Obese African-American Women's Perspectives on Weight Loss and Bariatric Surgery

Cheryl Sterling Lynch, MD, MPH¹, Judy C. Chang, MD, MPH^{1,2}, Angela F. Ford, PhD, MSW³, and Said A. Ibrahim, MD, MPH^{1,4}

¹Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; ²Departments of Obstetrics, Gynecology and Reproductive Sciences and Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; ³Center for Minority Health, Graduate School of Public Health, University of Pittsburgh, PA, USA; ⁴Center for Health Equity Research and Promotion (151-C), VA Pittsburgh Healthcare System, Pittsburgh, PA 15240, USA.

BACKGROUND: African-American (AA) women have higher rates of obesity and obesity-related diseases but are less likely than other women to undergo bariatric surgery or have success with conventional weight loss methods.

OBJECTIVE: To explore obese AA women's perceptions regarding barriers to weight loss and bariatric surgery.

DESIGN: Focus groups to stimulate interactive dialogue about beliefs and attitudes concerning weight management.

PARTICIPANTS AND APPROACH: We partnered with a community organization to recruit women who were AA, were \geq 18 years old, and had a body mass index (BMI) of \geq 30 kg/m². We audiotaped the 90-minute focus groups and used content analysis for generating and coding recurring themes.

RESULTS: In our sample of 41 participants, the mean age was 48.8 years and mean BMI was 36.3. Most participants were unmarried, had some postsecondary education, and reported good or fair health. About 85% knew someone who had undergone bariatric surgery. Qualitative analysis of 6 focus group sessions revealed that the most common barriers to weight loss were lack of time and access to resources; issues regarding self-control and extrinsic control; and identification with a larger body size. Common barriers to bariatric surgery were fears and concerns about treatment effects and perceptions that surgery was too extreme or was a method of last resort.

CONCLUSIONS: Only through the elimination of barriers can AA women receive the care needed to eliminate excess weight and prevent obesity-related morbidity and mortality.

 $\it KEY WORDS: African American; obesity; body mass index; weight loss; bariatric surgery.$

DOI: 10.1007/s11606-007-0218-0

 $\ensuremath{\mathbb{C}}$ 2007 Society of General Internal Medicine 2007;22:908–914

Received October 19, 2006 Revised April 5, 2007 Accepted April 11, 2007 Published online April 20, 2007

INTRODUCTION

In the United States, where obesity ranks as the second leading cause of preventable deaths, 1 nearly 50% of African-American (AA) women and 30% of white women are obese. $^{2-4}$ Obesity increases the risk for several chronic medical conditions that adversely affect morbidity and mortality rates, particularly in AA adults. $^{3.4}$ With reductions in excess body weight, these conditions can often be prevented or lessened in severity. $^{6-8}$ Therefore, the design and implementation of effective preventive measures have become important public health and research priorities.

In studies examining risk reduction via conventional methods of dietary changes and exercise, losing a modest amount of weight (10% excess weight) leads to an improvement in obesity-related conditions $^{9-12}$ and a decreased risk of death. 13 A meta-analysis of long-term weight maintenance studies utilizing behavioral interventions (very low calorie diet and hypo-energetic balanced diet) revealed that greater weight loss $(\geq 20 \text{ kg})^{13}$ or longer-term reduced weight $(\geq 2 \text{ years})^{14}$ lessens the likelihood of weight regain.^{5,13} Decreased caloric intake, increased exercise, and use of professional services $^{15-19}$ result in successful weight reduction among AA and white women alike. 19,20 However, racial/ethnic differences in the extent of weight loss have been demonstrated whether behavioral methods, ^{19,21} medical therapies, ^{22,23} or surgical approaches ²⁰ are employed. AA women lose less excess weight and fat mass than their white counterparts, which holds true even when pre-weight loss anthropometric parameters (e.g., body mass index, waist-hip ratio, or thigh circumference) are similar.²⁰ The reasons behind this discrepancy remain unclear.

In recent years, surgical weight loss methods (bariatric surgery) have grown exponentially. A 400% increase in procedures was estimated between 1998 and 2002²⁴ and >100,000 procedures nationwide in 2003.^{25,26} Several studies emphasize that bariatric surgery is the most effective means of treating severe obesity. One of treating severe obesity. A recent meta-analysis shows that gastric bypass (most commonly performed) can eliminate 60% or more of excess weight nest commonly performed or eliminate improvements in obesity-related comorbidities, thereby reducing the number of potential years of life lost. Despite escalating rates, major concerns remain about the risks associated with this elective surgery. The anatomic alterations leave potential for metabolic and nutritional complications, such as malnutrition and mineral and vitamin deficiencies, that likely require life-long follow-up. The extended (>25–

30 years) view of surgical effects is unknown and, although shorter-term successes are substantial, patients who do not adhere to diet and exercise recommendations are at high risk of weight regain. Weight loss, then, has limited success without long-term lifestyle and behavioral modifications, regardless of which method is instituted.

Health care utilization patterns show that the vast majority of patients undergoing bariatric surgery are female^{7,10,30} and patient preference plays a crucial role in these patterns.³⁰ Given growing interest and performance of bariatric surgery as well as knowing that AA women have the highest obesity rates,^{3,27} have less success with various weight loss methods,^{15,20} and are less likely to use bariatric surgery,²⁸ it is imperative for health care professionals to understand factors that influence their decisions about how to deal with excess weight. The objective of our study was to explore the perceptions of obese AA women and describe factors that represent barriers to their weight loss in general and to their use of bariatric surgery in particular.

METHODS

Research Design and Recruitment

Issues surrounding weight are sensitive topics that elicit a complex set of attitudes and beliefs based on individual experiences and cultural practices. Therefore, we chose a qualitative method involving discussions in a focus group setting; allowing us to obtain perspectives about obesity and obesity management, without limiting participants to responding to a set of predetermined questions, and explore in-depth this socially and personally sensitive subject. The plan was to congregate participants in a nonthreatening location with an atmosphere that would encourage interactive and dynamic dialogue and the sharing of views, ideas, experiences, and feelings. This type of qualitative groundwork is an important precursor to larger-scale studies and to the design and implementation of interventions appropriate to minority populations.

Individuals called in for eligibility screening and were eligible to participate if they were AA women, were at least 18 years old, were obese (as defined by a body mass index [BMI] of at least 30 kg/m 2 , based on their self-reported height and weight), were living in the greater Pittsburgh area, and were willing to provide a signed informed consent to participate in a focus group session. They were excluded if they did not speak English as their primary language.

The study was approved by the Institutional Review Board of the University of Pittsburgh and was implemented collaboratively with a community partner, the Black Women and Health Outreach for Longer Life and Empowerment (BWHOLE). Members of BWHOLE are AA women drawn from all walks of life, including professional working women (in business, industry, medicine, and academia), nonprofessional laborers, students, and stay-at-home mothers. This organization is heavily focused on health promotion for minority women and provides a network of information, resources, and support concerning medical, social, environmental, and spiritual issues.

BWHOLE helped recruit study participants via 3 mechanisms: posting advertisements at strategic locations (e.g., community centers and churches) in predominantly AA neighborhoods; distributing flyers to employees of a children's daycare program serving several local public housing sites;

and sending electronic messages (e-mails) to key BWHOLE contacts to solicit interested participants.

Our recruitment goal was to conduct 4 or more focus groups, with 6–10 participants each, a number considered optimal for effective focus group communication. We provided women with information about the date and time of their focus group session, the location (usually a community facility), and directions to the location. We indicated that the focus group interview would last about 90 minutes and would be accompanied by a meal (usually dinner). We also provided a \$25 gift certificate to compensate each person for her time. We informed participants that joining the group discussion served as their consent and reminded them of this at the beginning of each focus group.

Data Collection

During the eligibility screening telephone call, we requested and obtained information regarding sociodemographic and health-related information, including age, weight, height, marital status, living arrangements, education, income, general health condition, and whether weight loss surgery (bariatric surgery) had been tried.

For use during the sessions, we developed a list of openended questions (see Appendix) to gather specific information and facilitate discussions concerning weight reduction and management, factors contributing to the success or failure of participants' previous attempts at weight loss, and knowledge and attitudes regarding weight loss surgery and its outcomes. Examples of questions included the following: "What goes on in your life that makes it difficult for you to lose weight?" "What would influence you to consider weight loss surgery for yourself?" During the sessions, 2 AA women who had received training in qualitative research methods and focus group methodology acted as group moderators. The primary moderator (AF) had much practical experience conducting focus groups, particularly among the AA population, and worked to put the participants at ease and facilitate open discussion. The second moderator (CL) assisted with audiotape equipment and taking notes, then later took a greater role in facilitating discussions. Before beginning each focus group, the moderators met to review techniques for minimizing leading questions and encouraging open discussion. After the discussions concluded, the moderators spent 10-15 minutes reviewing what the focus group process and taking notes on what questions elicited more open responses and active exchange among the participants. All sessions were audiotaped and subsequently transcribed by an experienced transcriptionist.

Data Analysis

We used self-reported height and weight to determine the BMI of each individual. In addition to calculating the mean BMI and mean age for the overall group, we calculated the frequencies and percentages of other sociodemographic and health-related information reported by the participants.

We used ATLAS.ti 5.0^{31} to organize data transcribed from focus group sessions. Initially, 2 coders independently identified phrases of similar meaning, assigned theme-based codes, and then categorized them. When necessary, an adjudicator arbitrated any differences in interpretation. Via an iterative process of content analysis where categories were derived

inductively, ^{32,33} the 2 coders generated a final coding scheme. By applying the final coding scheme to all transcripts, they identified common themes concerning weight loss in general and bariatric surgery in particular. We achieved thematic saturation, or redundancy of themes, such that no new information was presented, by the fifth and sixth focus groups.

RESULTS

Participant Characteristics

A total of 41 women participated in 6 focus group sessions. As shown in Table 1, the mean age of participants was 48.8 years, and the mean BMI was 36.3. Most participants were unmarried, had more than a high school education, and had an annual income in the lowest of the 3 strata (<\$20,000). Nearly all participants rated their health as good or fair. The vast majority said they knew someone who had undergone bariatric surgery, although 11% had personally undergone this surgery.

Barriers to Weight Loss

While the participants recognized losing weight was a desirable and important goal, they described 3 main types of barriers to successful weight loss. These barriers are outlined in Table 2 and described below.

Lack of Time and Access to Resources. Women identified numerous challenges to finding time and resources necessary to implement changes in eating and exercise habits. Individual-

Table 1. Baseline Characteristics of the 41 Focus Group Participants*

Characteristic	Number (%)
Age in years, mean ± SD	48.8±14.7
Body mass index, mean ± SD	36.3 ± 7.5
Marital status	
Never married	18 (43.9)
Married	7 (17.1)
Divorced or widowed	16 (39.0)
Living arrangements	
Alone	8 (19.5)
With spouse or significant other	8 (19.5)
With children	18 (43.9)
Other	4 (9.8)
Education	
Less than high school	1 (2.4)
High school graduate or equivalent	7 (17.1)
More than high school	32 (78.0)
Income	
<\$20,000	21 (51.2)
\$20,000-\$34,999	12 (29.3)
≥\$35,000	5 (12.2)
Self-rated health	
Poor	1 (2.4)
Fair	15 (36.6)
Good	23 (56.1)
Excellent	1 (2.4)
Knew someone having weight loss surgery	
Yes	34 (85.0)
No	6 (15.0)

Because of missing cases, percentages may not all total 100.

Table 2. Obese African American Women's Perceptions Regarding Barriers to Weight Loss and Bariatric Surgery

Type of barrier	Examples
Barrier to weight loss	
Lack of time and access to resources	Time limited by responsibilities to family, friends, and work. Access to weight management limited by costs and insurance coverage
Issues regarding control (intrinsic and extrinsic)	Lack of dietary self-restraint: "I am my own worse enemy."
	Food as a source of pleasure or comfort: "I like food [and I] don't have any willpower to push away from the table or just say no, just because it's there and I like it." Recommendations from others about good dietary practices: "It's too
Identification with a larger	much." Sense of belonging: "In my family,
body size	every woman easily weighed over 200 pounds [I waited] to grow so I could look like my grandmother and my
	mother and be in sync with the family."
	Pressure to conform: "I think there is
	not a lot of 'big girl love' in the world, and I hope that all the big girls and
	little girls and everybody in between
	can be who they are without the pressure to change."
	Changed relationships after weight loss: "I was okay when I was the fat girlfriend."
Barrier to bariatric surgery	grimena.
Fears and concerns about the effects of bariatric surgery	Surgical complications: "You talk to the doctors [and] they tell you all the things that aren't good You can bleed to deathis what is scaring
	me from going back and having it." Concerns about having no control over
	the amount of weight lost: "You are so used to seeing them [look heavy that when] they drop that weight so fast,
	you think they look sick." Physical and lifestyle restrictions: "It's
	like a trend in my family. It started with my one aunt thenmy other
	auntthen my mom went [when]
	they told her [that] her knees were getting bad because of all the weight, soshe had the surgery [and] it was very scary knowing that they went
	through that [and then they] can't eat for a long time."
Perceptions that bariatric surgery is too extreme	Perceptions that bariatric surgery is
	not worth the risk: "I've heard people die from it, and I don't want to put
	myself at that risk." Perceptions that bariatric surgery is an
	option of last resort: "I don't know,
	sometimes I just feel like I've tried everything and nothing has worked
	so why not give this a shot."

level barriers included lack of time remaining after fulfilling work, family, and social obligations; limited economic resources, which place restrictions on food choices; and difficulty accessing equipment or classes needed to increase physical activity. Systems-level factors included general lack of insurance coverage for nonsurgical weight management options and restricted availability of exercise facilities. In many

cases, the participants described how these factors interacted, thereby compounding the difficulty of managing their weight.

Issues Regarding Control. Participants discussed both intrinsic and external forms of control. Many women said they had difficulty regulating the amount of particular types of foods they consumed or had problems maintaining control of their dietary intake over time. In this regard, 1 participant admitted, "I am my own worst enemy." Another declared, "I like food [and I] don't have any willpower to push away from the table or just say no..." In addition to perceiving food and eating as enjoyable, many participants felt it helped them deal with emotional and psychological stressors. For example, 1 participant stated, "If it was a bad day, if 1 piece of chocolate is good then ten gotta be better." Similarly, another participant described how she accommodates temptation by allowing herself to indulge in poor eating during a "cheat day" if she promises to adhere to a healthier diet during the remaining days of the week. Participants believed their body cues for hunger were somehow geared toward improper eating habits, such as latenight eating and waking from sleep to eat then return to bed. Despite understanding the ramifications of these behaviors, some reported lacking the will to fight them.

With the responsibility for feeding the family, many women reported feeling the need to cater to food preferences of their family members, which exposed them to diets that were not necessarily healthy. Participants also expressed feeling that decisions about healthier eating are highly influenced (and not always positively) by the opinions of immediate family members on a daily basis and by opinions of extended family members during gatherings for holidays and other special occasions. Participants discussed the imposition having to worry about their weight and weight loss presented in their lives. They also expressed concern that pressures and recommendations regarding weight loss could dominate their lives. For example, after describing a long list of lifestyle changes suggested by a health care practitioner, 1 woman said in frustration, "It's too much."

Identification with a Larger Body Size. Most participants indicated their female relatives were consistently of a larger body size, and mirroring the appearance of these relatives brought them a sense of belonging. This sentiment was best reflected in the following statement: "In my family, every woman easily weighed over 200 pounds.... [I waited] to grow so I could look like my grandmother and mother and be in sync with the family."

As the conversation flowed and the participants felt more comfortable talking about physical appearances, many seemed indignant about the pressure to conform to a limited definition of beauty and health. As 1 woman argued, "I think there is not a lot of 'big girl love' in the world, and I hope that …everybody… can be who they are without the pressure to change."

Although participants had many positive things to say about weight loss, they discussed several scenarios in which weight loss elicited negative feelings and comments. In some cases, they described how personal relationships and feelings of identity changed after 1 person was more successful losing weight than another. For example, relationships between women friends sometimes became more competitive and less supportive. A few women admitted that when close friends or

relatives lost considerable weight, their relationships suffered in that they could no longer shop at the same stores, wear one another's clothes, and participate in the kinds of bonding activities that preserved and strengthened their friendships. "I was okay when I was the fat girlfriend," 1 participant lamented. This sense of losing identity and companionship that accompanied weight reduction was difficult to deal with and made participants question whether losing weight was worth the effort. In another instance, participants described how somebody's weight loss was erroneously attributed to the use of illicit drugs or to the effects of a disease such as cancer. Some participants found discussions of these types of scenarios to be offensive and discouraging, as they thought the focus should be on the benefits of weight loss, including increases in energy and activity levels, improvements in health and appearance, and ability to fit into smaller clothing.

Barriers to Bariatric Surgery

When asked about bariatric surgery, participants tended to discuss concerns about expected and unexpected effects of surgery and to express the belief that this method of weight loss was too extreme (Table 2).

Fears and Concerns about the Effects of Bariatric Surgery.

Participants perceived bariatric surgery to be a new approach to treating obesity. They were aware the surgery greatly facilitates weight reduction, but they had many fears and concerns about the risks, complications, and results of surgery. Their fears often stemmed from "horror stories" described by acquaintances that had undergone bariatric surgery. In 1 case, a participant described a woman who had to remain in the hospital for a year or more and was unable to eat without severe pain.

Participants were apprehensive about having little control over how much weight was lost with surgery. As discussed earlier, some women expressed a preference for larger body sizes, so it was difficult for them to adapt to people's postsurgical appearance. One woman, for example, commented, "You are so used to seeing them [look heavy that when] they drop that weight so fast, you think they look sick."

The participants knew bariatric surgery was not an "end-all" operation, and they understood that individuals who had surgery would regain their weight if they failed to change their eating and activity habits after surgery. When participants talked about celebrities having this surgery and regaining weight, they questioned the rationale for putting oneself at such risk and not adhering to a postsurgical plan.

Perceptions that Bariatric Surgery is Too Extreme. Most participants voiced strong negative perceptions about surgery as a weight loss method. Some considered it a method of last resort and thought that only a "life or death situation" would justify its use. Others felt bariatric surgery may be a last resort, for example, if obesity was caused by circumstances beyond one's control (e.g., a genetic disorder) or if an obese but otherwise healthy person had tried repeatedly to lose weight through nonsurgical methods. Regarding personal choice, some believed the risk of the surgical procedure was too great: "...people die from it, and I don't want to put myself at that risk." However, others were willing to consider it where 1

participant said, "... sometimes I just feel like I've tried everything and nothing has worked so why not give this a shot." In general, however, the acceptability of bariatric surgery seemed to be greatest in cases in which the perceived risks of obesity outweighed the perceived risks of surgery.

DISCUSSION

In our community-based qualitative study examining obese AA women's perceptions of weight loss and bariatric surgery, we found the most common barriers to weight loss were lack of time and access to resources, issues regarding control, and identification with a larger body size. The most common barriers to bariatric surgery were fears and concerns about its effects and perceptions that it was too extreme or was a weight loss method of last resort.

This study shared features with prior qualitative studies in several regards. Similar to our results, the notion of control within oneself (intrinsic) or outside oneself (extrinsic) was reported in a comparative case study between 2 non-Hispanic white women.³⁴ The authors indicated that while losing weight, each woman used a preferential method of support through either establishing a workable routine for herself (internalization) or having an externally imposed system of guidance (e.g., Weight Watchers; externalization) to initiate and remain motivated to maintain desired changes in eating and exercise habits.³⁴ Another key theme across weight-focused studies presented that many individuals lack the financial freedom to afford or gain access to several methods of weight reduction, such as healthier foods and exercise programs or facilities. 34-36 Additionally, there were predominant concerns about obligations to family, friends, and work³⁷ and issues with emotional eating. 34,37 In these types of situation, successful weight loss is less likely to be attained, regardless of race/ethnicity.

Although earlier studies have addressed the issue of race/ ethnicity and attitudes related to weight, 17,38-40 few have provided an in-depth review of AA women's perceptions about barriers to weight loss. One recent in-depth study found both AA and white participants struggled with their weight but, similar to our findings, AA women were more likely to face culture-specific barriers to weight loss, such as dietary choices based on family influence than their counterparts. 41 Looking at body image and weight studies reveals that although both AA women and white women desired weight loss, 18,25,42,43 AA women expressed an acceptance of larger body types and were not as distressed by their heavier weight.³⁰ However, it cannot be inferred that AA women want to remain overweight. On the contrary, studies of satisfaction with body size show that AA women with higher BMIs have lower levels of satisfaction with their size and want to lose weight. 17,44 One study has offered evidence to refute the notion that race/ethnicity is a major determinant of tolerance for obesity, which revealed that although women were more critical of body size than men there was no difference for body size preference or for tolerance of obesity across ethnic groups (Asian, Hispanic, black, and white). 16 These previous findings suggest acceptance of larger body types may not be exclusive to AAs but women, in general, are more concerned about their physical attractiveness than men.

Further research among AA women found "both health and looks" motivated dieting behavior 17 and surgical weight loss

through gastric banding^{41,45}; however, physical appearance was the primary motivation among women with higher weights. 17 Another study suggested the driving force behind losing weight shifted from physical appearance in younger women to health concerns in older women. 41 Yet, similar to our results, the women in this latter study also recognized a focus on weight played a major part in their lives and was perpetuated by media attention on physical appearance and beauty.41 A consensus was reached among our focus group participants, supporting the notion that society generally perceives thinner body types as more attractive. This seemed somewhat unmotivating for some women, whereas some others advocated for more widespread acceptance of "big girls". Despite concerns about physical attributes, we should consider that an important determinant of adopting healthy behaviors is more related to age than gender or race/ethnicity.

More distinctive results from our study included identification with larger body size as well as views regarding barriers to bariatric surgery. Women indicated that mirroring the body type of female relatives fostered a sense of belonging within their family unit. This identity appeared to be lost when weight loss and a smaller body frame was achieved. Therefore, it is not a stretch in imagination to connect this idea of altered identity with participants' articulating reduced control over the process and extent of surgical weight loss. Whereas some women felt surgery is too extreme a method, a few appeared willing to entertain the idea of surgery as a last resort option when they perceived a high risk of ill health. Not surprisingly, our participants also expressed major reservations about undergoing obesity surgery relating to complications and mortality.

No known studies have provided data regarding open-ended perspectives of bariatric surgery among AA women. Few have examined patient motivations for getting this weight loss surgery done. Two such studies had participants with a mean age of 41–42 years and mean BMI of 46–47 with results signifying health as 1 of the primary reasons for undergoing bariatric surgery. Another suggests that primary motivation does not affect weight outcomes. These studies do not clarify the perceptions of bariatric surgery among AA women, so this is a particular strength of our study.

Indications for bariatric surgery depend on BMI and/or the presence of comorbid conditions with a primary purpose of improving an individual's long-term health outlook. Though modest weight loss improves obesity-related diseases^{9–11} and long-term success is possible, some may still view this surgery as cosmetic. Interestingly, a recent article examining motivations for cosmetic surgery found that social acceptance and body image were the strongest predictors for a desire to undergo cosmetic procedures.⁴⁷ Whether this finding holds true for individuals considering bariatric surgery is not certain. However, as an increasing number of people experience successful results from bariatric surgery, it will likely become more widely accepted and utilized.

Our study has several limitations that deserve mention. First, because it focused on obese AA women in 1 region, its findings might not be generalizable to non-obese women or to the nation at large. Second, our study did not examine how attitudes may vary in the context of clinical decision making. It is conceivable that participants might have had different views about weight loss if they had been asked to make a clinical decision about treatment of their obesity. Third, we did not specifically assess or report on motivation for weight loss,

which can be a powerful factor for behavior change. Finally, like most qualitative studies, our study used a relatively small sample. However, by the last set of focus groups, we achieved thematic saturation.

Our findings emphasize that AA women face a variety of barriers affecting their behaviors and attitudes concerning weight loss via the use of conventional methods and bariatric surgery. As medical decision making can be driven by one's attitudes, beliefs, values, and opinions, it is imperative that health professionals notice these behavior-related attributes. Furthermore, health care providers need to recognize the obstacles to weight loss for their patients and assist in individualizing appropriate therapies. Through overcoming these barriers we can direct appropriate care and resources to reduce excess weight and prevent the chronic medical problems that commonly accompany obesity.

Acknowledgments: This research was supported by the EXPORT Health Project at the Center for Minority Health (CMH), Graduate School of Public Health, University of Pittsburgh, NIH/NCMHD Grant No. P60 MD-000-207-03 and the Division of General Internal Medicine, School of Medicine, University of Pittsburgh. Sincerest thanks to our collaborating partners for their efforts with recruitment and data management and analysis—CMH and Black Women's Health and Outreach for Longer Life and Empowerment (BWHOLE) and University Center for Survey and Urban Research, University of Pittsburgh—R. Schulz, S. Shulman. Finally, we express our gratitude to Laurel Person, Natalie Solomon, and Andrea Arrington who assisted in data collection and analysis.

Conflict of Interest: None disclosed.

Corresponding Author: Said A. Ibrahim, MD, MPH; Center for Health Equity Research and Promotion (151-C), VA Pittsburgh Healthcare System, Pittsburgh, PA 15240, USA (e-mail: said. ibrahim2@med.va.qov).

APPENDIX

Focus Group Interview Guide

Opening question:

(1) What are your thoughts or opinions about weight and how it relates to health?

Transitional questions:

- (2) What comes to mind when you think about ways to lose weight?
- (3) What would be some positive changes in your life if you lost weight?
- (4) What goes on in your life that makes it difficult for you to lose weight?

Key questions:

- (5) How much weight do you think you need to lose to be satisfied?
- (6) How hard do you think you need to work at losing weight?
- (7) Have you heard about weight loss surgery? If so, what comes to mind when you think of it?
- (8) What would influence you to consider weight loss surgery for yourself?

Concluding question:

(9) What is the one burning comment or piece of information that you want to add that I did not ask about?

REFERENCES

- Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-45.
- Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999– 2004. JAMA. 2006;295(13):1549–55.
- Flegal KM, Carroll MD, Ogden CL, Johnson CL. Prevalence and trends in obesity among US adults, 1999–2000. JAMA. 2002;288(14):1723–27.
- Wechsler JG, Leopold K. Medical management of obesity. Langenbecks Arch Surg. Dec 2003;388(6):369–74.
- McTigue KM, Harris R, Hemphill B, et al. Screening and interventions for obesity in adults: summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med. 2003;139(11):933–49.
- Residori L, Garcia-Lorda P, Flancbaum L, Pi-Sunyer FX, Laferrere B.
 Prevalence of co-morbidities in obese patients before bariatric surgery: effect of race. Obes Surg. 2003;13(3):333–40.
- Choban PS, Jackson B, Poplawski S, Bistolarides P. Bariatric surgery for morbid obesity: why, who, when, how, where, and then what? Cleve Clin J Med. 2002;69(11):897–903.
- Presutti RJ, Gorman RS, Swain JM. Primary care perspective on bariatric surgery. Mayo Clin Proc. 2004;79(9):1158–66; quiz 1166.
- McGuire MT, Wing RR, Klem ML, Hill JO. Behavioral strategies of individuals who have maintained long-term weight losses. Obes Res. 1999:7(4):334–41.
- Buchwald H, Avidor Y, Braunwald E, et al. Bariatric surgery: a systematic review and meta-analysis. JAMA. 2004;292(14):1724–37.
- Sjostrom CD, Lissner L, Wedel H, Sjostrom L. Reduction in incidence of diabetes, hypertension and lipid disturbances after intentional weight loss induced by bariatric surgery: the SOS Intervention Study. Obes Res. 1999;7(5):477–84.
- Avenell A, Brown TJ, McGee MA, et al. What interventions should we add to weight reducing diets in adults with obesity? A systematic review of randomized controlled trials of adding drug therapy, exercise, behaviour therapy or combinations of these interventions. J Hum Nutr Diet. 2004;17(4):293–316.
- Anderson JW, Konz EC, Frederich RC, Wood CL. Long-term weightloss maintenance: a meta-analysis of US studies. Am J Clin Nutr. 2001;74(5):579–84.
- 14. Wing RR, Hill JO. Successful weight loss maintenance. Annu Rev Nutr. 2001;21:323-341.
- Tyler DO, Allan JD, Alcozer FR. Weight loss methods used by African American and Euro-American women-QUALIT. Res Nurs Health. 1997;20(5):413–23.
- Cachelin FM, Rebeck RM, Chung GH, Pelayo E. Does ethnicity influence body-size preference? A comparison of body image and body size. Obesity Res. 2002;10(3):158–66.
- Kumanyika S, Wilson JF, Guilford-Davenport M. Weight-related attitudes and behaviors of black women. J Am Diet Assoc. 1993;93 (4):416-22.
- Serdula MK, Mokdad AH, Williamson DF, Galuska DA, Mendlein JM, Heath GW. Prevalence of attempting weight loss and strategies for controlling weight. JAMA. 1999;282(14):1353–58.
- Wing RR, Anglin K. Effectiveness of a behavioral weight control program for blacks and whites with NIDDM. Diabetes Care. 1996;19(5):409–13.
- Buffington CK, Marema RT. Ethnic differences in obesity and surgical weight loss between African-American and Caucasian females. Obes Surg. 2006;16(2):159–65.
- Daly A, Konz EC, Soler N, Anderson JW, Yergler C, Carpenter P. Successful long-term maintenance of substantial weight loss: one program's experience. J Am Diet Assoc. 2000;100(12):1456.
- Wadden TA, Berkowitz RI, Womble LG, et al. Randomized trial of lifestyle modification and pharmacotherapy for obesity. N Engl J Med. 2005;353(20):2111–20.
- Sjostrom L, Rissanen A, Andersen T, et al. Randomised placebocontrolled trial of orlistat for weight loss and prevention of weight regain in obese patients. European Multicentre Orlistat Study Group. Lancet. 1998;352(9123):167–72.

- Encinosa WE, Bernard DM, Steiner CA, Chen CC. Use and costs of bariatric surgery and prescription weight-loss medications. Health Aff (Millwood, Va.). 2005;24(4):1039–46.
- Steinbrook R. Surgery for severe obesity. N Engl J Med. 2004;350 (11):1075–79.
- Buchwald H, Williams SE. Bariatric surgery worldwide 2003. Obes Surg. 2004;14(9):1157–64.
- Freedman DS, Khan LK, Serdula MK, Galuska DA, Dietz WH. Trends and correlates of class 3 obesity in the United States from 1990 through 2000. JAMA. 2002;288(14):1758–61.
- Schauer PR, Ikramuddin S, Gourash W, Ramanathan R, Luketich J.
 Outcomes after laparoscopic Roux-en-Y gastric bypass for morbid obesity. Ann Surg. 2000;232(4):515–29.
- Christou NV, Sampalis JS, Liberman M, et al. Surgery decreases longterm mortality, morbidity, and health care use in morbidly obese patients. Ann Surg. 2004;240(3):416–23: Discussion 423–14.
- Pope GD, Birkmeyer JD, Finlayson SR. National trends in utilization and in-hospital outcomes of bariatric surgery. J Gastrointest Surg. 2002;6(6):855–60: Discussion 861.
- 31. [computer program]. Version 3rd Edition. Berlin, Germany; 2005.
- Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. BMJ. 2000;320(7227):114–6.
- Krueger RA, Casey MA. Focus groups: a practical guide for applied research. 3rd ed. Thousand Oaks: Sage Publications; 2000.
- Hayward LM, Nixon C, Jasper MP, et al. The process of restructuring and the treatment of obesity in women-QUALIT. Health Care Women Int. 2000;21(7):615–30.
- 35. **Dietz W.** Focus group data pertinent to the prevention of obesity in African Americans. Am J Med Sci. 2001;322(5):275–8.
- Belza B, Walwick J, Shiu-Thornton S, Schwartz S, Taylor M, LoGerfo J. Older adult perspectives on physical activity and exercise: voices from multiple cultures. Prev Chronic Dis. 2004;1(4):A09.

- Walcott-McQuigg JA, Sullivan J, Dan A, Logan B. Psychosocial factors influencing weight control behavior of African American women. West J Nursing Res. 1995;17(5):502–20.
- Walcott-McQuigg JA, Chen SP, Davis K, Stevenson E, Choi A, Wangsrikhun S. Weight loss and weight loss maintenance in African-American women. J Natl Med Assoc. 2002;94(8):686–94.
- Walcott-McQuigg JA. Stress, women and weight control behavior.
 J Cult Divers. 1995;2(2):64–71.
- 40. Striegel-Moore R, Wilfley D, Caldwell M, Needham M, Brownell K. Weight-related attitudes and behaviors of women who diet to lose weight: a comparison of black dieters and white dieters. Obes Res. 1996;4 (2):109–16.
- Blixen CE, Singh A, Thacker H. Values and beliefs about obesity and weight reduction among African American and Caucasian women. J Transcult Nurs. 2006;17(3):290–7.
- Calle EE, Thun MJ, Petrelli JM, Rodriguez C, Heath CW, Jr. Bodymass index and mortality in a prospective cohort of U.S. adults. N Engl J Med. 1999;341(15):1097–105.
- Foster GD, Wadden TA, Makris AP, et al. Primary care physicians' attitudes about obesity and its treatment. Obes Res. 2003;11(10): 1168–77.
- Arfken CL, Houston CA. Obesity in inner-city African Americans. Ethn Health. 1996;1(4):317–26.
- Libeton M, Dixon JB, Laurie C, O'Brien PE. Patient motivation for bariatric surgery: characteristics and impact on outcomes. Obes Surg. 2004;14(3):392–8.
- Wee CC, Jones DB, Davis RB, Bourland AC, Hamel MB. Understanding patients' value of weight loss and expectations for bariatric surgery. Obes Surg. 2006;16(4):496–500.
- 47. von Soest T, Kvalem IL, Skolleborg KC, Roald HE. Psychosocial factors predicting the motivation to undergo cosmetic surgery. Plast Reconstr Surg. 2006;117(1):51–62; Discussion 63–54.