# The Fat Acceptance Scale: Development and Initial Validation

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The fat acceptance movement arose to combat the widespread stigmatization of fatness and fat people through personal liberation and political activism. Support for the movement and its underlying ideology has grown rapidly over the past three decades; however, a self-report measure of fat acceptance with strong psychometric properties has not yet been developed. The current studies aimed to develop the Fat Acceptance Scale (FAS), a measure of fat-accepting beliefs, attitudes, and behaviors that was designed to be appropriate for use with people of all sizes. In Study 1, exploratory factor analysis ($n = 266$) and confirmatory factor analysis ($n = 267$) supported a three-factor solution assessing fat activism, health beliefs related to weight, and interpersonal respect for fat individuals. In Study 2 ($N = 291$), FAS scores predicted reactions to fictitious fat women after controlling for an established measure of antifat attitudes. Data from a subsample of 47 participants indicated moderate-to-high stability of the FAS over 4 weeks. In Study 3 ($N = 156$), health service psychology doctoral students' FAS scores predicted their reactions to a fictional fat psychotherapy client after controlling for antifat attitudes. Taken together, results provided preliminary evidence for the validity and reliability of FAS scores and suggest that the FAS may be a valuable tool for researchers, clinicians, and advocates interested in fat acceptance.

*Public Significance Statement*
The fat-acceptance movement arose to combat the significant discrimination that fat individuals encounter in a variety of contexts. This article describes the development of a new scale measuring fat-accepting beliefs, attitudes, and behaviors (the Fat-Acceptance scale; FAS). The results of this study suggest that the FAS may be a reliable and valid tool for researchers, clinicians, and advocates interested in fat acceptance.

*Keywords:* fat acceptance, sizeism, scale development, activism

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Research has documented widespread oppression of fat[1] people in Western societies. Fat individuals experience discrimination in healthcare (Phelan, Burgess, Yeazel, et al., 2015), psychotherapy (Kinavey & Cool, 2019), the workplace (Roehling et al., 2007), and educational settings (Phelan, Burgess, Puhl, et al., 2015); sizeism pervades social (Schaefer & Simpkins, 2014), familial (Kraha & Boals, 2011), and romantic (Boyes & Latner, 2009) relationships. Likely because of this antifat environment, fat individuals report high levels of internalized weight bias and distress (Durso & Latner, 2008). The ongoing stigmatization of fatness is striking given that the percentage of U.S. adults who would be classified as obese is at an all-time high (Wang et al., 2020).

Many fat individuals and their allies have resisted antifat bias through personal liberation and political activism, and these individuals often identify as *fat accepting*. Despite the rapid growth of the fat acceptance movement over the past three decades (Eckert, 2020), a high-quality measure of fat-accepting attitudes, beliefs, and behaviors has not yet been developed. The purpose of the current studies was to develop a psychometrically sound measure of fat acceptance that can be used in research, clinical work, and advocacy. In contrast to measures focused solely on antifat bias, a broad measure of fat acceptance may be better equipped to predict positive processes, such as the respectful treatment of fat people, empathy for sizeism-related suffering, engagement in fat activism, and coping with antifat discrimination.

## Defining Fat Acceptance

The fat acceptance movement arose in the 1960s to combat the pervasive stigmatization of fat individuals and improve their quality of life (National Association to Advance Fat Acceptance, 2016). Throughout its history, the fat acceptance movement has been

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[1] The term "fat" is typically preferred by fat acceptance advocates and is therefore used throughout this article (McKinley, 2004).

closely intertwined with the feminist movement, and it has often explicitly focused on the cultural devaluation of fat women. Feminism and fat acceptance are united by a focus on the "othered" body, which is seen as "irreconcilable with personhood" and is subjected to widespread discrimination and violence (Farrell, 2021, p. 47). Moreover, since the beginning of the fat acceptance movement, many of its supporters have striven to take an intersectional approach to fat liberation. They have called attention to the ways that sizeism and other forms of oppression operate conjointly and highlighted fat people of color, fat disabled individuals, fat poor individuals, and fat queer and trans-individuals as frequent targets of sizeist discrimination (van Amsterdam, 2013). For instance, fat study scholars have argued that the stigmatization of fatness in Western cultures may have arisen to mark Black bodies as deviant and to justify the subordination of Black people in the African slave trade (Strings, 2015).

Most fundamentally, supporters of the modern fat acceptance movement believe that people of all sizes possess equal inherent dignity, reject the notion that fat people should try to lose weight, and challenge common weight-related stereotypes (Cooper, 2008). Fat-accepting individuals also argue that implicit and explicit fat stigma is unjust and pervasive in Western societies, causing significant harm to the health of fat individuals (Bacon & Aphramor, 2011). They contend that sizeist discrimination must be challenged in both interpersonal contexts and the larger political system (Cooper, 2010). For example, fat acceptance advocates have argued that nondiscrimination laws should include body size as a protected class (National Association to Advance Fat Acceptance, 2016).

Many fat acceptance advocates also reject the notion that fatness is inherently unhealthy. Instead, they argue that fatness represents natural variation in body size that has been inappropriately pathologized by the mainstream medical establishment. Relatedly, many activists contend that body weight is primarily driven by biological and genetic factors, rather than diet and exercise. Contradicting sizeist stereotypes, they suggest that many fat people enjoy good physical health, eat healthy diets, and enjoy physical activity. They also point to research documenting the high failure rate and negative health impacts of dieting (Bacon & Aphramor, 2011). However, other advocates have resisted this line of reasoning, arguing that the question of how weight and health are related is irrelevant—fat people possess inherent dignity, whether fatness confers health risk or not (Morris, 2019). They also point out the systemic inequities that may make weight control difficult, particularly for marginalized populations, including poorer access to medical care, nutritious food, and leisure time (Calogero et al., 2019).

Many fat acceptance activists also challenge sizeist beauty standards that glorify thinness. These activists argue that contrary to the cultural trope that all fat people are insecure about their appearance, many fat people are satisfied with their bodies. They also suggest that many more fat people would be accepting of their bodies if not for rampant sizeism. As a result, many fat activists attempt to promote more inclusive beauty standards and help fat individuals cultivate a positive body image. Again, however, other fat acceptance advocates have argued that the movement should focus on persuading others of the inherent value of fat individuals, rather than the aesthetic appeal of their bodies (Afful & Ricciardelli, 2015).

Many fat acceptance advocates have argued that supporting the fat acceptance movement requires both personal liberation and political activism. On the personal level, fat acceptance involves rejecting one's own antifat biases, treating fat individuals with respect, and challenging sizeism in everyday life. On the political level, fat acceptance activists may campaign for weight-related nondiscrimination policies; work to make public spaces more accessible to fat people; protest the medical establishment's treatment of fat bodies; boycott the diet industry; and create subversive art that celebrates fat bodies (Cooper, 2010; Morris, 2019). Most activists have suggested that people of all sizes can be fat accepting; however, they have also argued that the movement should emphasize the perspectives of larger fat individuals (van Amsterdam, 2013).

## Measuring Fat Acceptance

Fat acceptance is related to constructs such body appreciation and body esteem, which have been measured using previously published scales. However, these constructs focus on individual's feelings towards their own body, whereas fat acceptance is related to one's attitudes about fat bodies in general. Fat acceptance is also related to the concept of body positivity; however, activists tend to view fat acceptance as a distinct and more radical construct. Whereas body positivity promotes the celebration of bodies of all sizes, fat acceptance focuses on challenging the structural discrimination faced by fat people specifically (Morris, 2019).

There are several existing measures of antifat bias, which assess the respondent's negative attitudes and beliefs about fat people (e.g., fat people are lazy; fat bodies are disgusting; and fatness is a personal failing). A lack of antifat biases is a core dimension of fat acceptance. Indeed, actively unlearning one's antifat attitudes is an essential task for activists of all sizes. However, measures of antifat bias alone do not capture the entirety of the fat acceptance construct. Highly fat-accepting people should also endorse affirming attitudes and beliefs about fatness and engage in fat activism. Thus, we designed our scale to capture both the absence of antifat biases and the presence of fat-accepting beliefs, attitudes, and behaviors. Moreover, previous antifat bias measures failed to adequately capture several biases that are commonly opposed by fat acceptance activists. For example, previous measures did not assess stigmatizing beliefs about the health of fat people or interpersonal reactions to fat people in detail. Thus, we sought to improve upon previous measures by thoroughly assessing a variety of antifat biases.

To the best of our knowledge, the only published measure of fat acceptance was created for McKinley (2004) study of fat women activists. The scale consists of one item with responses ranging from 1 to 5 (1 = *I think being fat is unhealthy and/or unattractive and I don't know why anyone who is fat would not want to change*; 5 = *I think fat people don't need to change their body size and I am publicly committed to changing cultural attitudes towards fat people*; McKinley, 2004). Although measuring fat acceptance quantitatively was an important innovation, a single-item scale is highly vulnerable to random measurement error (Price, 2017). In addition, the scale conflates several potentially distinct components of fat activism, including beliefs (i.e., fat people should change their size), attitudes (i.e., fatness is unattractive), and actions (i.e., changing cultural biases about fat people).

## Present Studies

The purpose of the following studies was to develop the first multi-item measure of fat acceptance (i.e., the Fat Acceptance Scale;

FAS). We sought to measure agreement with the underlying principles of the fat acceptance movement, rather than identification with the movement per se, given that the organized fat acceptance movement is still relatively unfamiliar to most people (Eckert, 2020). In Study 1, we report the results of an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) undertaken with a sample of undergraduate students. In Study 2, the incremental validity and test–retest reliability of the new FAS are investigated among a second sample of undergraduate students. In Study 3, the incremental validity of the FAS is examined among health service psychology doctoral students.

## Study 1: Factor Structure, Internal Reliability, and Construct Validity

In Study 1, we first developed the item pool for the FAS. We then performed an EFA on the items using a random subsample of data. We believed that an exploratory approach was appropriate, because no widely accepted conceptual model of fat acceptance exists, and we were uncertain about the factor structure of the construct. Next, we conducted a CFA on the remaining data to verify the factor structure indicated by the EFA. Finally, with the entire sample, we investigated the construct validity of the resulting measure. An undergraduate sample was used, because it offered a convenient means of acquiring sufficient sample size and because we had no reason to believe that the factor structure of the FAS would differ in a broader community sample.

Construct validity was assessed by examining whether the new measure's subscales were negatively correlated with a validated measure of antifat attitudes. In addition, we expected associations between several demographic variables and FAS scores. First, we hypothesized that women would score higher than men, given that qualitative research suggests that women are more likely than men to be involved in the fat acceptance movement (Afful & Ricciardelli, 2015). We also hypothesized that conservative political identity would be negatively associated with FAS scores, since self-identification as politically conservative has been shown to be associated with antifat bias (Crandall & Biernat, 1990). Finally, we hypothesized that participants' body mass index (BMI) would be positively associated with FAS scores, given that larger individuals would be more likely to have experienced the negative effects of sizeism, which can motivate participation in the fat acceptance movement (Striley & Hutchens, 2020).

### Method

#### Participants

The sample included 533 undergraduate students at a large Mid-Atlantic university, of whom 70.9% identified as women, 28.5% as men, and .6% as another gender identity. Regarding race, 54.5% identified as White, 21.1% as Asian, 10.3% as Black, 7.3% as multiracial, 5.6% as Hispanic or Latino, and 1.1% as another racial identity. Regarding sexual orientation, 88.3% of respondents identified as heterosexual and 11.7% as nonheterosexual (only heterosexual and nonheterosexual response options were provided, so more detailed sexual orientation data are not available). Participants' ages ranged from 18 to 55 ($M = 19.88$, $SD = 2.39$) and BMIs[2] ranged from 14.65 to 43.93 ($M = 23.23$, $SD = 4.07$). Regarding

socioeconomic class, 1.5% of respondents identified their families as poor, 10.3% as working class, 42.1% as middle class, 41.9% as upper middle class, and 4.2% as upper class.

#### Procedure

Data were collected as part of the university's Introduction to Psychology mass survey. Measures from several research teams' studies are combined into a single survey and distributed to all undergraduate students taking Introduction to Psychology, who can complete the survey for course credit. The measures for the present study were included in the Spring 2019 mass survey, which included a consent form and 12 measures, and were administered through Qualtrics survey software. In total, the survey took participants approximately 45 min to complete. Approval for the individual study and the mas survey were obtained from the Institutional Review Board.

To clean the data, we first examined the date, time, origin, and student identification number for all responses, and found no evidence of duplicate surveys. Next, we removed data from 34 respondents who discontinued the survey before completing the first survey measure. Finally, to identify careless responders, we examined responses to two attention check items (e.g., "Please choose 'Disagree' to indicate that you are paying attention"). We removed data belonging to 36 respondents who responded incorrectly to one or both items. The sample described above includes all respondents who remained after completing these steps.

#### Measure

**Fat Acceptance.** The development of the item pool for the new measure was guided by a review of the quantitative, qualitative, theoretical, and popular literature on fat acceptance. Items were generated by the first author, a doctoral student in counseling psychology. The second author, a faculty member in counseling psychology, reviewed the items and made edits to improve item clarity and relevance. The items were also reviewed by three doctoral students in counseling psychology to assess for clarity, inclusiveness, and face validity. During the item generation process, we sought to include items that adequately represented the key elements of fat acceptance identified by our literature review, as well as an approximately equal proportion of beliefs, attitudes, and behaviors and positively and negatively keyed items.

Items were selected for inclusion in the final pool using iterative pilot testing (Price, 2017). The goal was to develop a pool of between 50 and 75 items to provide an adequate number for EFA (Boateng et al., 2018). A pilot sample of 56 undergraduate students (63.6% women, 36.4% men; 56.4% White, 18.2% Asian, 18.2% Black, 5.5% multiracial, and 1.8% other racial identity) taking introductory psychology courses completed the original item pool for course credit. Parallel analysis and EFA were performed. Items were retained in the pool if (a) their strongest pattern coefficient was at least .40 in absolute magnitude and (b) the difference between the absolute values of their two strongest pattern coefficients was at least .20. In addition, items with very restricted

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[2] While we acknowledge the BMI classification system's flaws (see Bacon & Aphramor, 2011), height and weight are among the only reliable self-report measures of body size.

ranges were discarded (Boateng et al., 2018). After discarding items, more items were developed by the first author, reviewed by the second author, and further reviewed by three doctoral students in counseling psychology. This process was repeated with additional pilot samples of 90 students (85.6% women, 14.4% men; 56.7% White, 16.7% Asian, 12.2% multiracial, 6.7% Black, 4.4% Hispanic or Latino, and 3.3% other racial identity) and 365 students (68.1% women, 30.6% men, 1.3% another gender identity; 60.3% White, 19.5% Asian, 8.6% Black, 5.8% Hispanic or Latino, 4.3% multiracial, and 1.6% another racial identity). At the end of this process, the coauthors were satisfied that the resulting item pool was a clear and thorough representation of the fat acceptance construct. Full demographic information about the pilot samples is available in an online supplement to this article.

Sixty-five items were included in the pool for the final EFA. Participants were instructed, "For each of the following items, please mark the response that best reflects your attitudes. Please be as honest as possible—indicate how you really feel now, not how you think you should feel. There is no need to think too much about any one question." Participants rated each item on a 6-point scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *disagree somewhat*, 4 = *agree somewhat*, 5 = *agree*, 6 = *agree strongly*). All 65 items are included in the online supplemental.

**Antifat Attitudes.** Participants also completed the Antifat Attitudes Scale (Crandall, 1994). High scores on the seven-item Dislike subscale (e.g., "I really don't like fat people much") indicate dislike for fat people. High scores on the three-item Willpower scale (e.g., "Some people are fat because they have no willpower") indicate a belief that fatness results from poor self-control. Items are rated on a scale from 1 (*completely disagree*) to 9 (*completely agree*). Among college students, scores on the Dislike (Cronbach's $\alpha$ = .84) and Willpower (Cronbach's $\alpha$ = .66) subscales demonstrated acceptable reliability, and subscale scores were correlated with several other types of prejudice (Crandall, 1994). In the present sample, McDonald's $\Omega$s were .83 and .76 for the Dislike and Willpower subscales. McDonald's $\Omega$ is a measure of internal consistency that produces less biased estimates of reliability than Cronbach's $\alpha$ (Dunn et al., 2014).

**Conservative Political Identity.** Participants were also asked to identify their "political views related to social issues" and their "political views related to economic issues" on a 7-point scale from 1 (*very liberal*) to 7 (*very conservative*). These items were averaged to produce a total political identity score. Among a group of American adults, individuals who self-identified as very conservative in terms of both economic and social issues exhibited more prejudice towards liberal groups (Crawford et al., 2017). In the current sample, the reliability of scores was supported by a Spearman–Brown coefficient of .71.

## Results

The sample was randomly split into two subsamples for the EFA ($n$ = 266) and CFA ($n$ = 267). Less than 1% of the data for each of the fat acceptance items was missing, with most missing data resulting from occasional skipped items. Little's Missing Completely at Random (MCAR) Test revealed that data were not missing completely at random. Missing data were managed using the Full Information Maximum Likelihood (FIML) approach, which performs similar to imputation-based methods (Lee & Shi, 2021).

Analyses were performed in SPSS Statistics 27.0 and MPlus 8.0 (IBM Corp, 2020; Muthén & Muthén, 1998–2017).

### Factor Analyses

**Preliminary Analyses.** Using data from the EFA subsample, the Kaiser–Meyer–Olkin index (.92) suggested that the correlation matrix was appropriate for factor analysis. Distributions of scores for all 65 items were normal according to Hair et al. (2010) criteria for skewness (±2) and kurtosis (±7). We used the scree plot and parallel analysis to determine the likely number of factors to extract (Worthington & Whittaker, 2006). The scree plot indicated that three or five factors should be extracted. We executed parallel analysis using an SPSS macro developed by O'Connor (2000) with the principal components option. Results suggested that five factors should be extracted. Thus, both three- and five-factor solutions were examined.

To choose between solutions, we extracted three and five factors using both maximum likelihood factor analysis and principal axis factoring. We then examined the respective factor loadings (i.e., pattern coefficients) after applying three oblique rotations: geomin, promax, and oblimin. Oblique rotations were preferred, because we expected the factors to be correlated with one another, given that all items were designed to reflect the general construct of fat acceptance. We evaluated all solutions based on the following criteria: (a) simple structure, meaning that we preferred solutions minimizing items with high cross-loadings (i.e., a difference between the two highest pattern coefficients of less than .20) and (b) conceptual interpretation, meaning that we preferred solutions with a clear theme among the items that loaded strongly onto each factor (Worthington & Whittaker, 2006). The solution with the simplest structure and clearest conceptual interpretation was the three-factor solution extracted using maximum likelihood analysis with an oblimin rotation; this solution was adopted.

**Factor Interpretation and Item Pool Reduction.** We used pattern coefficients to interpret the factors in our three-factor solution. The factors included *Fat Activism* (actions, beliefs, and attitudes that signal an awareness of pervasive sizeism and a commitment to eliminating it), *Health Beliefs* (beliefs about the causes and health consequences of fatness), and *Interpersonal Respect* (the tendency to treat fat people with respect). We next decided which items to retain for each factor. Only those items that met the following criteria were retained: (a) their strongest pattern coefficient was at least .40 in absolute magnitude and (b) the difference between the absolute values of their two strongest pattern coefficients was at least .20. We also retained a maximum of ten items per factor to develop a scale of a reasonable length. If more than ten items met our criteria, the items with the ten strongest pattern coefficients were retained. In total, 26 items were retained (10 loading onto Factor 1, 10 onto Factor 2, and 6 onto Factor 3). These items and their associated pattern coefficients are featured in Table 1.

Because dropping items can modify the factor structure, we repeated the EFA with the reduced item pool (Worthington & Whittaker, 2006). The three-factor solution accounted for 48.31% of the variance in the retained 26 items. Eigenvalues for unrotated Factors 1 through 3 were 9.75, 2.57, and 1.77. After applying an oblimin rotation, the factors closely resembled the three factors described above and all items fulfilled the retention requirements

described above. Based on these findings, we retained these 26 items in the final version of the FAS.

**Confirmatory Factor Analysis.**  We conducted a CFA with the second subsample to examine the degree to which the proposed factor structure would fit data from a different sample. In this model, the retained 26 items were constrained to load only onto the latent factor on which they had the highest factor loading in the EFA, and the three latent factors were allowed to correlate. Robust fit statistics were evaluated using Hu and Bentler (1999) guidelines: CFI > .95, SRMR <.08, and RMSEA < .06. Fit statistics were as follows: CFI = .94, SRMR = .05, RMSEA = .05, and RMSEA 90% CI [.04, .06], indicating relatively good fit. Standardized factor loadings are presented in Table 1. All factor loadings were significant at the $p < .05$ level. This model is conceptually and statistically equivalent to a second-order factor model, suggesting that it is appropriate to average the three FAS subscales to produce a total score (Bollen, 1989).

**Descriptive Statistics and Internal Reliability.**  We computed subscale scores by averaging scores on the items for each subscale, reverse scoring as needed. A total FAS score was computed by averaging scores on the three subscales. Means, standard deviations, and McDonald's omegas for the EFA and CFA subsamples are

presented in Table 2. Coefficient omegas were acceptable for research purposes, ranging from .81 to .94. Subscale distributions were relatively normal in the full sample (skewness, kurtosis): Fat Activism (−.45, −.02), Health Beliefs (.31, .31), Interpersonal Respect (−.74, .20), and FAS total score (−.22, .26).

**Construct Validity.**  Correlations between the FAS and other study variables are presented in Table 3. As hypothesized, all three FAS subscales and the FAS total score were negatively correlated with the Dislike and Willpower subscales of the Antifat Attitudes Scale and with conservative political identity. Contrary to our expectations, only the Fat Activism subscale was associated with BMI. As expected, women scored significantly higher than men on all FAS subscales (see Table 4 for the results of independent samples $t$ tests).

## Study 2: Incremental Validity and Test–Retest Reliability

Because the construct of fat acceptance comprises not only the absence of antifat biases but also the presence of fat-affirming attitudes, beliefs, and behaviors, a high-quality measure of fat acceptance should be able to predict participants' reactions to fat people after accounting for antifat attitudes. Thus, Study 2 aimed to

**Table 1**
*Factor Loadings for Retained FAS Items (Study 1)*

| Item | EFA factor loadings | | | CFA factor loading (standardized) |
| --- | --- | --- | --- | --- |
| | 1 | 2 | 3 | |
| 1. I would be more likely to work for a company that has positive attitudes about fat people. | **0.79** | −0.06 | 0.15 | 0.80 |
| 2. I would be more likely to watch a movie that included positive depictions of fat people. | **0.77** | −0.02 | 0.03 | 0.80 |
| 3. I would be more likely to shop at a store that uses positive images of fat people in its advertising. | **0.76** | −0.05 | 0.10 | 0.81 |
| 4. Society should encourage more positive attitudes towards fat people. | **0.72** | 0.10 | 0.03 | 0.72 |
| 5. I feel happy when I see examples of fat people celebrating their bodies. | **0.70** | 0.07 | 0.02 | 0.75 |
| 6. I make a point to expose myself to media sources with an explicitly positive view of fat people (e.g., blogs, social media accounts). | **0.68** | 0.02 | 0.01 | 0.61 |
| 7. It is unfair that some furniture in public spaces is too small for fat people to fit into (e.g., booths in restaurants, chairs in lecture halls). | **0.67** | 0.08 | 0.01 | 0.69 |
| 8. I make an effort to encourage my friends and family members to have more positive attitudes about fat people. | **0.66** | 0.02 | 0.13 | 0.71 |
| 9. Fat people experience unfair discrimination when dating. | **0.65** | 0.01 | 0.08 | 0.61 |
| 10. Our society makes fat people feel too much shame about their size. | **0.64** | 0.12 | 0.07 | 0.76 |
| 11. Generally speaking, fat people tend to eat a lot of junk food. (R) | 0.04 | **−0.71** | −0.19 | −0.76 |
| 12. Compared to others, fat people usually have unhealthy diets. (R) | 0.07 | **−0.69** | −0.15 | −0.78 |
| 13. Fat people are usually inactive. (R) | −0.00 | **−0.67** | −0.23 | −0.74 |
| 14. Most fat people could lose weight if they had more willpower. (R) | 0.07 | **−0.66** | −0.04 | −0.60 |
| 15. As a society, it is important that we encourage overweight people to lose weight. (R) | −0.17 | **−0.63** | −0.13 | −0.53 |
| 16. Fat people tend to be lazier than thin people. (R) | −0.05 | **−0.62** | −0.19 | −0.72 |
| 17. People are fat, because they eat too much. (R) | 0.04 | **−0.71** | −0.19 | −0.70 |
| 18. Fat people usually have health problems like high blood pressure. (R) | 0.06 | **−0.59** | −0.02 | −0.50 |
| 19. Many fat people enjoy exercising. | 0.15 | **0.55** | 0.05 | 0.51 |
| 20. Most fat people dislike their bodies. (R) | 0.14 | **−0.54** | −0.05 | −0.52 |
| 21. It makes me angry when a fat person is in a position of authority over me (e.g., boss, professor). (R) | −0.06 | −0.13 | **−0.63** | −0.61 |
| 22. I would be just as happy to make friends with a fat person as with a thin one. | 0.20 | 0.09 | **0.56** | 0.69 |
| 23. When I see a fat person, I often feel disgusted. (R) | −0.23 | −0.19 | **−0.54** | −0.67 |
| 24. Generally speaking, I think a thin person would be a better boss than a fat one. (R) | −0.08 | −0.32 | **−0.53** | −0.69 |
| 25. If I knew a colleague had gained a significant amount of weight, I would lose some respect for him or her. (R) | −0.07 | −0.27 | **−0.52** | −0.71 |
| 26. I try to be respectful of fat people I encounter in public. | 0.25 | −0.12 | **0.45** | 0.48 |

*Note.*  Only items retained in the final scale are included above. Loadings in bold indicate the strongest loading (i.e., pattern coefficient) for each item. 1 = Fat Activism; 2 = Health Beliefs; 3 = Interpersonal Respect. FAS = Fat Acceptance Scale; EFA = Exploratory Factor Analysis; CFA = Confirmatory Factor Analysis; (R) = Item should be reverse scored when calculating subscale scores.

**Table 2**
*Descriptive Statistics and Reliability Estimates (Studies 1, 2, and 3)*

| | | Study 1 | | | | | | Study 2 | | | | Study 3 (N = 156) | | |
| | | Exploratory factor analysis sample (N = 266) | | | Confirmatory factor analysis sample (N = 267) | | | Time 1 sample (N = 291) | | | Time 2 sample (N = 47) | | | |
| FAS subscale | Possible range | Ω | M | SD | Ω | M | SD | Ω | M | SD | Test–retest r | Ω | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fat activism | 1.0–6.0 | .92 | 4.09 | 1.00 | .92 | 4.08 | .95 | .91 | 4.12 | .92 | .91* | .89 | 4.91 | .75 |
| Health beliefs | 1.0–6.0 | .88 | 3.61 | .78 | .87 | 3.49 | .74 | .85 | 3.48 | .72 | .87* | .92 | 4.43 | .88 |
| Interpersonal respect | 1.0–6.0 | .82 | 5.12 | .69 | .81 | 5.07 | .69 | .80 | 5.16 | .64 | .76* | .73 | 5.42 | .50 |
| Full scale | 1.0–6.0 | .93 | 4.27 | .68 | .94 | 4.21 | .67 | .92 | 4.26 | .63 | .92* | .94 | 4.91 | .60 |

*Note.* FAS = Fat Acceptance Scale.
* $p < .05$.

examine the incremental validity of the FAS as compared to the Fat Phobia Scale (Bacon et al., 2001) using three vignettes about fictional fat women. The test–retest reliability of the FAS over a 4-week period was also investigated.

## Method

### Participants

The sample included 291 undergraduate students at the same university, of whom 75.3% identified as women, 24.4% as men, and .3% as another gender identity. Regarding race, 52.9% identified as White, 19.9% as Asian, 13.1% as Black, 9.6% as multiracial, 3.1% as Hispanic or Latino, and 1.4% as another racial identity. Regarding sexual orientation, 86.9% of participants identified as heterosexual and 13.1% identified as nonheterosexual. Participants' ages ranged from 18 to 55 ($M = 19.50$, $SD = 2.51$) and BMIs ranged from 16.30 to 42.51 ($M = 23.08$, $SD = 3.70$). In terms of class, 2.0% of the participants identified their families as poor, 11.4% as working class, 35.6% as middle class, 45.0% as upper middle class, and 5.9% as upper class.

### Procedure

**Time 1.** Approval for this study was obtained from the Institutional Review Board. Participants were students in undergraduate psychology courses who completed the survey for course credit. First, participants completed an online consent form, the newly developed FAS subscales, and the Fat Phobia Scale-Revised (Bacon et al., 2001). Next, participants were randomly assigned (via the Qualtrics platform's block randomization feature) to read one of the three vignettes about a fat woman ($n$ = 98, 97, 96, respectively[3]). After reading their assigned vignette, participants completed measures of affinity, respect, and sympathy for the target woman. The vignettes were developed by the authors based on a review of the literature on fat acceptance, including other studies using vignettes (e.g., Murakami & Latner, 2015). They were then reviewed for clarity and relevance by three doctoral students in counseling psychology.

The fictional woman in the three vignettes was described as follows: "Based on her height and weight, [name] qualifies as obese." Names were selected from the 20 most popular names for 30-year-old women in the U.S. We featured fat women in our vignettes for two reasons. First, we believed that our vignettes would

be more realistic if the targets were women, given evidence that (a) fat women tend to experience more discrimination than fat men of the same weight, including in the contexts described in the vignettes (i.e., dating and employment; Boyes & Latner, 2009; Roehling et al., 2007) and (b) women are more likely than men to be involved in the fat acceptance movement (Afful & Ricciardelli, 2015). Second, participants only viewed one vignette to keep the study to a reasonable length. As a result, we kept the gender of the targets stable to avoid producing gender effects. In accordance with previous research, the races of the targets were not specified (Murakami & Latner, 2015).

In Vignette 1, "Emily" was described as a typical fat acceptance advocate. For example, she "runs an Instagram page aimed at helping other fat women accept and enjoy their bodies." It was hypothesized that highly fat-accepting participants would identify with Emily's liberatory approach to her body. Thus, we hypothesized that FAS scores would predict affinity and respect for Emily, even controlling for antifat attitudes. However, we hypothesized that FAS scores would be unrelated to sympathy for Emily, since she was not described as experiencing a negative event. In Vignette 2, "Jen" was described as an accomplished professional who experienced weight-based employment discrimination and pursued legal action. Like the previous vignette, we hypothesized that scores on the FAS would predict affinity and respect for Jen. However, we also hypothesized that FAS scores would be positively related to sympathy for Jen, since highly fat-accepting participants would recognize Jen's experience with sizeist discrimination as legitimate and harmful. Finally, in Vignette 3, "Amanda" was described as experiencing weight-based dating discrimination and attempting to lose weight in response. Because Amanda experienced sizeist discrimination, we hypothesized that FAS scores would predict sympathy for her. However, since she also engaged in behaviors that are contrary to the values of the fat acceptance movement (i.e., attempting to lose weight to avoid discrimination), we believed that fat-accepting participants would not view her as an in-group member. Thus, we hypothesized that FAS scores would be unrelated to affinity or respect for Amanda. Vignettes can be viewed in their entirety in the online supplemental to this article.

**Time 2.** Four weeks after completing the Time 1 measures, participants who had consented to be contacted for follow-up

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[3] Participants in the three groups did not differ significantly in terms of demographic characteristics, FAS scores, or anti-fat attitudes.

**Table 3**
*Correlations Between FAS Subscales and Demographic Variables (Study 1)*

| Scale | Range | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| 1. FAS—fat activism | 1.00–6.00 | — | | | | | | | |
| 2. FAS—health beliefs | 1.40–6.00 | .54* | — | | | | | | |
| 3. FAS—interpersonal respect | 2.50–6.00 | .56* | .50* | — | | | | | |
| 4. FAS—total score | 1.83–6.00 | .87* | .81* | .80* | — | | | | |
| 5. Antifat attitudes—dislike | 1.00–8.14 | −.46* | −.42* | −.70* | −.62* | — | | | |
| 6. Antifat attitudes—willpower | 1.00–9.00 | −.53* | −.69* | −.41* | −.66* | .50* | — | | |
| 7. Body Mass Index (BMI) | 14.56–43.93 | .10* | .01 | .08 | .09 | −.17* | −.02 | — | |
| 8. Political conservatism | 1.00–5.00 | −.36* | −.27* | −.26* | −.40* | .18* | .23* | −.01 | — |

*Note.* Correlations are based on the entire Study 1 sample. FAS = Fat Acceptance Scale.
* $p < .05$.

($n = 115$; 39.5% of the original sample) received an email asking them to complete the FAS again. Forty-eight (16.5%) of the original participants participated at Time 2. Most participants received course credit for completing the retest measure (some participants no longer needed credit). Participants who completed the Time 2 survey did not differ from nonparticipants in terms of demographic characteristics or antifat attitudes (measured at Time 1). However, students who participated at Time 2 scored significantly higher than nonparticipants on the Fat Activism subscale at Time 1, $t(284) = 2.60$, $p < .05$.

Data were cleaned using the same process described in Study 1. At Time 1, nine responses were removed for discontinuing the survey before completing the first measure and 17 responses were removed due to failed attention checks. At Time 2, 19 responses were removed for early discontinuation and one response was removed due to failed attention checks. At Time 1, .9% of data points were missing. At Time 2, 2.1% of data points were missing. Little's MCAR Test revealed that data from both timepoints were missing completely at random.

### Measure

In addition to the FAS, participants completed the following measures at Time 1.

**Antifat Attitudes.** Participants completed the Fat Phobia Scale-Revised (Bacon et al., 2001). The measure consists of 14 semantic differential pairs (e.g., *lazy . . . industrious*), which are rated on a 5-point scale. Participants are asked to choose the option which best describes their "feelings towards fat or obese people." High scores indicate a high degree of antifat attitudes. Scores

demonstrated acceptable reliability with adults recruited from body image and weight loss groups, health organizations, and college courses ($\alpha = .87$; Bacon et al., 2001). In the same study, scores on the measure decreased following participation in a treatment program designed to improve body image. In the present study, McDonald's $\Omega = .88$ at Time 1.

**Affinity.** As a measure of participants' liking for their assigned vignette's target, participants completed the affinity measure described by Moreland and Beach (1992). This measure comprises three items, which were edited slightly to apply to the vignettes (e.g., "To what extent would you enjoy spending time with [name]?"). Items are rated on a scale from 1 to 100; higher scores indicate a higher degree of affinity. In previous research with college students, scores on the measure were associated with previous exposure to a target, demonstrating construct validity. In the present study, McDonald's $\Omega = .93$, .93, and .89 for the three vignettes.

**Respect.** Participants also completed Wojciszke et al. (2009) measure of respect about their vignette's target. The measure comprises three items (e.g., "[name] could serve as an example to others."), which are rated on a scale from 1 (*definitely disagree*) to 5 (*definitely agree*). Higher scores indicate a higher degree of respect. Scores demonstrated acceptable reliability in a sample of Polish adults ($\alpha = .84$) and were associated with a measure of capability (Wojciszke et al., 2009). In the present study, McDonald's $\Omega = .85$, .86, and .71.

**Sympathy.** Participants also completed Haegerich and Bottoms (2000) measure of sympathy regarding the vignette. The measure comprises three items (e.g., "I feel sorry for [name]"), which participants rate from 1 to 100 on an agreement scale. Higher scores indicate a higher degree of sympathy for the target. College students' scores on the measure have demonstrated acceptable reliability (Cronbach's $\alpha = .91$) and were related to a fictional defendant's characteristics in a vignette. In the present study, McDonald's $\Omega = .73$, .80, and .81.

### Results

Descriptive statistics, McDonald's omegas, and test–retest coefficients for the FAS are available in Table 2. Coefficient omegas for the FAS subscales and the FAS total score ranged from .80 to .92, indicating an acceptable degree of internal consistency. Four-week test–retest correlation coefficients were .91 (Fat Activism), .87 (Health Beliefs), .76 (Interpersonal Respect), and .92 (FAS total score), indicating a moderate-to-high degree of stability over a

**Table 4**
*Gender Comparisons for FAS Subscale Scores (Study 1)*

| FAS subscale | Women, M (SD) | Men, M (SD) | t | df | Cohen's d |
|---|---|---|---|---|---|
| Fat activism | 4.31 | 3.49 | 8.73* | 231.59 | 0.92 |
| Health beliefs | 3.63 | 3.30 | 5.03* | 329.58 | 0.45 |
| Interpersonal respect | 5.17 | 4.89 | 4.17* | 521 | 0.40 |
| Total score | 4.37 | 3.89 | 7.87* | 528 | 0.76 |

*Note.* Analyses are based on the entire Study 1 sample. FAS = Fat Acceptance Scale.
* $p < .05$.

4-week period. Correlations among study variables are available in Table 5.

To examine the FAS's incremental validity over and above the antifat attitudes measure, we conducted hierarchical regression analyses. Each subsample of participants assigned to the three vignettes was analyzed separately. Each outcome (affinity, respect, and sympathy) was included as the dependent variable in a regression model. For each model, antifat attitudes were entered in stage one, and the three FAS subscales were entered in stage two. Prior to these analyses, the variance inflation factors (VIFs) for each predictor were examined. The highest VIF was 2.29, suggesting that multicollinearity was not a signficant concern (Hair et al., 2010). Results are provided in Table 6. The $\Delta R^2$ values indicate that the FAS subscales accounted for unique variance in participants' reactions in five of the nine regression models. In these models, the subscales collectively accounted for an additional 11–41% of the variance in participants' reactions, above and beyond the variance explained by antifat attitudes.

## Study 3: Incremental Validity Among Psychology Trainees

Study 3 was designed to investigate the reliability, validity, and clinical utility of the FAS in a sample of health service psychology doctoral students. This study examined the associations between participants' FAS scores and their reactions to a fictional fat therapy client. Research shows that weight bias is common among psychotherapists (Puhl et al., 2014), and fat individuals report encountering sizeism in therapy (Akoury et al., 2019). If the FAS predicts meaningful differences in clinicians' reactions to and approaches to therapy with fat clients, it could be used as part of interventions designed to improve weight-related cultural competence.

We hypothesized that, compared to participants with low scores on the FAS, participants with higher scores would report the following about the fictional fat client: (a) better functioning, due to a reduced tendency to pathologize fat people; (b) a better anticipated working alliance, due to a commitment to treating fat individuals fairly; and (c) a lower likelihood of engaging in interventions aimed at weight loss. We also expected that FAS scores

would be positively associated with self-reported support for the fat acceptance movement and BMI and unrelated to scores on an impression management measure.

## Method

### Participants

The sample included 156 doctoral students in counseling ($n = 58$; 37.2%), clinical ($n = 95$; 60.9%), and combined ($n = 3$; 1.9%) psychology programs in the U.S. Of these, 16.0% were in their first year in the program, 16.0% second year, 12.2% third year, 25% fourth year, and 30.8% fifth year or above. Participants identified as women (76.3%), men (15.4%), nonbinary (6.4%), and other gender identities (1.9%); as White (66.7%), multiracial (12.2%), Asian (7.7%), Black (7.1%), Hispanic or Latino (4.5%), and other racial identities (1.8%); and as heterosexual (59.0%), bisexual (13.5%), queer (11.5%), gay (7.1%), lesbian (5.1%), and other sexual orientation identities (3.8%). Participants' ages ranged from 22 to 54 ($M = 28.92$; $SD = 5.43$) and BMIs ranged from 17.47 to 49.77 ($M = 26.54$; $SD = 6.51$). Regarding income, 32.4% of participants reported that their household income was less than $25,000; 37.0% between $25,000 and $65,000; 15.5% between $65,000 and $100,000; and 14.9% more than $100,000.

### Procedure

Approval for the study was obtained from the university's Institutional Review Board. To recruit participants, the authors sent emails to the training directors of health service psychology doctoral programs, asking them to forward the study advertisement to students in their programs. Participants were also recruited through listservs and social media forums that attract doctoral students in psychology. To conceal the purpose of the study, recruitment materials described it as a study on "trainees' clinical judgements." We chose to conceal the purpose of the study, so that the sample would not be biased towards participants interested in fat acceptance and so that their judgements of the clinical vignette would be as unaffected by demand characteristics as possible.

**Table 5**
*Correlations Between FAS Subscales and Variables of Interest (Study 2)*

| Scale | Range | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. FAS—fat activism | 1.40–6.00 | — | | | | |
| 2. FAS—health beliefs | 1.50–6.00 | .56* | — | | | |
| 3. FAS—respect | 3.17–6.00 | .54* | .46* | — | | |
| 4. FAS—total score | 2.37–6.00 | .88* | .81* | .77* | — | |
| 5. Fat Phobia Scale—revised | 1.57–4.86 | −.45* | −.55* | −.41* | −.56* | — |
| 6. Vignette 1—affinity | 40.00–100.00 | .52* | .25* | .49* | .50* | −.11 |
| 7. Vignette 1—respect | 2.00–5.00 | .56* | .40* | .41* | .56* | −.03 |
| 8. Vignette 1—sympathy | 0.00–100.00 | −.13 | −.15 | −.27* | −.21* | .09 |
| 9. Vignette 2—affinity | 20.00–100.00 | .55* | .34* | .49* | .54* | −.44* |
| 10. Vignette 2—respect | 2.00–5.00 | .51* | .31* | .50* | .51* | −.39* |
| 11. Vignette 2—sympathy | 17.00–100.00 | .35* | .12 | .27* | .30* | −.17 |
| 12. Vignette 3—affinity | 28.25–100.00 | .27* | .06 | .33* | .31* | −.28* |
| 13. Vignette 3—respect | 1.00–5.00 | .09 | −.01 | .22* | .14 | −.15 |
| 14. Vignette 3—sympathy | 17.00–100.00 | .09 | −.27* | −.05 | −.05 | .06 |

*Note.* FAS = Fat Acceptance Scale. Correlations between the FAS and the Fat Phobia Scale-Revised are based on the entire Study 2 sample. Correlations involving the vignettes are based on the subsample of participants assigned to the relevant vignette only.
* $p < .05$.

**Table 6**

*Hierarchical Regression Results for FAS Scores and Antifat Attitudes Predicting Vignette Scores (Study 2)*

| Predictors | Affinity, β (SE) | Respect, β (SE) | Sympathy, β (SE) |
|---|---|---|---|
| Vignette 1—Emily | | | |
| Bacon—antifat attitudes | 0.12 (0.10) | 0.32* (0.13) | −0.02 (0.09) |
| FAS—fat activism | 0.48* (0.09) | 0.46* (0.12) | 0.08 (0.13) |
| FAS—health beliefs | −0.16 (0.11) | 0.19* (0.09) | −0.12 (0.14) |
| FAS—interpersonal respect | 0.35* (0.11) | 0.20 (0.12) | −0.27* (0.09) |
| $R^2$ | 0.37* | 0.41* | 0.08 |
| $\Delta R^2$ | 0.36* | 0.41* | 0.08 |
| Vignette 2—Jen | | | |
| Bacon—antifat attitudes | −0.16 (0.10) | −0.10 (0.12) | 0.06 (0.12) |
| FAS—fat activism | 0.39* (0.15) | 0.32* (0.14) | 0.34 (0.18) |
| FAS—health beliefs | −0.10 (0.09) | −0.12 (0.09) | −0.07 (0.12) |
| FAS—interpersonal respect | 0.17 (0.15) | 0.28* (0.14) | 0.11 (0.16) |
| $R^2$ | 0.33* | 0.31* | 0.13 |
| $\Delta R^2$ | 0.15* | 0.17* | 0.10 |
| Vignette 3—Amanda | | | |
| Bacon—antifat attitudes | −0.23* (0.10) | −0.18 (0.11) | 0.02 (0.13) |
| FAS—fat activism | 0.16 (0.14) | 0.16 (0.12) | 0.22 (0.12) |
| FAS—health beliefs | −0.21 (0.11) | −0.22* (0.11) | −0.35* (0.13) |
| FAS—interpersonal respect | 0.28* (0.13) | 0.18 (0.11) | −0.01 (0.10) |
| $R^2$ | 0.18* | 0.11 | 0.11 |
| $\Delta R^2$ | 0.11* | 0.07 | 0.10 |

*Note.* βs = standardized regression coefficients; FAS = Fat Acceptance Scale; SEs = standard errors. $R^2$ represents the regression model including all four predictors. $\Delta R^2$ represents the change in $R^2$ attributable to the addition of the FAS subscales to the model.
* $p < .05$.

Participants completed the approximately 20-min survey through Qualtrics. The order of the survey elements was designed to disguise the primary focus of the study until after participants had completed the main clinical task. Participants first completed an online consent form. Next, they read a warm-up clinical vignette, in which the client was a 32-year-old, bisexual, Hispanic woman whose presenting issues were career and relationship difficulties (see Mohr et al., 2009). Participants then completed measures of the client's overall functioning, their anticipated working alliance with the client, and their imagined intervention approach. This case served to strengthen the impression that the study was about clinical judgments in general.

Next, participants read the main clinical vignette, which described a 19-year-old, heterosexual, White woman ("Sarah") who was seeking therapy for problems in her relationship with her mother. According to the vignette, a central conflict in their relationship was that Sarah's mother "pester[ed] Sarah to lose weight" and offered frequent, unwanted weight loss advice. The client was described as "aware that her BMI qualifies her as obese, but ... [she was] happy with her body and h[ad] no interest in losing weight." A group of doctoral students in counseling psychology ($n = 14$) and doctoral-level psychotherapists ($n = 6$) rated the vignette on a scale from 1 (*not at all believable*) to 5 (*extremely believable*). The raters assessed the vignette to be highly believable ($M = 4.55$; $SD = .50$), suggesting that the vignette was suitable for research purposes. Both vignettes can be found in the online supplemental to this article.

After reading the main vignette, participants again completed measures of client functioning, working alliance, and intervention approach. They also completed an impression management measure, the FAS, the Fat Phobia Scale-Revised, and an item assessing support for the fat acceptance movement. Participants were then debriefed on the true purpose of the study and entered into a raffle to win one of four $25 gift cards, if desired.

## Measure

In addition to the FAS and Bacon et al. (2001) Fat Phobia Scale-Revised (described above), participants completed the following measures.

**Overall Functioning.** Client functioning was measured using the Global Assessment of Functioning (GAF; Hilsenroth et al., 2000). Participants rated the fictional client's "overall level of psychological functioning" on a scale from 0 (*lowest level of functioning*) to 100 (*highest level of functioning*), with anchors provided at 10-point increments. Research suggests that the GAF can be reliably scored by mental health clinicians (Hilsenroth et al., 2000) and clinician-assessed scores are associated with symptom burden (Startup et al., 2002).

**Working Alliance.** Participants' anticipated working alliance with the client was assessed using the therapist version of the Working Alliance Inventory-Short Revised (WAI-SR; Hatcher & Gillaspy, 2006). All three subscales (i.e., goals, tasks, and bond) were used. Participants rated four Goals items (e.g., "We would work towards mutually agreed upon goals"), four Tasks items (e.g., "We would agree on what is important for Sarah to work on"), and four Bond items (e.g., "I would appreciate Sarah as a person") on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). In previous research with adult client–therapist dyads, the three subscales demonstrated good reliability (Cronbach's α = .87, .85, .90 for goals, tasks, and bond, respectively), and scores were associated with a measure of client improvement (Hatcher & Gillaspy, 2006). In the present study, McDonald's Ω = .73, .75, .79, respectively.

**Intervention Approach.** Participants rated their likelihood of engaging in interventions aimed at changing five aspects of the Sarah's situation: her environment, her thoughts and feelings, her interactions, her behaviors, and her lifestyle habits. Each approach was rated on a scale from 1 (*extremely unlikely*) to 6 (*extremely likely*). This measurement strategy was used in previous research, which found that counselors' endorsement of intervention approaches differed based on a fictional client's presenting concern (Kernes & McWhirter, 2001). In the present study, the "lifestyle habits" intervention approach was added. This item was designed to subtly assess participants' likelihood of attempting to facilitate weight loss in therapy (Korp, 2010).

**Impression Management.** Given that participants might feel compelled to conceal antifat biases, we also measured impression management. The Impression Management subscale of the Balanced Inventory of Desirable Responding-Short Form (BIDR) was used (Hart et al., 2015). Participants rate eight items (e.g., "I never cover up my mistakes") on a scale from 1 (*not at all true*) to 7 (*very true*). Scores on the Impression Management subscale of the BIDR have demonstrated acceptable reliability in previous research with online volunteers (Cronbach's α = .72), and scores were associated with a validated measure of desirable responding (Hart et al., 2015). In the present study, reliability was adequate (McDonald's Ω = .76).

**Support for Fat Acceptance.** Participants were asked, "To what extent are you supportive of the fat acceptance movement (also known as fat empowerment, fat activism, and fat liberation)?." Participants rated their support on scale from 1 (*not at all supportive*) to 5 (*extremely supportive*). In the current sample, responses ranged from 1 to 5, with a mean of 3.82 and a standard deviation of .99.

## Results

Data were cleaned using the process described in Study 1. Fifty-six responses were removed due to discontinuation of the survey before completion of the first measure and two responses were removed due to failed attention checks. Less than .2% of data points were missing, and Little's MCAR Test indicated that data were missing completely at random.

Descriptive statistics for the FAS are available in Table 2. Coefficient omegas ranged from .73 to .94, indicating acceptable reliability. Means ranged from 4.43 (Health Beliefs) to 5.42 (Interpersonal Respect). The response ranges for the subscales (see Table 7) indicated restriction at the lower end of the range. Correlations between FAS subscales and other variables of interest are presented in Table 7. All the three FAS subscale scores and the total score were positively associated with self-reported support for the fat acceptance movement and with BMI, as expected. Scores on the impression management measure were unrelated to FAS scores.

To examine the incremental validity of the FAS subscales over and above antifat attitudes, we used the same hierarchical regression approach described in Study 2. The highest VIF in our models was 2.65, suggesting that multicollinearity was not a concern (Hair et al., 2010). Results are presented in Table 8. The $\Delta R^2$ values indicate that the FAS subscales collectively accounted for significant variance in participants' anticipated bond with Sarah and their likelihood of engaging in interventions aimed at changing her lifestyle habits, even controlling for antifat attitudes. Neither the FAS subscales nor antifat attitudes predicted significant variance in GAF scores or anticipated goal and task agreement.

One unanticipated finding was the significant negative association between the Health Beliefs subscale and the tasks measure when controlling for the other predictors (i.e., antifat attitudes, Fat Activism, and Interpersonal Respect). Given the nonsignificant zero-order correlation between Health Beliefs and tasks, we suspected a competitive mediation effect (also known as suppression; Zhao et al., 2010). In this case, competitive mediation would occur if (a) one or more of the other predictors were significant mediators of the association between Health Beliefs and tasks; (b) there was a significant direct effect of Health Beliefs on tasks; and (c) the mediated and direct paths had opposite signs. In such cases, the direct and mediated effects often cancel one another out, resulting in a nonsignificant zero-order correlation. We conducted exploratory regression analyses to inspect for competitive mediation (MacKinnon et al., 2000). Health Beliefs were entered as the independent variable, tasks as the dependent variable, and the three other predictors as mediators. First, the direct effect of Health Beliefs on tasks was examined. It was significant and negative

**Table 7**
*Correlations Between FAS Subscales and Variables of Interest (Study 3)*

| Scale | Range | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. FAS—fat activism | 2.60–6.00 | — | | | | | | | | | | | | |
| 2. FAS—health beliefs | 2.20–6.00 | .63* | — | | | | | | | | | | | |
| 3. FAS—interpersonal respect | 3.67–6.00 | .50* | .57* | — | | | | | | | | | | |
| 4. FAS—total score | 3.22–5.97 | .86* | .90* | .76* | — | | | | | | | | | |
| 5. Fat Phobia Scale—revised | 1.64–4.36 | −.56* | −.73* | −.55* | −.74* | — | | | | | | | | |
| 6. Support for fat acceptance | 1.00–5.00 | .71* | .56* | .41* | .68* | −.53* | — | | | | | | | |
| 7. Body Mass Index | 17.47–49.77 | .21* | .17* | .25* | .23* | −.27* | .21* | — | | | | | | |
| 8. Impression management | 1.50–6.75 | .02 | .12 | .10 | .10 | −.09 | −.01 | −.04 | — | | | | | |
| 9. Vignette—GAF | 30.00–100.00 | .14 | .02 | .09 | .09 | .02 | .17* | −.06 | −.09 | — | | | | |
| 10. Vignette—goals | 3.00–5.00 | .11 | .02 | .22* | .11 | −.01 | .13 | −.02 | .09 | .04 | — | | | |
| 11. Vignette—tasks | 2.75–5.00 | .16* | .02 | .21* | .13 | −.13 | .15 | .08 | −.02 | .06 | .64* | — | | |
| 12. Vignette—bond | 3.50–5.00 | .26* | .07 | .30* | .22* | −.13 | .20* | .08 | .16* | .05 | .61* | .60* | — | |
| 13. Vignette—lifestyle | 1.00–6.00 | −.30* | −.22* | −.15 | −.27* | .19* | −.23* | −.07 | −.04 | −.14 | .13 | .09 | .02 | — |

*Note.* FAS = Fat Acceptance Scale; GAF = Global Assessment of Functioning.
* $p < .05$.

**Table 8**
*Hierarchical Regression Results for FAS Scores and Antifat Attitudes Predicting Vignette Scores (Study 3)*

| Predictors | GAF, β (SE) | Goals, β (SE) | Tasks, β (SE) | Bond, β (SE) | Lifestyle intervention, β (SE) |
|---|---|---|---|---|---|
| Antifat attitudes | 0.16 (0.12) | 0.11 (0.14) | −0.14 (0.13) | −0.01 (0.12) | 0.01 (0.13) |
| FAS—fat activism | 0.21* (0.11) | 0.12 (0.10) | 0.17 (0.10) | 0.28* (0.11) | −0.28* (0.09) |
| FAS—health beliefs | −0.06 (0.12) | −0.16 (0.13) | −0.32* (0.12) | −0.30* (0.13) | −0.05 (0.14) |
| FAS—interpersonal respect | 0.10 (0.10) | 0.31* (0.11) | 0.23* (0.10) | 0.33 (0.10) | 0.02 (0.09) |
| $R^2$ | 0.04 | 0.08 | 0.09 | 0.15* | 0.09* |
| $\Delta R^2$ | 0.04 | 0.08 | 0.07 | 0.13* | 0.06* |

*Note.* βs = standardized regression coefficients; FAS = Fat Acceptance Scale; *SE*s = standard errors. $R^2$ represents the regression model including all four predictors. $\Delta R^2$ represents the change in $R^2$ attributable to the addition of the FAS subscales to the model. GAF = Global Assessment of Functioning.
* $p < .05$.

($\beta = -.32$, $SE = .13$, $p = .01$). Next, the indirect effect of Health Beliefs on tasks through the three mediators was examined. It was significant and positive (combined indirect effect: $\beta = .34$, $SE = .11$, $p = .001$). These findings imply competitive mediation. Similar analyses were conducted to probe the negative effect of Health Beliefs on bond scores. Again, results indicated competitive mediation. Health Beliefs exhibited a signficant negative direct effect on bond scores ($\beta = -.32$, $SE = .13$, $p = .01$) and a significant positive indirect effect on bond scores (combined indirect effect: $\beta = .34$, $SE = .11$, $p = .001$).

## Discussion

The three studies presented above describe the development, psychometric properties, and initial validation of the FAS, a measure of fat-accepting attitudes, beliefs, and behaviors. An EFA and CFA supported the creation of three FAS subscales, which can be combined to reflect the broad construct of fat acceptance. The FAS improves significantly upon previous measures by assessing both positive and negative attitudes towards fatness in detail, distinguishing between subcomponents of fat acceptance, and being appropriate for use with individuals of all sizes. Results supported the reliability and validity of FAS scores, suggesting that it may be a valuable tool for research, clinical work, and advocacy.

### Interpretation of the Fat Acceptance Scale Subscales

The three factors that emerged represent key elements of the fat acceptance movement. The first, *Fat Activism*, includes actions (e.g., encouraging loved ones to adopt fat-accepting attitudes), beliefs (e.g., antifat bias is pervasive and unjust), and attitudes (e.g., an affirming stance towards fatness) that are common among self-identified fat acceptance activists. Interestingly, items describing political remedies for sizeist oppression did not load onto this factor. It may be that that not enough radical fat acceptance advocates were included in the Study 1 sample to generate support for the relevant items. Indeed, the means for items such as "It should be illegal to discriminate against fat people," which was dropped from the original item pool, were quite low. Nevertheless, the Fat Activism subscale appears to capture the activism undertaken by the mainstream of the modern fat acceptance movement.

The second factor, *Health Beliefs*, describes beliefs about the causes and health consequences of fatness. High scorers reject the cultural conception that people are fat, because they eat poorly, do not exercise, and are lazy and weak-willed. They also challenge the

idea that most fat people suffer from chronic health problems. Most of the items included in this subscale are reverse scored. As a result, high scores should be interpreted as a rejection of mainstream beliefs about weight and health, rather than the presence of fat-affirming health beliefs. Though positively keyed items related to health were included in the initial item pool (e.g., "Fat people can be just as healthy as thin people"), most of these items exhibited high cross-loadings and were discarded for the sake of interpretability. In contrast, the negatively keyed items loaded cleanly onto a single factor. The rejection of medicalized, pathologizing obesity discourse appears to be an essential aspect of the modern fat acceptance movement (Dickins et al., 2011). Moreover, this subscale measures antifat health-related beliefs in much greater detail than any previously published antifat bias scale, expanding its potential applications.

The third factor, *Interpersonal Respect*, includes a mix of positively and negatively keyed items that describe a lack of negatively biased reactions to fat people and a tendency to treat fat individuals equitably. This factor reflects the fat acceptance movement's emphasis on the ubiquity of sizeism in everyday social contexts. Importantly, the wording of these items does not imply that respondents are themselves thin, unlike some previous measures of antifat bias (e.g., Crandall, 1994). This subscale also improves on previous measures of antifat attitudes by assessing multiple reactions to fat people (e.g., anger, disgust, respect, and liking) in a wide range of contexts and relationships (e.g., the workplace, friendships, and in public).

Some elements of fat acceptance that were identified in our literature review and reflected in the original item pool are not represented in the final measure. In addition to the lack of items related to political activism mentioned above, the final scale does not include beliefs related to beauty norms. It may be that not enough items reflecting this concept were included in the original item pool. Alternatively, several theorists have argued that body positivity, which promotes more inclusive beauty standards for people of all sizes, is conceptually distinct from fat acceptance (Morris, 2019). Our findings provide preliminary evidence for this argument.

### Reliability and Validity of the Fat Acceptance Scale

The psychometric properties of the FAS suggest that it is suitable for use in research and clinical work, particularly with college students and trainees in health service psychology. Across samples, reliability coefficients for the FAS subscales and total score ranged from .73 to .93, indicating adequate internal consistency.

The test–retest correlations estimated in Study 2 suggest that FAS scores are moderately to highly stable over a 4-week period. However, the participants who elected to complete the retest survey scored significantly higher than noncompleters on Fat Activism at baseline. These participants' active engagement in fat activism may indicate more fully developed (and, therefore, more stable) attitudes about fatness. As a result, our estimates of temporal stability may have been artificially inflated.

Across the studies, the means of the FAS subscales were often higher than the midpoint of the scale. Furthermore, in some cases, there was evidence of restricted range at the lower end of the response scale. These characteristics were particularly apparent in the sample of psychology trainees. These findings may indicate that psychology trainees are relatively fat accepting. FAS scores were unrelated to an established measure of impression management, suggesting that socially desirable responding alone cannot account for the trainees' high FAS scores. However, other pressures (e.g., a desire to appear culturally competent) may have artificially elevated participants' scores.

## Study 1

In Study 1, FAS scores were negatively associated with a validated measure of antifat attitudes and with conservative political identity, as hypothesized. Conservatism is associated with upholding traditional ideals and preserving the existing social order (Crawford et al., 2017), whereas fat acceptance represents a desire to disrupt society's weight-based hierarchy. FAS scores were also higher among women than men. Women tend to experience higher levels of body surveillance than men, perhaps predisposing women to be sympathetic to the goals of the fat acceptance movement (van Amsterdam, 2013). Surprisingly, BMI was only associated with Fat Activism scores. The lack of other signficant correlations may be due to the generally low BMIs in this sample.

## Study 2

In Study 2, the FAS subscales collectively accounted for a significant proportion of the variance in participants' reactions to the fictional fat women, even controlling for an established measure of antifat attitudes. In terms of the individual subscales, Fat Activism scores predicted participants' ratings of affinity and respect for the targets of Vignette 1 (Emily, the typical fat acceptance advocate) and Vignette 2 (Jen, the victim of employment discrimination). Since both these targets were described as actively resisting fat oppression, their stories likely triggered in-group affiliative motives among participants who themselves engage in fat activism.

The Health Beliefs subscale predicted participants' ratings of respect for Emily. It makes sense that participants who reject the conventional wisdom that fat people are unhealthy would have more respect for Emily's choice to stop trying to lose weight. Surprisingly, scores on the Health Beliefs subscale were also negatively associated with participants' ratings of respect and sympathy for the target of Vignette 3 (Amanda, the victim of dating discrimination). Given that Amanda's pursuit of weight loss aligns with mainstream beliefs about weight and health, it is reasonable that participants who reject these beliefs would disagree with her choices.

Interpersonal Respect scores were positively associated with participants' ratings of affinity for Emily and Amanda, as well as with their ratings of respect for Jen. These findings provide evidence for the validity of the Interpersonal Respect subscale by demonstrating that high scorers react positively to fat people in a variety of circumstances. Surprisingly, Interpersonal Respect scores were also negatively associated with sympathy for Emily. Participants with high Interpersonal Respect scores may have felt excited about Emily's acceptance of her body, rather than "feeling sorry" or "feeling pity" for her (items from the sympathy measure that may imply condescension in the absence of a negative event).

## Study 3

In Study 3, all three FAS subscales were associated with self-identified support for the fat acceptance movement and with BMI, as expected. FAS scores also collectively predicted signficant variance in participants' anticipated bond with a fictional fat client and in the likelihood that they would attempt to change the client's lifestyle habits, over and above a validated measure of antifat attitudes. Highly fat-accepting participants appeared to reject the paternalistic view that they should help their client lose weight, regardless of her expressed wishes. Taken together, these findings suggest that clinicians with high scores on the FAS may provide their fat clients with more culturally competent psychotherapy services than low scorers.

Regarding the individual subscales, Fat Activism scores were positively associated with participants' GAF ratings for the client. High scorers are likely aware of the negative effects of cultural sizeism and, therefore, less inclined to pathologize their fat clients than low scorers. In addition, fat activism was positively associated with scores on the bond subscale and negatively associated with the lifestyle intervention strategy. Participants who are actively involved in fat activism may have identified with Sarah's accepting attitude towards her body, resulting in a better anticipated bond and a rejection of weight loss-focused clinical interventions.

Surprisingly, the Health Beliefs subscale was negatively associated with participants' task and bond scores after controlling for the other FAS subscales and antifat attitudes. Exploratory analyses revealed competitive mediation effects. Health Beliefs had a positive indirect effect on participants' task and bond scores. For instance, Health Beliefs were associated with a higher degree of Fat Activism, which was in turn associated with a better anticipated bond. However, Health Beliefs had a negative direct effect on tasks and bond scores. In the vignette, the client explicitly referred to herself as "obese," a term that is rejected by many fat acceptance activists (Bacon & Aphramor, 2011). Participants with high Health Beliefs scores may have reacted negatively to the client's use of this term. They may also have anticipated difficulty working with the client given her anxiety about challenging her mother's sizeism.

Finally, Interpersonal Respect scores were positively associated with anticipated agreement on therapy goals and tasks. This is perhaps unsurprising, given that respect is an important prerequisite to effective therapeutic relationships (Slay-Westbrook, 2016). Therapists who are committed to treating fat people equitably and who are attuned to the potential for sizeist discrimination in their interpersonal relationships—including the therapy relationship—are likely to work effectively with fat clients (Kinavey & Cool, 2019). In particular, they may share their fat clients' treatment objectives, including coping with pervasive sizeist discrimination.

## Limitations

Although these studies provide preliminary support for the FAS's reliability and validity, a number of limitations should be noted. First, the initial development of the FAS was completed with undergraduate students, most of whom were young adults with relatively low BMIs. It is possible that the factor structure and psychometric properties of the FAS would differ in other populations. In particular, these sample characteristics may account for the lack of items related to political action in the final measure. Given their young age, participants may not yet have had the opportunity to develop critical consciousness around body size, especially because sizeism is often overlooked in social justice curricula. Furthermore, since most of the participants likely benefit from thin privilege, they may have been reluctant to support systemic remedies to sizeism.

In addition, across the samples, participants were largely White, heterosexual, middle or upper class, educated, and women. Again, these characteristics may have influenced the development of the scale. For example, qualitative researchers have suggested that the racialized nature of fat oppression may facilitate different kinds of activism between fat advocates of color and their White counterparts (Williams, 2017). Future research should test the FAS for measurement invariance across age, BMI, race, gender, and other relevant social categories.

More broadly, our study was limited by our singular focus on fatness as a marginalized identity. We hope that future research will use the FAS to examine the intersections between body size and other aspects of identity. Moreover, our vignettes all described fat women who were White (Study 3) or whose race was unspecified (Study 2). Even when the targets' races were not specified, participants may have assumed that they were White due implicit biases about the "default" race (Merritt & Harrison, 2006, p. 794). This is especially likely given that the names used in the Study 2 vignettes are more often associated with White women than women of other races (Tzioumis, 2018). Future research should examine how fat acceptance is related to reactions to fat men, fat nonbinary individuals, and fat people of color of all genders.

Finally, all the measures described in these studies relied on self-report, making them susceptible to response bias. Participants may have felt compelled to answer in socially desirable ways (i.e., down-playing antifat attitudes). Future research should utilize alternate data collection methods (e.g., implicit bias tests and direct observation) to investigate fat acceptance. In addition, while our use of vignettes allowed us to gather preliminary evidence about the FAS's validity, future research should examine whether the FAS predicts real-world behavior.

## Implications

Research suggests that fat acceptance helps fat individuals cope with sizeist stigma, leading to positive mental health outcomes (McKinley, 2004). Thus, fostering fat acceptance should be a priority for therapy, particularly with fat clients (McHugh & Chrisler, 2019). Clinicians could use the FAS to assess their clients' baseline levels of fat acceptance, as well as shifts over time. Levels of fat acceptance are likely to shed more light on clients' resilience to sizeist discrimination than a lack of antifat biases alone (Dickins et al., 2011).

Supervisors could use the FAS to help clinicians identify and rectify gaps in their cultural competence related to body size. The development of explicitly fat-accepting attitudes may improve clinicians' treatment of fat clients more than a reduction in antifat biases alone (McHugh & Chrisler, 2019), making the FAS a particularly valuable tool for such interventions. Advocates could also use the FAS to examine the effectiveness of individual- or organization-level educational programs designed to elevate critical consciousness around body size. The FAS's multidimensional nature makes it particularly suited to assessing scores on the three subscales relative to one another. Such analysis could point to areas that are ripe for intervention.

The FAS is also well suited to research examining correlates of fat acceptance, differing levels of fat acceptance among demographic groups, and conditions that promote the development of fat acceptance (e.g., exposure to fat-accepting role models). Moreover, our results suggest that the FAS may be a stronger predictor of peoples' reactions to fat individuals than previously established measures of antifat attitudes, signaling its value for research on interpersonal sizeism. Surprisingly, little psychological research has examined fatness as a locus of identity, oppression, and activism. We hope that the development of the FAS will encourage further research on body size in counseling psychology.

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