongly disagree) to 9 (very strongly agree).
 - Crandall, C.S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology*, 66, 882-894.

- *Anti-fat Attitudes Scale (AFAS)*
 - 5-item measure developed to measure negative attitudes toward individuals with overweight. Respondents indicate their extent of agreement with survey statements on a scale of 1 (strongly disagree) to 5 (strongly agree).
 - Morrison, T.G., & O'Connor, W.E. (1999). Psychometric properties of a scale measuring negative attitudes toward overweight individuals. *Journal of Social Psychology*, 139, 436-445.

- *Anti-fat Attitudes Test (AFAT)*
 - 47-item measure developed to assess beliefs, emotions, and behavioral dispositions towards individuals with obesity. Three subscales are included: (1) Social and character disparagement of people with obesity, (2) Physical and romantic unattractiveness, and (3) Causal attributions of obesity and blame. Respondents indicate extent of their agreement with survey statements on a scale of 1 (strongly disagree) to 5 (strongly agree).
 - Lewis, R.J, Cash, T.F, Jacobi, L., & Bubb-Lewis, C. (1997). Prejudice toward fat people: The development and validation of the Anti-fat Attitudes Test. *Obesity Research*, 5, 297-307.

- *Attitudes toward Obese Persons Scale (ATOP)*
 - 20-item measure focuses on stereotypical attitudes about individuals with obesity including perceptions about their personality, social quality of life, and self-esteem. Respondents indicate extent of their agreement with survey statements on a scale of -3 (strongly disagree) to +3 (strongly agree).

- Allison, D.B., Basile, V.C., & Yuker, H.E. (1991). The measurement of attitudes toward and beliefs about obese persons. *International Journal of Eating Disorders*, 10, 599-607.
- *Beliefs about Obese Persons Scale (BAOP)*
 - 8-item measure that assesses beliefs about causes and controllability of obesity. Respondents indicate their extent of agreement to statements on a scale of -3 (strongly disagree) to +3 (strongly agree).
 - Allison, D.B., Basile, V.C., & Yuker, H.E. (1991). The measurement of attitudes toward and beliefs about obese persons. *International Journal of Eating Disorders*, 10, 599-607
- *Fat Phobia Scale – short form*
 - 14-item scale that assesses attitudes about individuals with obesity. Fourteen pairs of adjectives used to describe individuals with obesity are listed (eg., “no will power vs “has will power”). Respondents indicate on scale of 1 to 5 which adjective they feel best describes their feelings and beliefs.
 - Bacon, J.G., Scheltema, K.E., & Robinson, B.E. (2001). Fat Phobia Scale revisited: The short form. *International Journal of Obesity*, 25, 252-257.
- *Universal Measure of Bias-Fat Scale (UMB-FAT)*
 - The FAT subscale of this measure contains 20 items assessing participants’ general attitudes toward individuals with obesity. Participants are presented with statements about individuals with obesity such as “fat people are sloppy.” Respondents indicate their extent of agreement on a 7-point scale, ranging from ‘strongly agree’ to ‘strongly disagree.’
 - Latner, J. D., O'Brien, K. S., Durso, L. E., Brinkman, L. A., & MacDonald, T. (2008). Weighing obesity stigma: the relative strength of different forms of bias. *International Journal of Obesity*, 32(7), 1145-1152.

Measures to Assess Personal Experiences of Weight Stigma

Measures for Adults

Stigmatizing Situations Inventory (SSI)

- 50-item evaluates lifetime frequency of experiences with different stigmatizing situations across eleven different categories (e.g., nasty comments from others, job discrimination, inappropriate comments from doctors). Respondents report frequency on a scale of 0 (never) to daily (9).

- Myers A, Rosen JC: Obesity stigmatization and coping: Relation to mental health symptoms, body image, and self-esteem. *Int J Obes Relat Metab Disord* 1999; 23: 221–230
- *Stigmatizing Situations Inventory – Modified (SSI-M)*
 - This measure is a modified version of the above SSI using a different 4-point (rather than 10-point) Likert Scale; possible responses include never, once, more than once in a lifetime, and multiple times in a lifetime.
 - Puhl, R. M., & Brownell, K. D. (2006). Confronting and coping with weight stigma: an investigation of overweight and obese adults. *Obesity*, 14(10), 1802-1815.
- *Coping Responses Inventory*
 - 99-item measure evaluates the different strategies used to cope with stigmatizing situations based on weight.
 - Myers A, Rosen JC: Obesity stigmatization and coping: Relation to mental health symptoms, body image, and self-esteem. *Int J Obes Relat Metab Disord* 1999; 23: 221–230
- *Perceived Weight Discrimination*
 - 5-item measure assesses frequency of weight-based discrimination experiences in last 12 months across various domains in which discrimination can occur (e.g., public setting, medical office). Respondents indicate frequency on a 5-point scale, ranging from ‘never’ to ‘very often.’
 - Hatzenbuehler, M. L., Keyes, K. M., & Hasin, D. S. (2009). Associations between perceived weight discrimination and the prevalence of psychiatric disorders in the general population. *Obesity*, 17(11), 2033-2039.
- *Experience of weight-based discrimination*
 - 6-item measure evaluates personal experiences with, feelings about and frequency of instances of weight discrimination. Respondents indicate extent of agreement on a scale of 1 (totally disagree) to 1 (agree very much).
 - Farrow, C. V., & Tarrant, M. (2009). Weight-based discrimination, body dissatisfaction and emotional eating: The role of perceived social consensus. *Psychology and Health*, 24(9), 1021-1034.

➤ *Perception of Teasing Scale (POTS)*

- 6 of the 11 items in this measure assesses frequency of and emotional response to weight-related teasing experienced between the ages of 5 and 16 years. For indicating frequency, respondents reply on a scale of 1 (never) to 5 (very often). For emotional response, the scale ranges from 1 (not upset) to 5 (very upset).
- Thompson, J. K., Cattarin, J., Fowler, B., & Fisher, E. (1995). The perception of teasing scale (POTS): A revision and extension of the physical appearance related teasing scale (PARTS). *Journal of personality assessment*, 65(1), 146-157.

➤ *The Impact of Weight on Quality of Life Questionnaire – Shortened Form (IWQOL-Lite)*

- 54 of the 59 items in this measure assesses different aspects of obesity-related quality of life, including physical function, self-esteem, sexual life, public distress, and work. Respondents validate survey statements on a 5-point scale, ranging from ‘always true’ to ‘not true.’
- Kolotkin, R. L., Crosby, R. D., Kosloski, K. D., & Williams, G. R. (2001). Development of a brief measure to assess quality of life in obesity. *Obesity Research*, 9(2), 102-111.

➤ *History of Weight-Based Victimization*

- 4-item measure asks respondents whether or not they or their child has previously had experiences with weight-related teasing and discrimination.
- Puhl, R. M., Peterson, J. L., & Luedicke, J. (2011). Parental perceptions of weight terminology that providers use with youth. *Pediatrics*, 128(4), e786-e793.
- Puhl RM, Luedicke J, DePierre JA. Parental Concerns about Weight-Based Victimization in Youth. *Childhood Obesity*. 2013 Dec;9(6):1-9.

➤ *Weight Self-Stigma Questionnaire (WSSQ)*
(only for individuals with overweight and obesity)

- 12-item measure evaluates the self-stigmatization among individuals with overweight and obesity. Two subscales include weight-related self-devaluation

and fear of enacted stigma; using these scores, one composite score may be calculated. Respondents indicate their extent of agreement on a scale of 1 (completely disagree) to 5 (completely agree).

- Lillis, J., Luoma, J. B., Levin, M. E., & Hayes, S. C. (2010). Measuring Weight Self-stigma: The Weight Self-stigma Questionnaire. *Obesity, 18*(5), 971-976.

➤ *Weight Bias Internalization Scale (WBIS)*

- 11-item measure evaluates beliefs about negative societal stereotypes and how self-statements about individuals with overweight and obesity apply to oneself. Content areas include acceptance/rejection of weight status, desire for change, effect of perceived weight status on mood, perceived personal value, ease of life, public appearance and social interaction, and recognition of the existence and unfairness of weight stigma. Respondents rate their agreement with items on a scale of 1 (strongly disagree) to 7 (strongly agree).
- Durso, L. E., & Latner, J. D. (2008). Understanding Self-directed Stigma: Development of the Weight Bias Internalization Scale. *Obesity, 16*(S2), S80-S86.

➤ *Weight Bias Internalization Scale – Modified (WBIS-M)*

- This measure is a modified version of the above WBIS that is applicable to individuals across different body weight statuses. From the original WBIS, phrases containing the word “overweight” are replaced with “my weight.” For example, an item beginning with “As an overweight person...” is changed to “Because of my weight...”
- Pearl, R. L., & Puhl, R. M. (2014). Measuring internalized weight attitudes across body weight categories: Validation of the Modified Weight Bias Internalization Scale. *Body image, 11*(1), 89-92.

Measures for Youth

➤ *Experiences of weight-based teasing and bullying*

- This measure includes 28 items to assess the frequency of experience in the past year with different types of weight-based teasing and bullying at school, 11 items to ask about the sources and locations of teasing, and 44 items to evaluate how youth react and cope with the teasing. Respondents indicate frequency of teasing on a 5-point scale, ranging from ‘never’ to ‘very often.’
- Puhl RM, Luedicke J, Heuer C: Weight-based victimization toward overweight adolescents: observations and reactions of peers. *J Sch Health* 2011; 81: 696–703.

- Puhl RM, Luedicke J: Weight-based victimization among adolescents in the school setting: emotional reactions and coping behaviors. *J Youth Adolesc* 2012; 41: 27–40.

➤ *Peer Teasing Scale (PTS)*

- 5-item scale assesses the lifetime frequency of weight-based and appearance-based teasing, exclusions from activities by other children, as well as incidences of fighting. Children indicate the frequency as ‘never,’ ‘sometimes,’ or ‘often.’
- Young-Hyman, D., Schlundt, D. G., Herman-Wenderoth, L., & Bozylinski, K. (2003). Obesity, appearance, and psychosocial adaptation in young African American children. *Journal of Pediatric Psychology*, 28(7), 463-472.

➤ *The Impact of Weight on Quality of Life questionnaire – Kids (IWQOL Kids)*

- 27-item measure evaluates youth’s weight-related quality of life and includes four factors: (1) physical comfort, (2) body esteem, (3) social life, and (4) family relations. Respondents indicate their extent of endorsement of survey questions on a scale of 1 (always true) to 5 (never true).
- Kolotkin, R. L., Zeller, M., Modi, A. C., Samsa, G. P., Quinlan, N. P., Yanovski, J. A., ... & Roehrig, H. R. (2006). Assessing weight-related quality of life in adolescents. *Obesity*, 14(3), 448-457.

Measures for Weight Loss Treatment-Seeking Patients

➤ *Perceptions of discrimination*

- 20-item measure primarily assesses frequency of experiences of discrimination across multiple domains of life (e.g., workplace, family life, public places), while few questions ask patients about their mood and perceived attractiveness of oneself. Respondents indicate frequency of discrimination on a 4-point scale (ranging from ‘never’ to ‘always’), mood questions are evaluated with 3 options (‘most of the time,’ ‘sometimes,’ or ‘not very often’) and physical attractiveness question is evaluated on a 5-point scale (ranging from ‘very attractive’ to ‘very unattractive.’)

- Rand CW, MacGregor AM: Morbidly obese patients' perceptions of social discrimination before and after surgery for obesity. *South Med J* 1990; 83: 1390–1395.

For additional information about measures evaluating weight stigmatization, please see:

DePierre, J. A., & Puhl, R. M. (2012). Experiences of weight stigmatization: A review of self-report assessment measures. *Obesity facts*, 5(6), 897-918.

Background: Overweight and obese persons are vulnerable to frequent stigmatization and discrimination because of their weight. Despite widespread prejudice towards obese persons, many questions remain regarding the nature, extent, and impact of weight-based stigmatization experienced by so many people. However, improving our knowledge in this area will only be as good as the measures we have to study this phenomenon. Our paper is the first to provide a comprehensive summary of published quantitative self-report measures available for assessing experiences of weight stigmatization in children and adults.

Methods: This review examined 22 measures of self-reported weight stigmatization and highlights the strengths and limitations of existing assessment.

Results: Existing measures contain a number of limitations and have been assessed in samples lacking diversity. Improvements in measurement are needed to achieve a clearer understanding of the nature and extent of self-perceived weight stigmatization and to develop measures that accurately reflect this type of stigmatization.

Conclusions: Specific directions for future research that will help improve measurement of self-perceived weight stigmatization and advance this area of study are highlighted.