

What Women Want: Understanding Obesity and Preferences for Primary Care Weight Reduction Interventions among African-American and Caucasian Women

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Purpose: To explore attitudes and perceptions of obesity, and identify preferences for weight-management interventions by African-American and Caucasian women who were followed in general internal medicine clinics.

Procedure: Surveys exploring these issues were mailed to African-American (n=240) and Caucasian (n=240) women with a BMI of ≥ 30 .

Main Findings: Caucasian women felt past weight-loss efforts were helped by weight-loss programs significantly more than African-American women ($P < 0.001$); African-American women were more likely to feel that their cultural background contributed to their weight gain than did Caucasian women ($P = 0.001$). African-American women expressed a higher need for one-on-one counseling with their physician ($P < 0.001$) as well as group meetings with the dietician, physician and other women ($P = 0.004$) than did Caucasian women. African-American women also felt it was more important for weight-loss programs to have information on food common to their culture than did Caucasian women ($P < 0.001$).

Conclusions: Differences in cultural background and preferences about weight loss interventions have important policy implications for how the U.S. healthcare system provides care to an ever-increasing multicultural population with a national epidemic such as obesity.

Key words: obesity ■ culture ■ weight loss ■ African Americans ■ women's health

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INTRODUCTION

The prevalence of obesity, defined as a body mass index (BMI) of ≥ 30 , has risen dramatically in the United States over the past two decades and continues to rise at an alarming rate.¹ Ranking second only to smoking as a preventable cause of death, obesity-related conditions account for 300,000 deaths annually—13% of all U.S. deaths.² Healthcare costs associated with obesity are substantial and vary according to BMI, race and age. Findings from a recent study revealed that while mean healthcare expenditures (in December 2003 dollars) for normal-weight adults were \$2,970, mean healthcare expenditures for overweight (BMIs 25–29.9 kg/m²) and obese (BMIs of ≥ 30) adults were \$3,038 and \$4,333, respectively. While the authors found no interaction between BMI and gender, healthcare expenditures related to higher BMI rose dramatically among Caucasians and older adults but not among African Americans or those age < 35 years.³

There are, however, differences in the prevalence of obesity between gender and race. Among men, racial/ethnic groups do not differ significantly in the prevalence of obesity or overweight;¹ however, among women, obesity and overweight prevalence are highest among non-Hispanic black women. While more than half (53.2%) of non-Hispanic black women aged ≥ 40 years are obese, and $> 80\%$ are overweight, prevalence rates for Caucasian women are 34.2% and 61%, respectively.¹ These gender and racial disparities raise questions about the health outcomes of African-American women—a group at increased risk for obesity-related diseases, such as diabetes, hypertension, hypercholesterolemia, stroke and heart disease.⁴

While some studies^{4,5} have suggested that genetic factors and a low metabolic rate play a role in African-American females being overweight or obese, other studies have examined the body image of African-American females. Some studies show that African-American females consider overweight bodies more attractive,^{5,6} while other

studies have shown that African-American women viewed “thinness” as the ideal and had dissatisfaction with being overweight similar to Caucasian women.⁷⁻⁹ Increased intake of high-calorie food and little exercise have also been linked to African Americans’ high rates of overweight and obesity,^{10,11} with dietary behavior being influenced by cost, the media, and cultural traditions.¹²⁻¹⁴

Although African-American women have been shown to have similar weight-loss practices as Caucasian women (dieting, exercising, crash diets, diet pills, binge eating, weight-loss programs),¹⁵ Caucasian women have been more successful than African-American women in controlling their weight.¹⁶⁻¹⁸ It has been suggested that weight-loss programs may be geared towards the needs and cultures of the “dominant” society and therefore may be less attractive to or successful with those who are not members of the majority.¹⁹ According to Kumanyika,¹⁹ cultural variables such as the sociocultural background of the staff of these programs, institutional policies and posture toward clients, professional staff orientation as well as staff attitudes and beliefs may conflict with the person’s cultural context (cultural background, values, economic conditions and food preferences).

Designing culturally relevant weight-loss programs requires understanding of ethnic variations, social customs and values as well as illness beliefs, behavior and preferences. Focus group methodology has often been used by researchers to identify and explore sociocultural

issues related to food choices, motivation, weight loss and physical activity²⁰⁻²³ among groups of African-American women in community-based settings. Information obtained from these focus groups was then used to design community-based, culturally relevant weight-loss programs for African-American women. Initial results from these programs showed that while the cultural-specific programs were well accepted by African-American women, they varied in degrees of weight loss attained. In addition, there is a paucity of literature on the long-term outcomes of these community-based studies.

There has been little or no research on the obesity-related issues of African-American women followed in primary care or general internal medicine clinics despite the fact that physicians in these settings see 11.3% of the U.S. population every month, and overweight or obese patients are overrepresented in this population.²⁴ We previously used focus group methodology to gather preliminary data that might identify any differences between African-American and Caucasian women related to their attitudes and perceptions of obesity, and preferences for weight-loss management interventions in general internal medicine clinics.²⁵

While there was concordance between the two groups on knowledge of obesity-related medical conditions and on some issues related to attitudes and perceptions of weight, areas of life affected by weight and previous weight-loss efforts, African-American women cited culture-specific barriers to weight loss more than

Table 1. Characteristics of the sample

Variables	Caucasians (N=91)	African-Americans (N=138)	P Value*
	N (%) or Mean (SD)		
Age	51.5(14.1)	49.8(14.9)	0.39 ⁺
BMI	37.6 (7.9)	42.2 (9.4)	<0.001 ⁺
Marital Status			0.003
Married	49 (53.9%)	47 (34.3%)	
Education			<0.001
Grade school	9 (9.9%)	31 (22.6%)	
High school	40 (44.0%)	81 (59.1%)	
College	42 (46.2%)	25 (18.3%)	
Income			<0.001
≤\$15,999	8 (9.2%)	43 (33.6%)	
\$16,000–\$29,000	15 (17.2%)	45 (35.2%)	
≥\$30,000	64 (73.6%)	40 (31.3%)	
Diabetes	8 (8.9%)	35 (25.4%)	0.002
High Blood Pressure	38 (42.2%)	75 (54.7%)	0.07
High Cholesterol	33 (36.7%)	56 (40.9%)	0.53
Gall Stones	7 (7.8%)	10 (7.3%)	0.89
Depression	37 (41.1%)	48 (34.8%)	0.33
Stroke	2 (2.2%)	5 (3.6%)	0.71 [#]
Arthritis	42 (46.7%)	76 (55.1%)	0.21
Heart Disease	8 (8.9 %)	15 (11.0%)	0.61
Mental Illness	4 (4.4 %)	13 (9.4%)	0.16
Cancer	6 (6.7 %)	4 (2.9%)	0.20 [#]

* Chi-squared test unless noted; + T test; # Fisher’s exact test

did Caucasian women, and wanted a more socially supportive approach to weight reduction from their primary care provider than did Caucasian women. A full description of the methodology and findings from this focus group study is reported elsewhere.²⁵

Our long-term goal is to design culturally relevant weight-reduction programs that can be incorporated into primary care and general internal medicine settings. Understanding the factors that are important to women when they are making decisions about weight reduction is an essential step before designing these programs. Therefore, the objective of the present study was to develop and test a reliable and valid questionnaire to further explore the themes and findings identified in the focus group study with a larger sample of women seen in the general internal medicine setting.

METHODS

Design

This study is the second part of a sequential exploratory design, in which an initial qualitative phase is used to develop an instrument, which is then tested in a subsequent quantitative phase.²⁶ This “mixed method” approach enriches our understanding by adding depth and perspective to the phenomenon being studied.

Developing the Questionnaire

An 18-item questionnaire was developed from the content related to the five themes identified from the focus group study data: 1) attitudes and perceptions of weight, 2) areas of life affected by weight, 3) medical knowledge and weight, 4) previous weight-loss efforts and contributing factors, and 5) what women wanted from their primary care physician in helping them lose weight.²⁵ The format of these questions included adjective checklists, multiple rating lists and multiple-choice items.

Attitudes and Perceptions about Weight

From the following list of words, we asked respondents to put a checkmark beside those words they felt best described their feelings about their weight: 1) happy, 2) satisfied, 3) low self-esteem, 4) depressed, 5) unattractive, 6) hopeless, 7) uncomfortable, 8) unfair, 9) embarrassed, 10) accepting, 11) don’t care, and 12) don’t think about it.

In order to assess respondents’ understanding of the words “overweight” and “obesity,” we asked them to put a check beside as many items as they felt described these terms. These items were gleaned from the focus group transcripts and included items such as: unhealthy, social term, medical term, unattractive, people making fun of you, person with medical problems because of weight, etc. We later coded these items into three categories: 1) health-related terms, 2) stigmatizing terms, and 3) socially acceptable terms.

To ascertain if respondents considered themselves overweight or obese, they were asked to check “yes” or “no” beside two questions: 1) “Do you consider yourself overweight?” and 2) “Do you consider yourself obese?” We then asked respondents to check off how many pounds over her normal weight would someone have to be, in order to be called “overweight” and “obese” (1–25 lbs, 26–50 lbs, 51–100 lbs, 101–150 lbs, >150 lbs).

Areas of Life Affected by Weight

On a scale of 0–5, with 0 being “not at all affected” and 5 being “very affected,” respondents were asked to rate specific areas of their life that were affected by their weight. These areas of life are listed in the results section in Table 3.

Medical Knowledge and Weight

Using the same kind of rating scale, respondents were asked how much being overweight or obese was associated with the list of obesity-related medical conditions also listed in Table 3.

Table 2. Number of pounds over normal weight to be considered overweight and obese

Weight Criteria	Total	Caucasians		African Americans		P Value *
		N	(%)	N	(%)	
Overweight (Pounds)						<0.001
1–25	80	35	38.5	45	32.9	
26–50	101	51	56.0	50	36.5	
51–100	27	4	4.4	23	16.8	
101–150	7	1	1.1	6	4.4	
≥150	13	0	0.00	13	9.5	
Obese (Pounds)						0.004
1–25	20	6	6.7	14	10.5	
26–50	48	26	29.2	22	16.5	
51–100	99	44	49.4	55	41.4	
101–150	32	11	12.4	21	15.8	
≥150	23	2	2.3	21	15.8	

* Chi-squared test

Previous Weight-Loss Efforts and Contributing Factors

Respondents were asked if they ever tried to lose weight (check “yes” or “no”) and how often they had been successful at losing weight (never, sometimes, always). They were then asked, “If you were “sometimes” or “always” successful in the past, how important were the following factors (frequent doctor visits, joining a weight-loss program, being younger, too depressed to eat, peer pressure, you were motivated, keeping a food diary) on a scale of 0–5, with 0 being “not at all important” and 5 being “very important,” in helping you succeed?”

In order to explore barriers to weight loss in the past, the same rating scale was used to ask respondents: “If you were “never successful” at losing weight, or you “regained” a majority of your weight back, how important were the following barriers?”

1. Stress
2. Lack of support
3. You did it for other people instead of yourself
4. Lack of will power
5. You got bored with diet foods
6. No time
7. Lack of motivation
8. Have to create separate meals for children/spouse
9. Family influence

10. Food craving
11. Depression
12. Your genes
13. Cooking with lard or lots of oil
14. Lack of commitment
15. You don’t know what caused weight gain
16. You are older
17. Ease of eating out
18. Food lying around at home
19. Food lying around at work

Using the same “importance” rating scale, respondents were also asked the following questions related to culture and weight: “How important was your cultural background in influencing your weight gain?” and “How important is it for weight-loss programs to have information on food common to your culture?”

What Women Want from Their Primary Care Physician

Respondents were asked to rate the importance of a number of weight-loss strategies that their primary care physician could use in assisting them in their weight-loss efforts (on a scale of 0–5, with 0 being “not at all important” and 5 being “very important”). These strategies are listed in Table 5.

These strategies were then coded as either: 1) one-

Table 3. Perceived areas of life affected by weight and medical knowledge of obesity-related conditions

Effect	Caucasians		African Americans		P Value *
	N	Median (25th, 75th)	N	Median (25th, 75th)	
Areas of Life Affected					
Going out of the house	91	0.0 (0.0, 3.0)	139	2.0 (0.0, 5.0)	0.008
Shopping for clothes	91	4.0 (3.0, 5.0)	139	4.0 (2.0, 5.0)	0.80
Eating out in restaurants	91	2.0 (0.0, 3.0)	139	3.0 (0.0, 5.0)	0.007
Dating	91	5.0 (3.0, 6.0)	139	5.0 (0.0, 6.0)	0.11
Getting attention from men	91	4.0 (1.0, 6.0)	139	4.0 (2.0, 6.0)	0.82
Relationship with partner	91	3.0 (1.0, 5.0)	139	3.0 (0.0, 5.0)	0.99
Relationship with your children/other children	91	2.0 (0.0, 3.0)	139	1.0 (0.0, 5.0)	0.95
Ability to play with young children	91	2.0 (0.0, 4.0)	139	3.0 (0.0, 5.0)	0.13
Work situation	91	2.0 (0.0, 4.0)	139	3.0 (0.0, 6.0)	0.13
Lack of energy	91	3.5 (2.0, 4.0)	139	4.0 (3.0, 5.0)	0.009
Physical health	91	3.0 (2.0, 5.0)	139	4.0 (3.0, 5.0)	0.012
Mental health	91	3.0 (1.0, 4.0)	139	3.0 (1.0, 5.0)	0.22
Medical Knowledge					
Diabetes	87	5.0 (3.0, 5.0)	120	4.0 (3.0, 5.0)	0.18
High blood pressure	88	5.0 (4.0, 5.0)	131	4.0 (4.0, 5.0)	0.57
High cholesterol	85	4.0 (3.0, 5.0)	125	4.0 (3.0, 5.0)	0.49
Gall stones	77	3.0 (1.0, 3.0)	107	2.0 (0.0, 4.0)	0.42
Depression	84	4.0 (3.0, 5.0)	120	4.0 (2.0, 5.0)	0.68
Stroke	81	4.0 (3.0, 5.0)	118	4.0 (1.0, 5.0)	0.73
Arthritis	86	3.0 (2.0, 4.0)	123	4.0 (2.0, 5.0)	0.99
Heart disease	83	4.0 (4.0, 5.0)	118	5.0 (3.0, 5.0)	0.90
Mental illness	82	2.5 (1.0, 4.0)	113	3.0 (0.0, 4.0)	0.37
Cancer	77	2.0 (0.0, 4.0)	109	2.0 (0.0, 3.0)	0.11

0 (not at all affected)—5 (very affected); * Wilcoxon rank sum test

on-one counseling with their primary care physician; or 2) team meetings with their primary care physician, dietician and other women facing the challenges of losing weight.

Body Mass Index and Sociodemographic Information

In order to calculate the BMI, we asked respondents to provide their height and weight. We also included questions related to age, race and marital status. For age and marital status, respondents were asked for their age in years and had a choice of checking off “married” or “unmarried.” For race, we asked respondents the question, “What race do you consider yourself belonging to?” and offered them a list of the following choices: 1) African-American/black, 2) Caucasian/white, 3) Hispanic/Latino/Chicano, 4) Asian, 5) American Indian, and 6) Other.” Respondents were told to “check all that apply.”

We used education and income as indicators of socioeconomic status. Education was categorized in three levels (grade school or some high school, high-school graduate or some college, college graduate or postgraduate), as was income (\leq \$15,999/year; \$16,000–\$29,999/year; and \geq \$30,000/year). We also asked the respondents about the kind of medical problems they might be experiencing by asking them to check a “yes” or “no” box beside a list of comorbid diseases.

The self-administered questionnaire was pretested in a group of 10 women who met the requirements for age, race and BMI. None of the women had problems with comprehension and clarity of the questions, and the surveys were

completed in an average of 17 minutes. These women completed the same survey two weeks after completion of the first, with a resultant test-retest reliability coefficient of 0.80.

Subjects and Sample Size

Approval for the use of human subjects for this study was obtained from the Cleveland Clinic Foundation’s (CCF) institutional review board. A list of all female patients aged \geq 18 years with a diagnosis of obesity (ICD–9 code-278.00/278.01) who were seen at the general internal medicine clinics constituted our sampling frame. We designed the study to be able to detect differences between Caucasian and African-American women of \geq 1 on the Likert-scale questions on attitudes about culture and weight and how they wanted help from the physician, with 90% power at the 0.05 significance level and assuming a standard deviation of no more than 2 points for any question. For this, we would need about 175 respondents.

Data Collection

We used the multiple mailing format suggested by Dillman.²⁷ Of the initial 480 questionnaires sent out (240 to African-American women and 240 to Caucasian women), 16 were returned due to incorrect mailing address, leaving a sample size of 464. Out of these 464, 256 women completed and returned their questionnaires for a response rate of 55%. While 54% of the sample (N=138) identified themselves as “African-American/black,” 36% (N=91) identified themselves as “Caucasian/white”, and 11% or 27 women identified themselves as “other” but did not specify what this term meant.

Table 4. Strategies in past weight loss attempts and the importance of culture

	Caucasians	African Americans	Difference	Uni-	Multi-
	Median	Median	in Median	variable	variable
	N (25th, 75th)	N (25th, 75th)	and 95% CI	P Value*	P Value**
<i>Strategies</i>					
“How important were the following in helping you succeed in losing weight?”					
Frequent doctor visits	71 3.0 (0.0, 4.0)	96 2.0 (0.0, 4.0)	0 (0, 1)	0.51	0.31
Joining a weight-loss program	75 3.0 (0.0, 5.0)	101 1.0 (0.0, 3.0)	1 (0, 2)	<0.001	<0.001
Being younger	78 3.0 (3.0, 5.0)	101 4.0 (2.0, 5.0)	0 (0, 0)	0.83	0.24
Being too depressed to eat	70 0.0 (0.0, 1.0)	100 0.0 (0.0, 3.0)	0 (0, 0)	0.36	0.70
Peer pressure	72 1.0 (0.0, 3.0)	99 0.0 (0.0, 3.0)	0 (0, 1)	0.029	0.004
Other (you don’t know what helped)	47 0.0 (0.0, 3.0)	61 1.0 (0.0, 4.0)	0 (-1, 0)	0.43	0.77
Being motivated	75 5.0 (4.0, 5.0)	102 5.0 (3.0, 5.0)	0 (0, 0)	0.25	0.46
Keeping a food diary	73 3.0 (0.0, 4.0)	98 1.0 (0.0, 3.0)	1 (0, 1)	0.013	0.030
<i>Culture</i>					
“How important do you think your cultural background influences your weight gain?”					
	91 3.0 (1.0, 4.0)	139 4.0 (2.0, 5.0)	-1 (-1, 0)	<0.001	0.004
“Weight-loss programs should have information on food common to my culture?”					
	91 3.0 (2.0, 4.0)	139 4.0 (3.0, 5.0)	-1 (-1, -1)	<0.001	<0.001

0 (not at all affected)—5 (very affected); * Wilcoxon rank sum test; ** Multivariable cumulative logistics regression adjusting for income, marital status, diabetes, BMI and education

For the purpose of this study, only African-American and Caucasian women were included, resulting in a sample size of 229 women with a diagnosis of obesity.

Analysis

Descriptive statistics, including means and standard deviations, medians, quartiles, percents and relevant confidence intervals, were used to describe knowledge and understanding of obesity and related medical conditions, attitudes and perceptions of weight and weight-loss efforts, barriers to weight loss, and what women wanted from their primary care physician to help them lose weight. Association between race and the variables described above were assessed using Student's t tests or the nonparametric Wilcoxon rank sum tests (if data were not normally distributed). Likelihood ratio Chi-squared analysis was used to compare groups on yes/no outcomes, and cumulative logit regression models were used to assess associations between the ordinal-scaled outcomes

and race while adjusting for important covariables.

The significance level was 0.05 for each hypothesis. No adjustment was made for testing multiple hypotheses.

RESULTS

Characteristics of the Sample

A description of the sample of African-American and Caucasian women is presented in Table 1. Although there were no significant age differences between the two groups, African-American women were significantly more obese than Caucasian women and more likely than their Caucasian counterparts to be unmarried, less educated and have a yearly income of <\$30,000. While both groups reported having a variety of obesity-related comorbid conditions, African-American women reported having significantly more diabetes than Caucasian women.

Table 5. What women want from their primary care physician in helping them lose weight

	Caucasians	African Americans	Difference	Uni-	Multi-
	Median	Median	in Median	variable	variable
	(25th, 75th)	(25th, 75th)	and 95% CI	P Value*	P Value**
	N	N			
"How important were the following in helping you succeed in losing weight?"					
One-on-one help from PCP [#]	73 2.5 (1.5, 3.3)	97 3.7 (2.5, 4.3)	-1 (-1.5, 0.7)	<0.001	<0.001
Team meetings with PCP, dietician, other women [#]	73 2.5 (1.5, 4.0)	97 3.5 (2.5, 4.5)	-1 (-1.5, 0.0)	0.004	0.007
Referral to dietician by primary care physician	78 3.0 (1.0, 5.0)	103 4.0 (3.0, 5.0)	-1 (-1, 0)	0.003	0.031
Primary care physician to give the latest pill for weight loss	77 3.0 (0.0, 4.0)	109 4.0 (1.0, 5.0)	-1 (-1, 0)	0.001	0.006
Individual one-one-one counseling by primary care physician	77 3.0 (0.0, 4.0)	104 4.0 (3.0, 5.0)	-1 (-2, 0)	<0.001	0.015
Have weight loss classes/support groups in physician's practice	76 3.0 (1.0, 4.0)	108 4.0 (3.0, 5.0)	-1 (-1, 0)	0.004	0.011
Frequent office visits with primary care physician to have eight checked	80 3.0 (1.0, 5.0)	105 4.0 (2.0, 5.0)	0 (-1, 0)	0.09	0.25
Team meeting with dietician, physician and you	76 3.0 (0.0, 4.0)	101 4.0 (2.0, 5.0)	-1 (-1, 0)	0.007	0.011
Physician to discuss the adverse effects of weight gain in depth (giving graphic details of the dangers of gaining weight)	78 2.0 (0.0, 4.0)	104 4.0 (2.0, 5.0)	-1 (-2, -1)	<0.001	<0.001
Primary care physician to be firm about need for weight loss	80 2.0 (1.0, 4.0)	109 4.0 (2.0, 5.0)	-1 (-2, 0)	<0.001	0.003

PCP: primary care physician; * Wilcoxon rank sum test; ** Multivariable cumulative logistics regression adjusting for income, marital status, diabetes, BMI and education; # These two categories are calculated from the individual items listed below

Attitudes and Perceptions about Weight

Overall, both Caucasian and African-American women were embarrassed and depressed about their current weight, but Caucasian women reported having a lower self-esteem about their weight than did African-American women ($P=0.013$). Although both groups labeled the words “overweight” and “obesity” as stigmatizing, Caucasian women found the word “overweight” a more socially acceptable term than did African-American women (37.4% vs. 22.5%, $P=0.014$).

There were no significant differences between Caucasian and African-American women’s perception of themselves regarding their weight, with 95% of Caucasian women and 96% of African-American women considering themselves overweight, and 65.2% and 58% respectively perceiving themselves as obese. However, as can be observed from Table 2, the reported number of pounds for being overweight and obese were significantly higher for African-American women than for Caucasian women.

Areas of Life Affected by Weight

Both groups of women felt that most areas of their lives were affected by excess weight. However, African-American women reported that going out of the house, eating in restaurants, lack of energy and their physical health were significantly more affected by their weight than did Caucasian women (Table 3).

Medical Knowledge and Weight

Also listed in Table 3 are the results of the questions associating excess weight with knowledge about certain medical conditions. There were no significant differences in ratings between African-American and Caucasian women, as to these associations, with both groups feeling that all the conditions that were listed on the questionnaire were affected by being overweight and obese. Both groups gave the highest ratings (4 or 5) to conditions such as diabetes, high blood pressure, heart disease, high cholesterol, depression and stroke.

Previous Weight-Loss Efforts and Contributing Factors

The majority of both Caucasian (100%) and African-American (95.5%) women had attempted to lose weight in the past, with 73.6% and 84.1%, respectively, having “sometimes” or “always” been successful in losing weight. As can be observed from Table 4, both groups cited a variety of factors that had helped them lose weight, but African-American women felt that past weight-loss efforts such as joining a weight-loss program, peer pressure and keeping a food diary were significantly less helpful than did Caucasian women. Differences in medians between the groups and 95% confident intervals are also presented in Table 4. These associations were still significant ($P<0.001$, $P=0.004$, and 0.030, respectively) after

adjusting for marital status, income, diabetes, education and BMI (Appendix 1). Depression, availability of food, denial and social issues were cited as barriers by those African-American (7.9%) and Caucasian (11.0%) women who were “never” successful or who had “regained” the majority of their weight.

As can be observed from Table 4, African-American women felt that their cultural background was significantly more important in influencing their weight gain than did Caucasian women. African-American women also felt that it was more important for weight-loss programs to have information on food common to their culture significantly more than did Caucasian women. Differences in medians between the groups and 95% confident intervals are also presented in this table. These associations were still significant ($P=0.004$, $P<0.001$, respectively) after adjusting for marital status, income, diabetes, education and BMI (Appendix 1).

What Women Want from Their Primary Care Physician

African-American women expressed a significantly higher need for all physician-assisted weight-loss strategies than did Caucasian women (Table 5). After collapsing these strategies into: 1) one-on-one counseling with their primary care physician, or 2) team meetings with their primary care physician, dietician and other women facing the challenges of losing weight, African-American women still expressed a significantly higher need for these offerings than did Caucasian women. These associations remained significant ($P<0.001$ and $P=0.007$, respectively) after adjusting for marital status, income, diabetes, education and BMI using cumulative logistic regression (Appendix 2).

DISCUSSION

This study is significant in that it is the first to explore attitudes and perceptions of obesity, and identify preferences for weight-management interventions by African-American and Caucasian women who were followed in general internal medicine clinics. Although an equal number of questionnaires were sent to African-American and Caucasian women, the response rate among African-American women (54%) was higher than among Caucasian women (36%). This is an interesting finding in itself given that African Americans, in general, have been shown to have low participation rates in research studies.²⁸ This finding may indicate that the issues surrounding obesity and weight gain are important to them. African-American women in this study had a significantly higher average BMI (42.2, 9.4) than Caucasian women (37.6, 9.4), which put them in the “extreme obesity” category (BMI >40). While staggering, this finding is consistent with data from the latest National Health and Nutrition Examination Survey (NHANES) 1999–2000, which showed a higher percent

increase in extreme obesity for African-American women [7.2% (3.0–11.4)] than for Caucasian women [1.5% (-0.5–3.5)].¹

Previous research on socioeconomic status, race and obesity is mixed. In the present study, we found that socioeconomic status, as measured by income and years of education, was higher for the Caucasian women in our sample compared with the African-American women. However, while some researchers²⁹ have suggested that racial disparities in the prevalence of obesity are primarily due to black/white differences in socioeconomic status, other researchers found that African-American women had higher relative weight than Caucasian women do, even after controlling for socioeconomic status.⁴ Still, other researchers found that middle or high socioeconomic status is protective against excess weight for Caucasian women but did not influence the prevalence of excess weight in African-American women.^{30–33} Although a significantly higher percentage of African-American women than Caucasian women in the present study were unmarried, the marital role has been shown to influence fatness and obesity among men but not among women.³⁴

Despite the differences in BMI, socioeconomic status and marital status, both Caucasian and African-American women in our sample labeled the words “overweight” and “obesity” as stigmatizing. Indeed, obesity is associated with tremendous social stigma in the United States, and obese individuals are discriminated against in a variety of contexts, including the search for housing, employment and mates.^{35–37}

Although our finding that African-American women reported higher self-esteem concerning their weight than did Caucasian women, literature on the association between self-esteem and relative body weight among African-American females is mixed.³⁸ However, African-American women in the present study attrib-

uted a significantly larger pound criteria for being “overweight” or “obese” than Caucasian women, perhaps indicating that a larger body image does not affect self-esteem. Indeed, results of body image research in which participants are shown silhouettes representing a range of weights from extremely underweight to extremely overweight have shown that African-American women selected heavier figures as ideal or attractive more than did Caucasian women.^{39–42} Still, other studies have reported that although African-American women may perceive themselves as overweight, they still consider themselves attractive.^{43–44} This perception of “attractiveness” may be reinforced by the fact that African-American men are more willing to date larger women than Caucasian men, and feel less ridiculed by their peers than their Caucasian counterparts.^{41,46} Indeed, feeling attractive in the eyes of men despite being heavy was well articulated by several members of the African-American focus groups.²⁵

However, our finding that the social and physical aspects of the lives of the African-American women in our study were significantly more affected by their weight than those of Caucasian women may indicate that, despite tolerance and acceptance of a larger body image, the quality of life of African-American women is still very much affected by their excess weight.

Both groups reported having a variety of obesity-related comorbid conditions, although the African-American women in our sample reported significantly more diabetes and a higher percentage of hypertension than Caucasian women. This is consistent with other findings indicating that African-American women are more likely than Caucasian women to have a 2.4-times greater relative risk for diabetes as well as a high prevalence of concomitant hypertension.⁴⁶ The self-reported “depression” found in both groups of women is also consistent with studies that have shown prevalence rates of depression to be higher in

Appendix 1. Multivariable results for Table 5 (cumulative logit regression)

Outcome Variables	Odds Ratio (95% CI) Comparing Caucasians vs.		Additional Covariables in Model				
	African Americans	P Value	Marital Status	Income	DM	BMI	Education
Frequent doctor visits	0.71 (0.36, 1.39)	0.31	0.31	0.77	0.26	0.016	0.016
Joining a weight loss program	0.30 (0.15, 0.58)	<0.001	0.042	0.58	0.23	0.13	0.23
Being younger	1.47 (0.77, 2.81)	0.24	0.07	0.71	0.70	0.92	0.62
Being too depressed to eat	0.87 (0.41, 1.82)	0.70	0.30	0.57	0.22	0.40	0.70
Peer pressure	0.36 (0.18, 0.73)	0.004	0.10	0.41	0.46	0.015	0.81
Being motivated	0.76 (0.37, 1.56)	0.46	0.23	0.09	<0.001	0.42	0.33
Keeping a food diary	0.47 (0.24, 0.93)	0.030	0.012	0.057	0.018	0.97	0.058
Other	0.87 (0.36, 2.13)	0.77	0.005	0.16	0.44	0.12	0.92
My cultural background influences my weight gain	2.37 (1.32, 4.26)	0.004	0.29	0.19	0.21	0.21	0.61
Importance of weight-loss programs to have info on food common to my culture	4.93 (2.64, 9.18)	<0.001	0.84	0.93	0.51	0.85	0.70

both African-American and Caucasian women compared to African-American and Caucasian men.⁴⁷ That there was no significant difference between groups on self-reported “mental illness” is also consistent with the surgeon general’s latest report that “for African Americans who live in the community, rates of mental illness appear to be similar to those for whites.”⁴⁸

In addition to having obesity-related conditions, both groups knew that being overweight or obese was clearly associated with specific medical conditions. Indeed, the consequences of being obese and having an obesity-related comorbid condition was also addressed by members of the focus group study.²⁵ While the assumption that knowledge shapes behavior may appear self-evident, evidence suggests that providing information about risk does not have much effect on behavior unless it can overcome counteracting psychosocial, behavioral and environmental barriers.⁴⁹

The African-American women in the present study felt that their cultural background influenced their weight gain significantly more than did Caucasian women. Perceptions of how cultural attitudes about food played a crucial role in keeping them from losing weight were also articulated by many of the African-American focus group members.²⁵

Weight-loss programs generally adopt a “one-size-fits-all” behavioral model that subscribes to the culture of the prevailing majority without attention to the cultural attitudes and preferences of nonmajority members.^{18,19} It is, therefore, not surprising that African-American women felt that past weight-loss efforts were helped by joining a weight-loss program significantly less than did Caucasian women. Indeed, this finding is consistent with results of the focus group study.²⁵ Even weight-loss programs that are technically very well designed for one client group cannot be expected to work for another client group that differs on an important variable such as culture.

The African-American women in our study felt it was significantly more important for weight-loss programs to have information on food common to their culture than did Caucasian women. According to Nestle et al.:⁵⁰

Culture is the pervasive foundation that underlies all food choices. People use the categories and rules of their specific cultures, subcultures and ethnic groups to frame what they consider to be acceptable and preferable foods, the amount and combination of foods they choose, and the food they consider ideal or improper.

Studies of weight-loss programs that incorporated modifications of ethnic food recipes and culturally appropriate food guides have shown modification of African-American women’s nutrition practices.^{19,51}

African-American women in the present study had a significantly higher need than did Caucasian women, for both continued one-on-one weight reduction counseling with their primary care physician as well as group meetings that stressed modification of their culture-specific food. This was also true after adjusting for demographic differences between the groups. The need for an increased role by their primary care physician in helping them lose weight by meeting with them individually and in a group setting was also expressed in the African-American focus groups.²⁵ In a review of 11 studies of weight-loss interventions targeted for African-American women, Bronner and Boyington⁵² found that elements of successful models included group sessions as well as individual centered counseling.

Although primary care and general internal medicine physicians have the opportunity to have a significant impact on intervening with weight-loss counseling for their overweight and obese patients, physicians in these settings rarely address weight-control strategies with them.²⁴ Lack of time and/or reluctance to discuss issues that their patients may perceive as stigmatizing or insulting may be reasons for this inattention to weight counseling in primary care or general internal medicine clinics. Although it is beyond the scope of this research to further explore this issue, our findings suggest that an alternative method of delivering weight-management interventions may exist for a segment of the population who are seen in these settings. Shared medical visits are a new concept in patient care. These visits last 90 minutes and are led by a physician, a behaviorist (e.g., a social worker, nurse practitioner, nurse or health psychologist).⁵³ African-American women who are obese may benefit from shared medical visits focused on culture-spe-

Appendix 2. Multivariable results for Table 2 (cumulative logit regression)

Outcome Variables	Odds Ratio (95% CI) Comparing Caucasians vs.		Additional Covariables in Model				
	African Americans	P Value	Marital Status	Income	DM	BMI	Education
One-on-one help from PCP	3.34 (1.74, 6.39)	<0.001	0.26	0.83	0.80	0.23	0.12
Team meetings with PCP, dietician, other women	2.36 (1.26, 4.26)	0.007	0.34	0.76	0.53	0.09	0.73

PCP: primary care physician

cific weight-loss interventions. In these shared visits, more time is spent educating a group of patients about a specific health-related topic because it is an issue for many participants.⁵³ In the area of diet change, continued contact with qualified and experienced treatment providers has been shown to improve treatment outcomes,⁵⁴ and social support has been shown to influence health outcomes by encouraging individual behavior change.⁵⁵

Because obesity and type-2 diabetes are more prevalent in African-American women than Caucasian women, diabetes self-management would be an important component of these visits. Indeed, in previous randomized studies of patients with type-2 diabetes, patients who participated in shared visits had fewer emergency room visits, fewer disability days,⁵⁶ decreased hemoglobin A1c levels and decreased weight loss⁵⁷ than patients who received usual care.

Limitations of the Study

This study may be limited by the low response rate and the method used for recruiting obese patients. We used the ICD-9 codes for obesity to recruit participants for the present study. Physicians may not code for obesity because of lack of insurance coverage for these diagnoses or fear of “labeling” their patients, or may use these codes only for morbidly obese women or obese women with multiple medical problems. Therefore, the use of ICD-9 codes to recruit participants may have underestimated the number of women who met the criterion for obesity (BMI ≥ 30) and may have resulted in a biased sample of morbidly obese women or obese women with multiple medical problems.

Another limitation in our study concerns the issue of generalizability. Because our sample of obese women was recruited from a general internal medicine setting at one site in the midwest, our findings may not be representative of other obese women in different settings and geographic regions of the country. In addition, what is reported in this study is what subjects “think” would help them decrease their weight, and the methods should be tested in practice to see what actually works. Despite these limitations, this is the first study to document the preferences of African-American and Caucasian women in a general internal medicine patient setting. Differences in preferences about weight-loss interventions have important policy implications for how the U.S. healthcare system provides care to an ever-increasing multicultural population with a national epidemic, such as obesity. Information from this study will facilitate the design and implementation of culturally sensitive weight-reduction programs for African-American women, potentially resulting in long-term weight loss, and improved health status and quality of life, as well as reduced medical costs for this group. Such successful weight reduction programs would confirm the value of an individual’s perception in weight management.

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