

Weight Loss Maintenance in African-American Women: Focus Group Results and Questionnaire Development

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BACKGROUND: African-American women are disproportionately affected by obesity. Weight loss can occur, but maintenance is rare. Little is known about weight loss maintenance in African-American women.

OBJECTIVES: (1) To increase understanding of weight loss maintenance in African-American women; (2) to use the elicitation procedure from the theory of planned behavior (TPB) to define the constructs of attitude, subjective norms, and perceived behavioral control regarding weight loss and maintenance; and (3) to help develop a relevant questionnaire that can be used to explore weight loss and maintenance in a large sample of African Americans.

DESIGN: Seven focus groups were conducted with African-American women: four with women successful at weight loss maintenance, three with women who lost weight but regained it. Discussions centered on weight loss and maintenance experiences.

PARTICIPANTS: Thirty-seven African-American women.

APPROACH: Content analysis of focus group transcripts.

RESULTS: Weight loss maintainers lost 22% of body weight. They view positive support from others and active opposition to cultural norms as critical for maintenance. They struggle with weight regain, but have strategies in place to lose weight again. Some maintainers struggle with being perceived as sick or too thin at their new weight. Regainers and maintainers struggle with hairstyle management during exercise. The theoretical constructs from TPB were defined and supported by focus group content.

CONCLUSIONS: A weight loss questionnaire for African Americans should include questions regarding social support in weight maintenance, the importance of hair management during exercise, the influence of cultural norms on weight and food consumption, and concerns about being perceived as too thin or sick when weight is lost.

KEY WORDS: African Americans; weight loss maintenance; theory of planned behavior; focus group.

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African-American women are disproportionately affected by overweight and obesity,^{1,2} and have a higher incidence of many of the diseases for which obesity is a risk factor.^{3,4} Consequently, excess weight is a key contributor to disparities in health. Numerous studies have explored issues of weight loss and physical activity among African-American women. Despite estimates that 70% of African-American women want to lose weight and nearly 50% are actively trying to lose weight,⁵ African-American women lose less weight than other ethnic groups⁶ and engage in weight loss methods for shorter periods of time.^{7,8} Although some studies have shown modest weight loss when interventions are specifically tailored for African-American participants,^{9–11} more knowledge is necessary for the development of interventions that promote not only significant weight loss but also weight loss maintenance.

WEIGHT LOSS MAINTENANCE

In all populations, successful initial weight loss often does not result in sustained weight loss.¹² Health benefits of weight loss are lost when the weight is regained.^{13,14} Among individuals successful with weight loss, few are able to maintain their new weight. Successful weight loss maintainers are a unique, important group from which useful information can be gathered. Their characteristics and strategies for weight loss maintenance can provide a basis for the development of successful weight loss and maintenance interventions.

Successful long-term weight maintenance is not well understood among African Americans, with only two studies that have examined weight loss maintenance. One assessed weight loss maintained at 32 weeks. Of 16 women who completed the 16-week acute weight loss program, 10 also completed the 16-week maintenance program and maintained a weight loss of 10.7 lbs. The women who completed the weight loss maintenance program demonstrated improved control regarding environmental hunger and eating cues compared to baseline.¹⁵ The second study included two focus groups, one of women who had lost at least 10 lbs and maintained the loss for 1 year and a second group who had initially lost 10 lbs but regained it. Themes gathered from the focus groups demonstrated that

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successful weight loss maintainers were motivated to lose weight by tight or poorly fitting clothes. They maintained their weight loss behaviors because they felt better, had more energy, and looked better in their clothes. They did not perceive foods as *good* or *bad*, but felt that almost all foods were acceptable within a balanced diet and an active lifestyle.¹⁶ Both studies were limited by few participants and small numbers of pounds lost. They do not fully explore social factors or facilitators and barriers to weight loss maintenance, nor do they include participants who achieved clinically significant weight loss.¹⁷

THEORY AND BEHAVIOR

Participation in both dietary and physical activities to promote or maintain weight loss is a complex process and is influenced by a variety of factors. The theory of planned behavior (TPB)¹⁸ was developed to explain the many factors that contribute to the adoption of specific behaviors¹⁹; in this case, weight-loss-promoting behaviors. The TPB postulates that a complex web of beliefs, attitudes, norms, and motivations interact to influence behavior (Fig. 1). A fuller understanding of these factors could allow the development of focused interventions that may be successful at promoting desired behaviors. The theoretical constructs underlying TPB have been shown to be effective in predicting physical activity and healthy eating in various populations.²⁰⁻²⁷ The theory has been applied to behaviors within African-American groups.^{28,29} However, for physical activity and healthy eating, most studies focused on only one or two of its constructs and were not designed using the TPB in its entirety.

African Americans have complex attitudes regarding weight loss. Most feel that weight loss and weight-promoting behaviors are beneficial to their physical health, mental health, and appearance and that these outcomes are positive.^{16,28,30} Other studies suggest that losing too much weight may be viewed as negative⁷ or that exercising too much may result in appearing too masculine.³⁰ The role of subjective norms in African Americans is less clear. Studies suggest that the influence of subjective norm is not clearly predictive of intention to perform weight loss behaviors;²⁹ however, it is possible that the collective African-American community and culture might have more social influence on an individual than one specific important other.²⁸

Facilitators and barriers that constitute perceived behavioral control have been well studied in African-American women as it relates to control over adoption of weight loss activities.

BARRIERS

Among African-American women and factors that hinder weight loss have been described. Frequent ones include the high cost of healthy eating and participating in physical activity.^{15,31-33} Other barriers include lack of social support from family and friends,^{15,34} lack of time, lack of motivation, lack of role models,³³ burden of family, and caregiving responsibilities,^{16,35} emotional stress,¹⁵ physical and health problems,^{30,33} as well as traditional foods and family eating expectations.^{32,36,37} African-American women describe lack of child care as a significant hurdle to engaging in physical activity.^{38,39} Two specific obstacles to exercise in their neighborhoods include concerns about

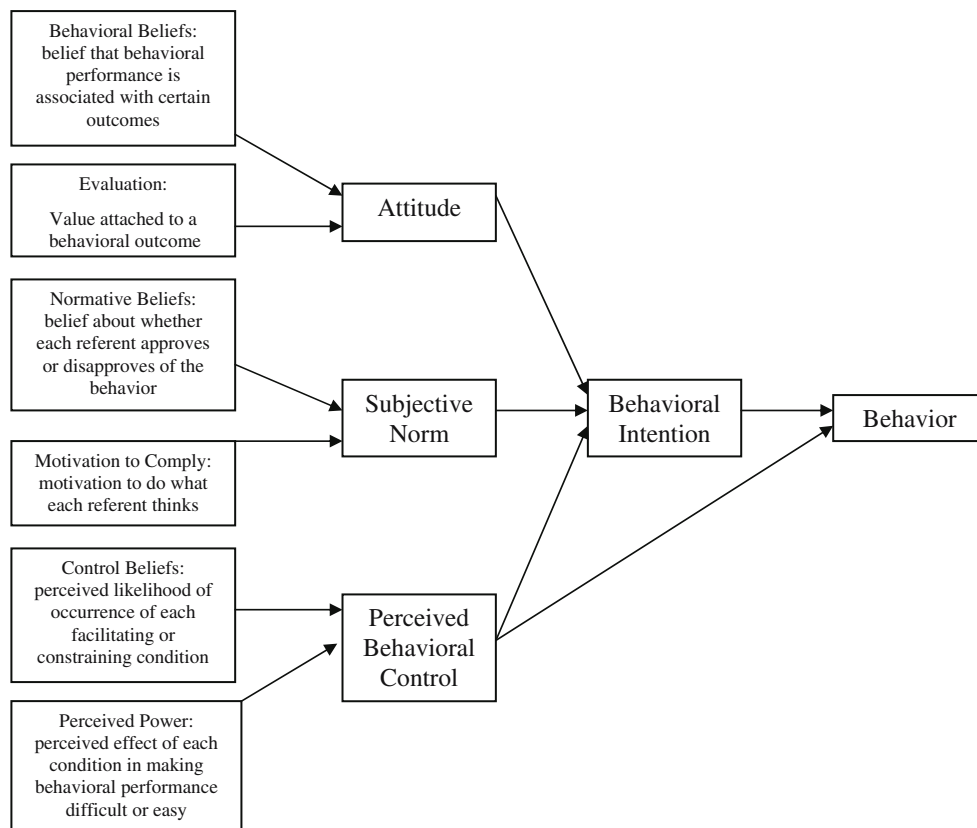


Figure 1. Theory of planned behavior. Adapted from Glanz et al.¹⁹

inclement weather^{39,40} and safety^{15,33}. Lastly, some studies demonstrate that overweight and obese African-American women are not satisfied with their bodies,³² whereas other studies suggest a higher level of body satisfaction at larger sizes among African-American women.⁴¹⁻⁴³ This tolerance of heavier weights is often used to explain reduced desire for weight loss.

FACILITATORS

In general, the factors that would promote weight loss activities are the opposite of the barriers described by African-American women. Low-cost food and physical activity options might increase engagement in weight loss efforts.³² Support from family and friends, provision of childcare, and relief from family and caregiving responsibilities would allow time for physical activity.³³ In addition, enjoyment of the type of physical activity performed could be motivating.³⁰ Weight management programs that include a weight maintenance component and are designed to address emotional and psychological concerns through spiritual means, in addition to weight, would be preferred by African-American women.³²

QUESTIONNAIRE DEVELOPMENT

The TPB has been used as a framework for the development of questionnaires.²¹ The TBP is grounded in the perspectives of the target population and requires eliciting the circumstances and factors involved in a behavior from the specific population in question.¹⁹ Focus groups are a useful means for eliciting the views of the study population regarding a specific behavior and are effective for the development or improvement of questionnaires in populations that have not been widely studied.^{36,44}

STUDY PURPOSE

African Americans who are successful long-term weight-loss maintainers are an important group from which strategies for weight loss and maintenance can be understood. This study will add to the limited literature a better understanding of weight loss maintenance among African-American women who have lost and maintained clinically meaningful amounts of weight.

The purpose of this focus group study is threefold: (1) to augment our understanding of successful weight loss maintenance in African-American women; (2) using the TPB, to explore the constructs of attitude, subjective norms, and perceived behavioral control regarding weight loss and maintenance in African Americans; and (3) to help develop a reliable, relevant, and valid weight loss questionnaire that can be used to explore weight loss and weight loss maintenance in a larger sample of African Americans.

METHODS

Study Design

We conducted seven focus groups from April 2004 to January 2005 to explore weight loss and maintenance experiences of African-American women. Each group was composed of African-

American women from a large urban city in the southwestern United States. Three of the groups included women who had lost at least 10% of their body weight and regained the weight (*regainers*). Four of the groups included women who had lost at least 10% of their body weight and had maintained the weight loss for at least 1 year (*maintainers*). The amount and duration of weight loss was provided by self-report. Self-report of weight has been demonstrated to be acceptable in other studies.^{45,46} All weight loss maintainers provided proof of their weight loss maintenance with either a before and after picture or a signed statement from a physician or significant other.

Eight open-ended questions were developed by the principal investigator and a group of advisors based on previous literature regarding weight loss and weight loss maintenance.^{7,16,34,47-51} Development of the questions was guided by the TPB to identify salient beliefs and experiences regarding weight loss and maintenance among African Americans.^{18,19} The guide questions (Table 2) were purposefully broad to encourage open discussion not simply limited to the TPB constructs. In addition, questions were developed to elicit open discussion about general weight loss experiences, motivations for weight loss, and strategies for overcoming barriers to weight loss and maintenance. The discussions allowed the participants to share their experiences and beliefs regarding weight control in their own words. The focus groups were conducted at the main campus of a medical school or in the family and community medicine offices. Each session lasted approximately 90 minutes.

Participants

African-American adults, 18 years old or older, were recruited for participation. Both men and women were recruited for the study; however, there were very few men who expressed interest in participating in a focus group about weight. Therefore, this study included African-American women only.

Recruitment

Recruitment was generated through a variety of methods. *Posters* describing the project were placed in two county-based clinical care sites. The county health system largely serves low-income, ethnic minority residents of the city and its surrounding area. *Radio advertisements* were broadcast from a local radio station with a primarily African-American audience. A *staff-wide email* of the poster was sent to medical center employees describing the project. *Word of mouth* method was used (e.g., participants told their friends and relatives about the project). Participants received a \$40 gift card for participation and completion of a focus group session. All participants provided informed consent in compliance with the Baylor College of Medicine Institutional Review Board requirements.

Data Collection

Focus group discussion using standard methods^{44,52} were used. The focus groups were moderated by trained researchers who were African-American women and were audiotaped and transcribed verbatim. The transcripts and demographic information provided by participants were the data for our analyses.

Analysis

The focus group transcripts were evaluated by a multiethnic team of men and women. The evaluators read each of the transcripts independently and identified the themes that emerged in response to the focus group guide questions. The evaluators then attended two separate meetings to discuss the themes of the focus groups: one for the regainers and another for the maintainers. During the analysis meetings, each evaluator reported the major thematic responses he or she identified in the transcript related to each guide question. All of the themes identified for each question were written on a board and discussed by the group. There were no new themes that emerged after review of the second transcript from each category (maintainers and regainers) of focus group discussions. A consensus was reached by the evaluators on the most important themes for each question. The selection of themes was supported by the number of times a specific response arose in the transcripts and the amount of concurrence or disagreement with that response by the other focus group participants.

RESULTS

Sample

All participants completed all or part of a demographic questionnaire (Table 1). There were 23 weight regainers and 14 weight maintainers. The age of the participants in each group was similar. The maintainer group lost more weight on average than the regainer group, 59.5 versus 37.1 lbs, respectively. The average current BMI for both groups at the time of the study was ≥ 29.5 .

Qualitative Findings

The broad themes extracted from the focus groups are shown in Table 2. Maintainers used a variety of weight loss methods and frowned upon the concept of *diets*. They understood that a balance between the food they ate and the exercise they did was critical to weight loss. Their weight loss was tied to the avoidance of embarrassment and negative self-image. Many of the women described self-perception or other's perception that their weight loss resulted in them being too thin or sickly. The maintainer group cited health concerns, physical attractiveness, looking good in clothes, and the attitude of their family and friends toward weight and weight loss as important motivators to their success. They also described avoidance of wearing larger sizes and paying for larger clothes as motivating. Lack of time for physical activity or healthy food preparation was described as a barrier to weight-loss-promoting behaviors. Resisting temptations and avoiding food-laden environments with family or coworkers was an obstacle to weight loss. Although management of hair did not emerge as a major challenge to weight loss, discussion of hairstyle management did emerge as a major theme when participants were asked how they overcame challenges related to weight loss. A variety of hairstyles and avoidance of exercise were offered as ways to address hairstyle concerns related to physical activity, sweat in particular. The women in the maintainer group described specific personal strategies they employed when they struggled with a challenge related to weight loss and they described open resistance to cultural and family norms regarding food quantity

Table 1. Sample Characteristics

	Maintainers	Regainers
Number of subjects	14	23
Mean age	40.4	43.7
Employed	12 (85%)	18 (82%)
Marital status		
Single	7 (50%)	9 (39%)
Married	2 (14%)	9 (39%)
Widowed	0	2 (9%)
Divorced	5 (36%)	3 (13%)
Highest level of education		
Less than high school	0	0
High school graduate	0	5 (22%)
Some college	4 (29%)	11 (48%)
College graduate	7 (50%)	5 (22%)
Graduate school	3 (21%)	2 (8%)
Mean start weight	234.3*	191.1*
Mean weight loss	59.5*	37.1*
Mean percent weight loss	22%*	19%*
Mean current weight	179.6	218.2
Mean BMI	29.5 [†]	36.0 [‡]

*Data missing on one maintainer participant and one regainer participant.

[†]Only 4 of the 14 maintainers have a BMI of less than 25. Five are obese by BMI and one is morbidly obese with a BMI of 46.32. Without including her in the calculation of mean BMI, the mean is 28.20.

[‡]One regainer participant had a BMI within the Centers for Disease Control and Prevention guidelines' normal range of 18.5 to 24.9 (23.01).⁵⁴

and type. For weight maintenance, the women described persistent vigilance regarding physical activity and food consumption; however, they admitted that they do regain weight at times. They identified tight fitting clothes as their cue to weight regain and had a specific personal strategies planned to reinstate weight loss if that occurred.

The women in the regainer group also used a variety of weight loss methods for weight loss, many of which were fad diets or over the counter supplements. They too cited health concerns and physical attractiveness as key motivators for weight loss. In terms of barriers to weight loss, women who had regained their weight felt that finding a balance between time for physical activity or healthy food preparation and other commitments and care giving responsibilities was a huge hurdle to weight loss. They felt that family and work environments with abundant, high-calorie food made it difficult for them to lose weight. Like the maintainer group, the women who regained weight did not identify hair management as a major challenge to weight loss, but did spontaneously discuss hair management when asked how they overcome challenges. They too described different hairstyling options and exercise avoidance as their response to the challenge. The regainer group offered a list of activities that should be done to lose weight, but did not describe strategies for overcoming obstacles to engaging in those activities. When asked what things resulted in their regaining weight, they revealed that laziness, lack of motivation, and inability to manage time were the primary causes of weight regain.

DISCUSSION

Our study is one of the few that has attempted to understand weight loss maintenance in African-American women. Our

Table 2. Focus Group Themes

Question	Maintainers	Regainers
1. Tell me about your experiences with losing weight?		
Major themes	Multiple weight loss attempts and multiple weight loss methods used Maintenance of a balance between food choice and physical activity is necessary Weight loss has been important to avoid embarrassment	Multiple weight loss attempts and multiple weight loss methods used Short-term success achieved
Minor themes	Do not engage in a diet, but a lifestyle change Difficult to resolve conflict between achieving a healthy weight and being perceived as too thin or sick	
2. What motivated you to lose weight?		
Major themes	Prevention and management of health conditions Avoidance of being physically unappealing to self and others Influence of family and friends' attitudes about weight	Prevention and management of health conditions Desire to look good in clothes Desire to be physically attractive to others
Minor theme		
3. What were the important reasons you were able to lose weight?		
Major themes	Positive support from others Influence of psychological and financial issues related to clothing Avoidance and management of health conditions	Desire to improve health appearance Desire to improve physical appearance
Minor theme		Influence of religious faith and prayer
4. What were the greatest challenges in losing weight?		
Major themes	Lack of time for physical activity and healthy living Expense of maintaining a healthy lifestyle Resisting temptation from environment and family Management of hairstyle during exercise	Influence of a food centered culture (ethnic, family, and general culture) Lack of time because of other commitments Impact of stressful life events Management of hairstyle during exercise
Minor theme		
5. How did you overcome the challenges?		
Major themes	Identify specific strategies for managing hair Implement strategies to counteract cultural and family norms Maintain cognitive vigilance to resist temptation	Identify specific strategies for managing hair Implement diet and physical activity strategies to promote weight loss
Minor theme		
6. How did you maintain the weight you loss?		
Major themes	Engage in physical activity Make healthy food choices Define personal strategies for maintenance of a healthy lifestyle	

Table 2. (continued)

Question	Maintainers	Regainers
Minor themes	Receive positive support and encouragement from others Use clothes to cue when weight regain is occurring and weight loss needs to be reinitiated	
7. What things resulted in your regaining the weight you loss?		
Major themes		Laziness Insurmountable time management challenges Lack of willpower
Minor theme		
8. Why is it so difficult for people to lose weight and keep it off?		
Major themes	Lack of willpower Lack of supportive environment	Requires complete lifestyle change Requires management of time and balance with family responsibilities
Minor themes		
9. What advice would you give to someone who is trying to lose weight and to keep it off?		
Major themes	Set realistic weight loss goals Find a personal and genuine motivation to change and sustain a healthy lifestyle Implement specific diet and physical activity strategies	Change lifestyle Maintain a mental focus on weight control

Major themes include the concepts that were generated spontaneously by focus group participants and that appeared frequently throughout the discussion and were identified as salient themes by the transcript evaluators. The minor themes represent concepts that generated a good deal of discussion, but did not occur spontaneously among the participants; they occurred when probed by the moderator.

qualitative findings have two major results: (1) we identified a number of important themes related to weight loss experiences among African-American women (Table 2), and (2) we found support for the theoretical constructs underlying the TPB, specifically regarding weight-loss-promoting behaviors in African-American women, which we have delineated in Table 3.

COMMON THEMES

The themes identified in this focus group study of weight loss maintainers and weight loss regainers confirm much of the existing knowledge regarding the weight loss experiences of African Americans. Most factors that influence acute weight loss are also important in weight loss maintenance. Specifically, both successful and unsuccessful weight loss maintainers are motivated to lose weight by their health and appearance. They struggle with lack of time for weight-loss-promoting activities, cost of healthy eating and being physically active, temptations to eat high-calorie foods and large quantities of foods (at work and with family), hairstyle management during exercise, and willpower. Aside from hairstyle management, many of the themes identified are not unique to African Americans, but have been described in other populations as well.^{8,31,33,40} The identification of hairstyle management during exercise as an issue in African-American women has been

Table 3. Theory of Planned Behavior: Construct Components

Construct	Focus Group Findings	Questionnaire examples
Attitude Outcomes are associated with weight loss and maintenance	Avoidance of embarrassment Being perceived as too thin or sick Avoidance of being physically unappealing Management of health conditions	Losing weight will help improve my blood pressure Unlikely.....Likely Improving my blood pressure is Bad.....Good
Subjective norm Important referent others	Husband Boyfriend Men Family Friends Coworkers Children Mother Father Doctor	My doctor thinks that I should keep off the weight I have lost Disagree.....Agree I generally want to do what my doctor thinks I should do Disagree.....Agree My friends think that I should keep off the weight I have lost Disagree.....Agree I generally want to do what my friends think I should do Disagree.....Agree
Perceived behavioral control Facilitators and barriers to weight loss and maintenance	Positive support from others Religious faith Cost of clothing Lack of time Cost of healthy foods Cost of being physically active Management of hair during exercise Influence of food centered culture Temptation from food Cultural norms Laziness Caregiving responsibilities Impact of stress on weight loss	When exercising, I have a hard time managing my hair Disagree.....Agree Managing my hair makes participating in exercise Difficult.....Easy When trying to lose weight, I have a hard time controlling my eating when I am at a family function Disagree.....Agree The struggle to control my eating at family functions makes losing weight Difficult.....Easy

previously reported;⁵³ however, its degree of influence on exercise adherence is not understood. The women in this study offered a variety of hairstyle management solutions including adopting easy to manage styles (pony tails, braids, and afros), setting aside adequate time to style hair after exercise, and avoiding exercise if their hair had been recently styled. Many of the women, however, stated that they are still trying to find a way to maintain an attractive hairstyle and be physically active. Because physical activity is an important component of weight loss maintenance, the role of hairstyle management and exercise adherence in African-American women is an area of research worthy of focus.

DIFFERENCES BETWEEN MAINTAINERS AND REGAINERS

There were important differences between weight loss maintainers and regainers. Women in the maintainer group hold a strong belief in the importance of positive support from other people. Although absent in the regainer group, social support has been described as important for acute weight loss in numerous other weight-related studies of African-American women.^{15,33,34} This study suggests that social support is a potent facilitator for long-term weight maintenance as well. Another difference between the groups is the approach to the barrier of family and cultural expectations to eat high-calorie

foods or large quantities of food. The maintainer group proposed active opposition to those influences with some focus group members refusing to participate in family functions if healthy food options were not available. This demonstrates the skill to overcome a barrier that might compromise weight control. The last notable difference between the two groups was the difference in their responses to weight regain. Both groups used the cue of tight fitting clothing to identify their relapse. However, the weight loss maintainers described specific plans they used to manage weight regain: drink more water, eat out less and cook at home, and exercise more than usual. Having a planned strategy in advance was a consistent practice among maintainers and was distinctly different from weight regainers who could not overcome *laziness* and lack of willpower when they regained weight.

THEORY OF PLANNED BEHAVIOR

Our study confirms the general understanding of attitudes, subjective norms, and perceived behavioral control in African-American women as it relates to weight loss and corroborates the theoretical constructs underlying TPB. The three major constructs underlying TPB include attitude, subjective norms, and perceived behavioral control. For attitude, the study demonstrates that the women have both positive and negative beliefs regarding weight loss. They want to lose weight to

improve their health, to avoid embarrassment, and to be physically appealing to themselves and others. Conversely, they worry that too much weight loss might cause them to be perceived as sick. For subjective norms, these women described a variety of referent others including friends, *family*, mother, father, children, coworker, doctor, husband, boyfriend, and men. Discussion content that reflected perceived behavioral control included a variety of facilitators and barriers to weight loss and maintenance that have been described in the literature: positive support from others, supportive role of faith, time constraints, laziness, stress/emotions, caregiver responsibilities, food-centered work and family culture, food temptations, and hairstyle management. Lastly, the behaviors of healthy eating and performance of physical activity were both clearly identified by the maintainer group as the behaviors employed for weight maintenance. These findings from the elicitation phase along with existing literature will shape the development of a questionnaire to be used among a large group of African Americans regarding their weight loss and weight maintenance experiences.

QUESTIONNAIRE CONTENT

The themes from this focus group study define a variety of areas that are important to African Americans regarding weight loss: the role of social support in weight loss maintenance, the influence of familial and cultural expectations regarding food consumption, the role of hairstyle management in physical activity, and the importance of establishing a relapse prevention plan when weight regain occurs. Furthermore, these themes define the constructs for the TPB as it relates to weight loss and maintenance in this group. Examples of questions to be used in the questionnaire using the TPB are listed in Table 3.

WEIGHT LOSS MAINTAINED

The weight loss maintainers in this study reduced their weight by more than 59 lbs (22% of their body weight), which surpasses the 10% that is considered an ideal goal for improvement of health.¹⁷ However, even with clinically successful weight loss maintenance, only 4 of the 14 maintainers had a current BMI in the normal range.⁵⁴ These findings are consistent with previous studies that suggest ideal body weight and image among African Americans may be heavier than that for other racial/ethnic groups.^{55–60}

LIMITATIONS

The results of this study may only be relevant for African-American women. Once developed, the questionnaire, which is intended for African-American men and women, will need to undergo revision based on feedback from men. In addition, because the study was conducted by a college of medicine, respondents may have overemphasized health concerns. Third, the participants in our focus group lost substantial amounts of weight, more than typically seen in studies of weight loss. Finally, our study sample was small with only 37 participants. Conversely, focus groups do not require large

sample sizes and our subjects had attained clinically meaningful weight loss, often not seen in other studies.

FUTURE RESEARCH

Findings from this focus group study, existing literature on weight loss and maintenance, and the TPB will be used for item development and testing of a questionnaire that explores the full range of weight control factors that are important in explaining individual differences among African Americans who lose weight and keep it off and those who regain it. African-American adults who have successfully maintained their weight loss and those who have regained it will be invited to participate in a registry and will be asked to complete the survey developed from the current study: African-American Weight Control Registry.

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Conflict of Interest: None disclosed.

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