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Patterns and Prevalence of Disordered Eating and Weight Control Behaviors in Women Ages 25–45

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Abstract

Objective—The current study describes detailed eating behaviors, dieting behaviors, and attitudes about shape and weight in 4,023 women ages 25 to 45.

Method—The survey was delivered on-line and participants were identified using a national quota-sampling procedure.

Results—Disordered eating behaviors, extreme weight loss measures, and negative cognitions about shape and weight were widely endorsed by women in this age group and were not limited to White participants. Thirty-one percent of women without a history of anorexia or binge eating reported having purged to control weight, and 74.5% of women reported that their concerns about shape and weight interfered with their happiness.

Discussion—Unhealthy approaches to weight control and negative attitudes about shape and weight are pervasive even among women without eating disorders. The development of effective approaches to address the impact of these unhealthy behaviors and attitudes on the general well-being and functioning of women is required.

Keywords

Eating Disorders; Race; Ethnicity; Dieting

Introduction

The majority of prevalence studies of adult eating disorders focus on threshold eating disorders (1) and many investigations of subthreshold behaviors focus on college-age

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populations (2–5). Little is known about disordered eating behaviors, dieting behavior, and attitudes about shape and weight in middle-age adult women. Although studies are emerging documenting the prevalence of eating disorders cross-culturally (6, 7), we know very little about the prevalence of specific eating disorder behaviors and unhealthy weight control practices in adult women across race and ethnicity. A clearer understanding of the nature and distribution of these behaviors and attitudes in racially and ethnically diverse samples of adult females could assist with program planning and development of tailored age- and culturally appropriate interventions.

Lifetime prevalence estimates of DSM-IV anorexia nervosa, bulimia nervosa, and binge eating disorder from a nationally representative population sample of women over age eighteen are .9%, 1.5%, and 3.5% (1). Across racial and ethnic groups, prevalence estimates of eating disorders vary. The lifetime prevalence of eating disorders among African American (AA) adult females from a US population-based survey is 0.14% for anorexia nervosa, 1.90% for bulimia nervosa, 2.36% for binge eating disorder, and 5.82% for any binge eating (8). However, another study has presented slightly lower prevalence estimates in AA women (9). Among Latinas, (10) reported a lifetime prevalence of 0.12% for anorexia nervosa, 1.91% for bulimia nervosa, 2.31% for binge eating disorder, and 5.80% for any binge eating. Prevalence of eating disorders among Asian women is estimated to be 0.12% for anorexia nervosa, 1.42% for bulimia nervosa, 2.67% for binge eating disorder, and 4.71% for any binge eating (11). However, another study found no difference binge eating frequency by race (12).

Disordered eating, dieting, and associated beliefs in American women

Few studies have described the patterns and prevalence of disordered eating and dieting behaviors in adult females. We define disordered eating as endorsing unhealthy or maladaptive eating behaviors, such as restricting, bingeing, purging, or use of other compensatory behaviors, without meeting criteria for an eating disorder. In a large community sample of Australian women, 3.2% of participants endorsed current episodes of binge eating, 1.6% regularly fasted or used strict dieting, 0.8% purged (13). In a population sample of Canadian women, 13.7% endorsed sub-threshold bingeing behaviors, 2.1% endorsed sub-threshold purging behavior, and 9.3% reported an excessive fear of weight gain (14)

Regarding racial and ethnic background, the few studies examining disordered eating and related behaviors and beliefs have yielded inconsistent estimates. Some studies suggest that White women are more likely to diet than Hispanic, Asian, or AA women (15), while another study found that pre- and early perimenopausal AA women were more likely to report fasting behavior than White women (16). In terms of body dissatisfaction, Mexican-American and AA women who have taken on the values and beliefs of Western culture may be more likely to have negative perceptions of their bodies and engage in weight loss behaviors (17, 18). However, other studies have not supported acculturation as a critical factor (2): compared to White women, AA women tend to be more satisfied with their bodies (19–21), and Mexican-American and Spanish women appear to be less susceptible to body dissatisfaction (22). Although these studies provide insight into dieting, fasting, and body image disturbance across racial and ethnic groups, they fail to characterize the full spectrum of disordered eating behaviors in a large sample of women.

The current study's aims were: 1) to describe the prevalence of eating disorders, disordered eating symptoms, dieting, and associated attitudes in a large sample of adult females ages 25–45, and 2) to compare these dimensions across racial and ethnic groups.

Methods

Participants and Procedures

The study sample comprised 4,023 female U.S. residents, ages 25–45, with computer access, who consented to participate in an online “eating habits” survey. The study was a cooperative effort between the University of North Carolina at Chapel Hill (UNC) and *Self* magazine. Critically, neither UNC nor *Self* magazine was identified in any way with the survey. Participants completed the online survey in exchange for the incentive of being entered into a drawing with a monetary prize. The survey included questions, described in detail below taken from a previously fielded questionnaire (23–25). The survey distribution was organized by the Equation Research Company. A quota sampling strategy included stratification on four age groups: 25–29, 30–34, 35–39 and 40–45, representative of the U.S. female population distribution for that age range. Quota sampling in the context of this study refers to a non-probability sampling method in which a fixed number of respondents are selected from predetermined strata representative of a population, U.S. women residents ages 25–45 in this sample. Following completion of the sample, post-stratification weights were created for age, race, and ethnicity.

An invitation email was sent and dissemination was completed once the quota sample of 4,023 women who consented to participate in the current study completed their questionnaires. In total, 4,686 women responded to the survey. Two-hundred and eighty-six were excluded due to failure to complete the questionnaire, 94 were excluded due to not answering the screening question to establish eligibility (e.g., age within the targeted age band), and 283 were terminated once the pre-determined quota was reached. The invitation email contained a link to the survey and an online consent form. Participants completed the survey confidentially. UNC researchers were not able to access any identifying information provided by participants. De-identified data were sent to UNC, where all data analysis was performed. This study was approved by the Institutional Review Board of UNC Chapel Hill.

Measures

Demographic Characteristics—All women were asked to report their racial and ethnic identity. Hispanic/Latina ethnicity was defined as Spanish, Hispanic, or Latina group membership and all participants were either Hispanic or non-Hispanic. Race included: (1) White, (2) Black or African-American (AA), (3) Asian, (4) Native Hawaiian or other Pacific Islander (NH/PI), (5) American Indian or Alaska Native (AI/NA), or (6) Other. Distinctions between race and ethnicity are complex (26–28), we therefore chose to follow current race and ethnicity classifications used by the National Institutes of Health. Other demographic variables measured in the survey and assessed in the current study were age, socioeconomic status, education level, partner status, height, and weight.

Eating Disorder Status and Disordered Eating Behaviors—Diagnostic questions relevant to eating disorders were taken directly from studies with the Virginia Twin Registry (23–25, 29). Questions were modeled after the Structured Clinical Interview for DSM IV (SCID) (30) and addressed each criterion in order to obtain DSM IV diagnoses for eating disorders, while allowing for dimensionality of responses to increase the flexibility of online questioning. In addition to the psychological criteria, diagnostic algorithms captured broadly defined anorexia nervosa (BMI < 18.5 was required; amenorrhea not required), broadly defined bulimia nervosa (minimum frequency of binge eating and purging once per week), broadly defined binge eating disorder (minimum weekly frequency of binge eating once per week), and eating disorder not-otherwise specified, purging type, a summary behavioral index of ever endorsing any type of purging behavior in one’s lifetime (i.e. lifetime purging) as a method to control weight. Purging behaviors included vomiting, laxative use, diet pill

use, diuretic use, excessive exercise, or other compensatory behaviors. The eating disorder not-otherwise-specified, purging type, category excluded those who ever endorsed binge eating or anorexia nervosa. Binge eating was defined as eating what most people would regard as an unusually large amount of food within a two-hour period. Self reported weight and height were used to calculate body mass index (BMI, kg/m²). Specific disordered eating behaviors queried were vomiting, use of laxatives, diet pills, or diuretics, excessive exercise, or restricting food intake (eating fewer than 1,200 calories a day or very small portions).

Current Weight Loss Attempts, Dieting Since Age 18, and Smoking to Control Weight—Current weight loss attempts, dieting since age 18, and smoking to control weight were each measured as dichotomous variables. Current weight loss status was categorized as either “Currently trying to lose weight” or “Not trying to lose or gain weight.” The variable measuring time spent dieting since age 18 was categorized as either “half of the time or more” or “less than half of the time.”

Importance of Weight or Body Shape—This question was “Check the statement that best describes you” regarding the importance of weight and body shape on self-perception. Categories were defined by endorsing weight or body shape as (1) “a moderate part,” “significant part” or “the most important thing that affects how I feel about myself” or (2) “a small part” or “not at all important to how I feel about myself,” taken from the previously fielded questionnaire.

Statistical Procedures

Data analysis was performed using the software packages, SAS/STAT[®] software, version 9.1 (31) and JMP (32). Data were collected from a quota sample with four age strata. There is no standard accepted method to produce variance estimates from a quota sample. Bias in quota samples can be addressed by way of comparisons with other samples, either through regression or frequencies, and use of post-stratification weights (33, 34). Evidence exists suggesting that point estimates are similar across probability and non-probability surveys (35). First, we used the post-stratification weights created for age, race and ethnicity, for point estimates. Next, we compared the estimates (while controlling for stratification variables) from our quota sample to point estimates from other samples.

We compared our dataset to U.S. population data from the 2006 “American Community Survey” to compare race and relevant demographic variables (36) for which we made distributions for women ages 25–45. Further, we compared eating disorder point estimates from our dataset with the Virginia Twin Registry dataset (23–25). Whites and non-Hispanics are over-represented in the *Self*un-weighted sample, as are women with a post-secondary education or a lower income bracket. After weighting, the racial and ethnic differences across the two surveys decline.

Variables of interest included eating disorder status (anorexia nervosa, bulimia nervosa, binge eating disorder, and eating disorder not-otherwise-specified, purging type), disordered eating behavior (vomiting, laxative, diuretic, and diet pill use, excessive exercise, or restriction), weight loss behaviors, smoking to control weight, dieting since age 18, and perception of shape and weight.

The aim of this study was descriptive. Quantitative and qualitative descriptive statistics were used. We investigated missing data or impossible values by performing range and value checking for the main variables. We compared a small number of socio-demographic characteristics across the four eating disorder groups to ensure that the groups did not differ significantly. We described the sample by conducting percent distributions for all categorical variables (ethnicity, race, partnered, educational, educational and socioeconomic

status) and means and standard errors for continuous variables (age and BMI). Further, we examined percent distributions for eating disorders, and all other outcome variables by ethnic and racial status.

Results

Demographics

Demographics of the entire sample are described in Table 1. The mean age was 35.2 years (SD = 5.9), the mean BMI was 29.2 kg/m² (SD = 8.4). Using the Center for Disease Control and Prevention (CDC) guidelines (37), 93 (2.3%) met criteria for underweight (< 18.5), 1379 (34.4%), met criteria for normal weight (18.5–25.0), 1010 (25.2%) met criteria for overweight (25.1–29.9), and 1526 (38.1%) met criteria for obesity (>30.0). The distribution was generally consistent with data from the 2003–2004 National Health and Nutrition Examination Survey (NHANES), a nationally representative sample of the US population (38). In the NHANES study, the prevalence of obesity was 28.5% in 20–39 year old females, and 36.8% in 40–59 year old females, while the prevalence of overweight in these two age ranges were 28.6% and 36.6% respectively (38). BMI distributions across ethnicity and race are reported in Table 2.

Overall, as designed with our quota sampling strategy, our demographic distributions were comparable to those reported by the 2006 “American Community Survey” (36) for women ages 25–45. However, some differences were present after post-stratification weighting. In contrast to the U.S. population, our sample had higher levels of education, more children, and fewer people in the income bracket \$100,000 or greater (36).

Prevalence of Eating Disorders in Entire Sample

Thirteen (0.3%) women met criteria for broad anorexia nervosa, 337 (8.4%) met criteria for broad bulimia nervosa, 70 (1.7%) met criteria for broad binge eating disorder, and 1250 (31.1%) endorsed eating disorder not-otherwise-specified, purging type.

Eating Disorders by Ethnicity and Race

In terms of ethnicity, of all women who met criteria for anorexia nervosa, 25.9% identified as Hispanic. Of those with bulimia nervosa, 13.2% were Hispanic, of those with binge eating disorder, 7.4% were Hispanic, and of those endorsing eating disorder not-otherwise-specified, purging type, 13.7% were Hispanic. Weighted frequencies are reported in Table 3. With reference to race, of all women who met criteria for anorexia nervosa, 74.1% identified as White, and 25.9% identified as Other; no women in other racial groups met criteria for anorexia nervosa. Of all women who met criteria for bulimia nervosa, 81.8% identified as White, 9.0% as AA, 3.9% as Asian, <1.0% as AI/NA, and 4.9% as Other. Of those who met criteria for binge eating disorder, 73.3% women identified as White, 11.7% as AA, 12.9% as Asian, and 2.2% as Other; none identified as AI/NA. Of the women who met criteria for eating disorder not-otherwise-specified, purging type, 73.1% identified as White, 15.6% as AA, 3.7% as Asian, <1.0% as AI/NA, and 6.5% as Other. Weighted frequencies are reported in Table 3.

Disordered Eating Behaviors by Ethnicity and Race

In terms of ethnicity, the percent distribution of those who endorsed disordered eating was similar across Hispanic and non-Hispanic women: 8.9% versus 6.8% endorsed vomiting, 12.0% versus 8.5% endorsed laxative use, 13.1% versus 11.3% endorsed diuretic use, 45.1% versus 39.4% used diet pills, 24.5% versus 19.9% endorsed excessive exercise, and 19.0% versus 17.7% endorsed extreme restricting. Weighted frequencies of specific eating

behaviors in those who identified as Hispanic are reported in Table 4. Weighted frequencies for specific eating behaviors across race are reported in Table 4.

Dieting, Current Weight Loss Attempts, Smoking to Control Weight, and the Importance of Weight or Body Shape on Self Perception by Ethnicity and Race

Among women who identified as Hispanic and Non-Hispanic, the prevalence of dieting about half or more of the time since age 18 (28.8% and 31.8%), current weight loss attempt (69.5% and 66.9%), and concern about weight and shape (74% and 74.6%) were similar. Across race, dieting since age 18 ranged from 18.6% (NH/PI) to 34.0% (White), current weight loss attempts ranged from 53.2% (Asian) to 72.3% (AI/NA), smoking to control weight ranged from 6.2% (AA) to 23.1% (AI/NA) and concerns about shape and weight ranged from 56.3% (NH/PI) to 78.0% (White). Weighted frequencies are reported in Table 5.

Discussion

The current study described eating disorders and associated behaviors and attitudes in a diverse quota sample of 4,023 women. Our findings suggest that disordered eating practices and attitudes are widespread in American women in this age bracket and that the unhealthy behaviors and attitudes are not limited to one racial or ethnic group. The frequency with which women engaged in extreme weight loss or purging behaviors was striking with nearly a third of women (31.1%) without a history of binge eating or anorexia nervosa endorsing lifetime purging behavior and over 40% reported having used diet pills to lose weight. Women reported that weight-loss related behaviors occupied a considerable amount of their time and energy. Two-thirds of the sample was currently trying to lose weight and nearly one-third reported having spent over half of their time since the age of 18 on a diet. Although the term diet can be ambiguous and could theoretically reflect a healthy, controlled manner of appropriate eating for overweight or obese individuals, the frequency with which other unhealthy weight-loss behaviors were endorsed argues against this interpretation. A particular concern was that three-quarters of women reported that weight and shape contributed moderately or primarily to how they felt about themselves in general and 74.5% of women reported that their concerns about shape and weight interfered with their happiness.

Although the pervasive preoccupation with shape and weight may be unsurprising to some, we took measures to ensure that the on-line quota sample survey was indeed representative of the US general female population in this age group. Overall, our sample appears to be consistent with demographic characteristics in larger random population samples. The distribution of women who met criteria for underweight, normal weight, overweight and obesity in our study was broadly consistent with aged-matched data from the 2003–2004 NHANES study (38). Further, demographic distributions were similar to those reported by the 2006 “American Community Survey” (36). Given the limitations of using a quota sampling method, our sample appears to be an appropriate reflection of women between the ages of 25 and 45 in the general population. One potential source of bias is that women who responded to the survey needed to have internet access. In America, approximately 82–83% of individuals ages 18–49 report having internet access at home, work, or elsewhere (39). Further, 77% of individuals have home internet access and 86% of employed Americans use the internet or email at least occasionally (40).

In comparing point estimates of eating disorders between the current sample and previously published population samples, some differences were noted in the prevalence of eating disorders. The present sample had a slightly lower frequency of women with anorexia nervosa and binge eating disorder compared with population norms, ranging from 0.1–3.3%

for anorexia nervosa, 1.5–4.0% for bulimia nervosa, and 3.5–3.8% for binge eating disorder (1, 9, 11, 41–43). The prevalence of bulimia nervosa was higher than previously published estimates (1, 41, 43). However, to our knowledge, there are no large-scale, population studies using computer-based survey methodology and reporting lifetime history of bulimia nervosa to which we could compare our observed prevalence. One possible explanation for the higher prevalence of bulimia is the anonymous nature of an online survey. Participants may feel more comfortable divulging potentially shameful information in an online format. Moreover, the quota sample from a panel of online survey participants may also bias the estimates upward.

Similarly, there are no epidemiological survey studies examining lifetime history of purging behavior to which our prevalence could be compared. The absence of anorexia nervosa in AA women is consistent with previous studies (9). One explanation for the low numbers of individuals with anorexia nervosa may be sample bias. The reasons for a lower prevalence of binge eating disorder are less clear, but could be related to the fact that the prevalence of bulimia was on the high end of previous population based prevalence estimates. Definitions of regular purging differ across studies and the presence of regular purging generally yields a diagnosis of bulimia nervosa. In studies in which a high threshold is set for the definition of “regular” individuals could be more likely to receive a diagnosis of binge eating disorder than bulimia nervosa.

Of note, the current study also reports a high frequency of eating disorder not-otherwise-specified, purging type (31.1%). Similar data with which to compare our estimates do not exist. While population norms for purging disorder range from 1.1–5.3% in epidemiological studies (44), these studies require purging at least once or twice per week. We were interested in determining the extent to which purging exists in the weight loss repertoire of American women and whether this differed at all by race. Purging behavior was not limited to any racial group and was seen in AA women (35.9%), AI/NA (34.3%), Other (33.5%), White (30.4%), Asian (24.7%) and NH/PI women (15.2%).

It is noteworthy that eating disorders, eating disordered behaviors, dieting, and negative cognitions about shape and weight were present across racial and ethnic groups. The use of smoking as a weight control practice was notably lower in AA women, which is consistent with previous studies of general lower prevalence of smoking in this group (45–47). In particular, over half of those in each racial group reported current dieting behavior, as well as having shape and weight strongly impact their self-evaluation.

The results of this study must be considered within the context of its limitations. First, our sample was comprised of volunteers who participated in an online survey using a non-probability sampling method. Although we verified the appropriateness of this approach by conducting comparisons with other population-based data, uncertainty of the validity of the data due to the non-random sampling method must be considered. Balancing this concern, there are advantages to online sampling, including access to individuals in distant locations, the ability to reach stigmatized groups, and the ease of automated data collection in saving researcher time and finances (48). Second, as with all data collected from self-report measures, the potential for participants to over-report or under-report may have impacted the accuracy of responses. Third, as women with anorexia nervosa may deny or normalize their eating disorder symptoms, underreporting is possible. Fourth, self-selection bias must be considered. As not all individuals in the population have access to computers to complete survey interviews, participants may not accurately reflect the general population. However, comparisons to population data suggest that our sample is generally representative on many demographic variables. Fifth, the current study used the racial category “Other” rather than allowing individuals to endorse multiple racial groups to define their identity. In turn, we

were not able to investigate individuals who identified as multi-racial. Future studies need to allow for race and ethnicity to be defined in broader categorical terms to capture cultural diversity more accurately.

In conclusion, given the historical misrepresentation of eating disorders as predominately impacting young, White, women (49, 50), our findings are particularly noteworthy. Females beyond adolescence and across racial and ethnic categories are clearly endorsing disordered eating behaviors and attitudes. Further exploration into the presentation of eating disorders and associated behaviors across the lifespan, and within and across specific racial and ethnic groups, is an important step to enhance understanding of risk factors, and to develop culturally- and age-tailored prevention and intervention strategies.

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Table 1

Demographic Characteristics of the Entire Sample

Characteristic	N (%)
Age	
25–30	1102 (27.4)
31–35	951 (23.6)
36–40	1038 (25.8)
41–45	932 (23.2)
Income	
Under \$10,000	178 (4.4)
\$10,000–\$19,999	274 (6.8)
\$20,000–\$29,999	472 (11.7)
\$30,000–\$39,999	566 (14.1)
\$40,000–\$49,999	531 (13.2)
\$50,000–\$74,999	907 (22.6)
\$75,000+	791 (19.7)
Prefer not to answer	303 (7.5)
Partnered Status	
Single/Never Married	850 (21.1)
Living with Significant Other/Partner	487 (12.1)
Married	2,265 (56.3)
Divorced	392 (9.7)
Widowed	30 (0.7)
Education	
Some High School	100 (2.5)
High School Graduate or GED	699 (17.4)
Some College or Technical School	1596 (39.7)
College Graduates	1277 (31.7)
Work on Post-Graduate Degree	351 (8.7)
Race	
White	3008 (74.8)
Black or AA	544 (13.5)
Asian	186 (4.6)
Native Hawaiian or other Pacific Islander	8 (0.2)
American Indian, Alaska Native	36 (0.9)
Other	241 (6.0)
Hispanic or Latina Ethnicity	
Yes	539 (13.4)
No	3484 (86.6)

Table 2

BMI by Race and Ethnicity

Characteristics	N (%)	BMI (kg/m ²) Mean (standard deviation)
<u>Ethnicity</u>		
Hispanic/Latina	539 (13.4)	30.0 (14.3)
Non-Hispanic/Latina	3469 (86.6)	29.1 (8.0)
<u>Race</u>		
White	2996 (74.8)	29.2 (7.7)
African American/ Black	544 (13.6)	31.2 (12.9)
Asian	186 (4.6)	23.6 (7.3)
Native Hawaiian/Other Pacific Islander	8 (0.2)	24.7 (3.6)
America Indian/Native Alaskan	36 (0.9)	31.2 (8.2)
Other	238 (5.9)	29.6 (12.9)

Note: Columns 100% due to missing data

Table 3

Weighted Frequencies of Eating Disorder Category by Race and Ethnicity

Eating Disorder Category	Entire Sample N = 4023 N (%)	Hispanic / Latina N = 539 N (%)	Non- Hispanic / Latina N=3484 N (%)	White N = 3008 N (%)	AA/ Black N = 544 N (%)	Asian N = 186 N (%)	Native Hawaiian/ Pacific Islander N = 8 N (%)	America Indian/ Native Alaskan N = 36 N (%)	Other N = 241 N (%)
Anorexia nervosa	13 (0.3)	3 (0.6)	10 (0.3)	10 (0.3)	0	0	0	0	3 (1.4)
Bulimia nervosa	337 (8.4)	44 (8.2)	292 (8.4)	275 (9.2)	30 (5.6)	13 (7.1)	0	1 (3.7)	16 (6.8)
Binge eating disorder	70 (1.7)	5 (1.0)	65 (1.9)	52 (1.7)	8 (1.5)	9 (4.9)	0	0	2 (0.6)
Eating disorder not-otherwise-specified, purging type	1250 (31.1)	171 (31.7)	1079 (31.0)	914 (30.4)	195 (35.9)	46 (24.7)	1 (15.2)	12 (34.3)	81 (33.5)
No eating disorder	2353 (58.5)	315 (58.5)	2038 (58.5)	1757 (58.4)	310 (57.0)	118 (63.3)	7 (84.8)	22 (62.1)	139 (57.7)

Note: Columns 100% due to missing data

Table 4
 Weighted Frequencies of Specific Eating Disordered Behaviors by Race and Ethnicity

Specific eating disorder behavior	Entire Sample N = 4023 N (%)	Hispanic / Latina N = 539 N (%)	Non-Hispanic / Latina N=3484 N (%)	White N = 3008 N (%)	AA/Black N = 544 N (%)	Asian N = 186 N (%)	Native Hawaiian/Pacific Islander		America Indian/ Native Alaskan		Other N = 241 N (%)
							N = 8 N (%)	N = 8 N (%)	N = 36 N (%)	N = 36 N (%)	
Vomiting	286 (7.1)	48 (8.9)	238 (6.8)	229 (7.6)	32 (6.0)	7 (3.6)	0	0	3 (7.1)	15 (6.1)	
Laxatives	362 (9.0)	65 (12.0)	297 (8.5)	254 (8.4)	69 (12.6)	13 (6.9)	0	0	5 (12.9)	22 (9.0)	
Diuretics	465(11.6)	71 (13.1)	394 (11.3)	356 (11.9)	68 (12.5)	13 (7.2)	0	0	4 (10.8)	23 (9.5)	
Diet Pills	1616 (40.2)	243 (45.1)	1372 (39.4)	1262 (42.0)	205 (37.7)	44 (23.5)	1 (18.6)	1 (18.6)	16 (43.5)	88 (36.4)	
Excessive Exercise	824 (20.5)	132 (24.5)	692 (19.9)	574 (19.1)	124 (22.7)	55 (29.5)	1 (10.4)	1 (10.4)	17 (48.2)	52 (21.7)	
Restriction	719 (17.9)	103 (19.0)	616 (17.7)	560 (18.6)	93 (17.1)	18 (9.6)	0.3 (3.6)	0.3 (3.6)	7 (19.6)	40 (16.4)	

Note: Columns 100% due to missing data

Table 5
 Weighted Frequencies of Weight Loss Attempts and Perception of Weight and Shape by Race and Ethnicity

Weight Control Behaviors	Entire Sample N = 4023 N (%)	Hispanic/Latina		Non-Hispanic/Latina		White		AA/Black		Asian		Native Hawaiian/Pacific Islander		America Indian/Alaskan		Other	
		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Dieting since age 18 ^a	1264(31.4)	155 (28.8)	1109 (31.8)	1022(34.0)	148(27.2)	37(20.1)	1 (18.6)	14 (38.2)	41 (17.2)								
Weight loss attempts ^b	2704(67.2)	375 (69.5)	2329 (66.9)	2086(69.4)	348(64.1)	99 (53.2)	5 (57.5)	26 (72.3)	140 (57.8)								
Smoking: Yes	593 (14.7)	110 (20.4)	483 (13.9)	474 (15.8)	34 (6.2)	28 (15.2)	1 (11.7)	8 (23.1)	47 (19.6)								
Concerns about weight/shape ^c	2998(74.5)	399(74.0)	2600 (74.6)	2344(78.0)	307(56.4)	144(77.3)	5 (56.3)	25 (70.4)	173 (71.8)								

Note: Columns 100% due to missing data

^a Half time or more

^b Currently trying to lose weight

^c Moderate to most important