WEIGHT-RELATED BELIEFS, BEHAVIORS, AND SOCIAL NETWORKS OF OBESE, YOUNG ADULT AFRICAN-AMERICAN WOMEN: IMPLICATIONS FOR HEALTHY WEIGHT INTERVENTIONS

A Dissertation

by

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ABSTRACT

Obesity is a public health concern that affects over 30% of Americans. Approximately 78% of African-American women are overweight/obese, as compared to 46% of Caucasian women. Obese African-American women are at higher risk for associated morbidities (e.g., hypertension, type II diabetes, select cancers, and early mortality) as compared to non-Hispanic whites. Weight gain after young adulthood (ages 20-35) is associated with an increased risk of cardiovascular disease and other health problems later in life. Research that seeks to explain, predict, or control obesity among African-American women has focused on individual behavior change. Few studies have addressed the social contexts within which these behaviors occur.

The purpose of this exploratory study was to examine the weight-related beliefs, behaviors, and social network characteristics of obese, young adult African-American women. A conceptual framework based on social support and social network theory guided the design of the study. Ten African-American women between the ages of 20 and 35, self-described as "plus-size" or "full-figured," completed initial informal conversations about weight-related issues and concerns and semi-structured, in-depth face-to-face interviews. Five participants were randomly selected to complete social network profiles to identify potential social influences on weight-related beliefs and behaviors.

Results of the initial conversations revealed approximately half of the participants were class III obesity (BMI $\geq$ 40), reported overall good health, and 70%

participated in physical activity at least one day a week. Semi-structured interviews results disclosed two primary reasons for unsuccessful long-term weight loss: (a) inconsistent weight loss behaviors and (b) lack of accountability.

Weight-related beliefs and behaviors of study participants were similar to those reported for older adult African-American women. Similarities included (a) mixed levels of body satisfaction; (b) the belief that health is not determined by weight; (c) sedentary lifestyles and; (d) social support from family and friends impacts long-term weight loss success. The five social network profiles indicated participants' networks are small, comprised of at least two overweight/obese females, and exhibited positive social support behaviors. Social networks included positive, negative, and non-positive relationships. Social support for weight loss is shared among network members through face-to-face interactions, phone conversations, and use of social media tools such as Facebook, Twitter, and text messaging.

Future healthy weight studies would benefit from comprehensive analyses of the social networks of obese, young adult African-American women, inclusive of interviews with social network members. Culture-based healthier weight interventions that organize social support networks through social media tools are promising strategies for promoting healthy weight management among obese, young adult African-American women.

DEDICATION

I dedicate this to Bryant (Daddy), Cindy (Mom), and Kristan (Kristy) Rollins, who eagerly await and tirelessly pray for my return home; for Corrado (2009 – 2012).

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First, I give glory and honor to my Lord and Savior Jesus Christ. Philippians 4:13 and Jeremiah 29:11 were comforting scriptures throughout this process. Without God renewing my strength daily (sometimes minute by minute), this dissertation would not be complete.

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> *I know what I'm doing. I have it all planned out – plans to take care of you, not abandon you, plans to give you the future you hope for.* ~ Jeremiah 29:11
>
> The Message

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CHAPTER I

INTRODUCTION

The chapter provides an introduction to the study. It includes the following sections: (a) background, (b) statement of the problem, (c) purpose of the study, (d) delimitations/limitations, and (e) study significance. The chapter concludes with a summary.

Background

The Centers for Disease Control and Prevention (CDC) cite obesity as a major cause of death, attributable to heart disease, cancer, and diabetes (CDC, 2011). In the United States, obesity has reached epidemic proportions, affecting over 30% of the population (Flegal, Carroll, Ogden, & Curtin, 2010). Among Americans aged 20 and older, 134.8 million are overweight or obese, of whom 68.6 million are men, and 66.2 million are women. Of these 134.8 million, 63.1 million are obese, of whom 27.5 million are men and 35.6 million are women (Office of Minority Health [OMH], 2005). The prevalence of obesity has steadily increased for adults of all ages, genders, and ethnicities over the past 15 years. The terms *overweight* and *obese* are generally defined using body mass index (BMI), a measure of weight (kg) relative to height (cm^2) that is closely correlated with total body fat (Kumanyika et al., 2008). According to the National Institutes of Health (NIH) National Heart, Lung, and Blood Institute, the term overweight, among adults, is defined as a BMI of 25 to 29.9 kg/cm^2; obesity, $\geq$30 kg/cm^2; and morbid obesity, $\geq$40 kg/cm^2 (NIH, 2010). Weight gain after young

adulthood is associated with an increased risk of cardiovascular disease and other health problems later in life, independent of BMI. Obese adults have an increased risk of chronic illnesses such as heart disease, diabetes, stroke, and certain types of cancers as well as premature death (Stevens, McClain, & Truesdale, 2008). These chronic diseases are among the leading causes of death for African-American women in the U.S. (Braithwaite, Taylor, & Treadwell, 2009).

OMH (2005) reported that 50% of adult African-American women are obese (OMH, 2005). Obesity prevalence among African-American women is disproportionate to other racial/ethnic groups of women (and men). For example, the prevalence of Grade 3 obesity among African-American women is 14.2%, as compared to that of Caucasian women, at 7.2% (Flegal et al., 2010). Consistent with their higher rates of obesity, African-American women are less likely to engage in regular physical activity or to consume healthy diets (Befort, Thomas, Daley, Rhode, & Ahluwalia, 2008,). Although nearly two-thirds of obese African-American women report that they want to lose weight and attempt to do so, their weight loss efforts do not last as long and are less successful as compared to Caucasian women (Befort et al., 2008; Thomas et al., 2009; Wolfe, 2004). Further, according to the most current National Health and Nutrition Examination Survey (NHANES) of 2007-2008, the age-adjusted obesity prevalence among non-Hispanic African-American women who are at least 20 years of age is 49.6%, compared to 33.0% for non-Hispanic Caucasian women (Flegal et al., 2010). Concurrently, mortality and incidence rates of coronary heart disease, hypertension, diabetes mellitus, cerebral vascular disease, and certain cancers types among African-

American women have been linked with obesity (Befort et al., 2008). Clearly, obesity disproportionately affects racial/ethnic minorities and people of lower socioeconomic status.

Over the past 20 years, a substantial body of literature has demonstrated the importance of the social determinants of health and obesity. These include neighborhood characteristics, socioeconomic status, education, social capital, cultural beliefs, values, and norms (Befort et al., 2008; Evans, Barer, & Marmor, 1994; Frankish, Milligan, & Reid, 1998; Wigle, Evans, Barer, & Marmor, 1995). Malpede and colleagues (2007) stated that African-American women may experience an environment (built and social) that supports acceptance of larger body size (Malpede et al., 2007). They also provided some evidence, however, that suggests weight management behaviors of African-American women are influenced by socioeconomic disparities. The variance in availability, accessibility, and affordability of physical activities and healthier foods, is not simply attributable to a cultural tolerance of unhealthy weight.

The increased risk for obesity among African-American women can be attributed to a complex array of factors. These include a personal acceptance of larger body types, sedentary lifestyles, unhealthy diets, and mixed social support messages for weight loss from family and friends (Befort et al., 2008; Thomas et al., 2009; Wolfe, 2004). Over the past decade, researchers have examined the impact of sociocultural and economic factors, including neighborhood characteristics, education, family customs, social support, societal and cultural norms, and economic systems, on the prevalence of obesity (Crossrow & Falkner, 2004; Frankish et al., 1998; Meunnig, Jia, Lee, &

Lubetkin, 2008; Robinson, Gordon-Larsen, Kaufman, Suchindran, & Stevens, 2009; Scharoun-Lee, Adair, Kaufman, & Gordon-Larson, 2009; Wang & Beydoun, 2007). These sociocultural factors influence weight-related beliefs and behaviors, body image, and weight management strategies (Baturka, Hornsby, & Schorling, 2000; Malpede et al., 2007; Morrow et al., 2006). Weight-related beliefs include body image perceptions (e.g., the perception people can be attractive and healthy at larger sizes), and weight-related behaviors include physical activity levels (sedentary vs. moderately active) and following dietary/nutrition practices (meal preparation and portion size; Befort et al., 2008; Kumanyika, Wilson, & Guilford-Davenport, 1993; Malpede et al., 2007; Thomas et al., 2009). Moreover, these beliefs and behaviors are developed within the context of social support networks (e.g., families, friends, and communities).

Social networks are "linkages between people." They may or may not provide social support and may serve functions other than providing support (Heaney & Israel, 2008, p. 190). These networks can have a great impact on the general health of individuals. Because people are embedded in social networks, they may be influenced by the evident beliefs as well as behaviors and appearances of those around them (Berkman & Glass, 2000; Smith & Christakis, 2008).

Numerous studies have examined the critical pathways by which the provision of social support influences positive (and negative) health outcomes (Berkman, 2007; Boutin-Foster, 2005; Thomas et al., 2009). Drawing on 30 years of social epidemiological research, Berkman and Glass (2000) presented a conceptual model of how social networks affect individuals' health (Berkman & Glass, 2000). The model

uses a flowing causal process and embeds social networks, which act as a mediator of social and interpersonal behavior, in a larger social and cultural context. Beckman and Glass argue that social networks operate at the behavioral level through four primary pathways: (a) provision of social support, (b) social influence, (c) social engagement and attachment and, (d) access to resources and material goods. Further, these pathways influence even more direct pathways to health status, including diet, exercise, and help-seeking behaviors.

Christakis and Fowler (2007) examined several aspects of the "spread of obesity" through social networks. Their findings indicated that: (a) obesity is spread through social ties; (b) social distance (e.g., distance related to whether someone is a friend, sibling, or spouse) appears to be more important than geographic distance; and (c) same-sex relationships may have more influence than do different-sex relationships on obesity risks. Although the literature acknowledges the influence of social networks on obesity, it fails to adequately explain the weight-related beliefs, behaviors, and defining characteristics of the social networks of obese, young adult African-American women. Further, the literature fails to explain how these social support networks influence obesity.

Conceptual Framework

The proposed exploratory study is guided by the conceptual model of the relationship of social networks and social support to health (Heaney & Israel, 2008). Specifically, the constructs of social network structure and social support functions were examined by the researcher to determine how they relate to weight-related beliefs and

behaviors. According to Heaney and Israel (2008), the structure of a social network can be understood through the relationships between the focal individual and other people in the network (dyadic) and of the network as a whole. Social support is the functional content of relationships. It is the "aid and assistance exchanged through social relationships and interpersonal transactions" (p. 187). It can be distinguished from the other functions of social relationships. Social support can be categorized into four broad types of supportive behaviors or acts: informational, instrumental, emotional, and appraisal. The means by which these acts are exhibited denote the processes of social support provided within a social network. See Figure 1.

Berkman's model (2010) offers a potentially useful conceptual framework for understanding how social support influences health (Berkman, 2010). Based on the current literature on social support and social networks, three concepts and specific supporting constructs were integrated into this research. These included: social-structural conditions - culture (norms and values, competition/cooperation, socioeconomic factors); social networks – network structure (size, reciprocity, organizational structure) and network activation (frequency of organizational participation, duration and intensity) and; behavioral mechanisms – social support/conflict, access to resources and material goods, social engagement and social influence.

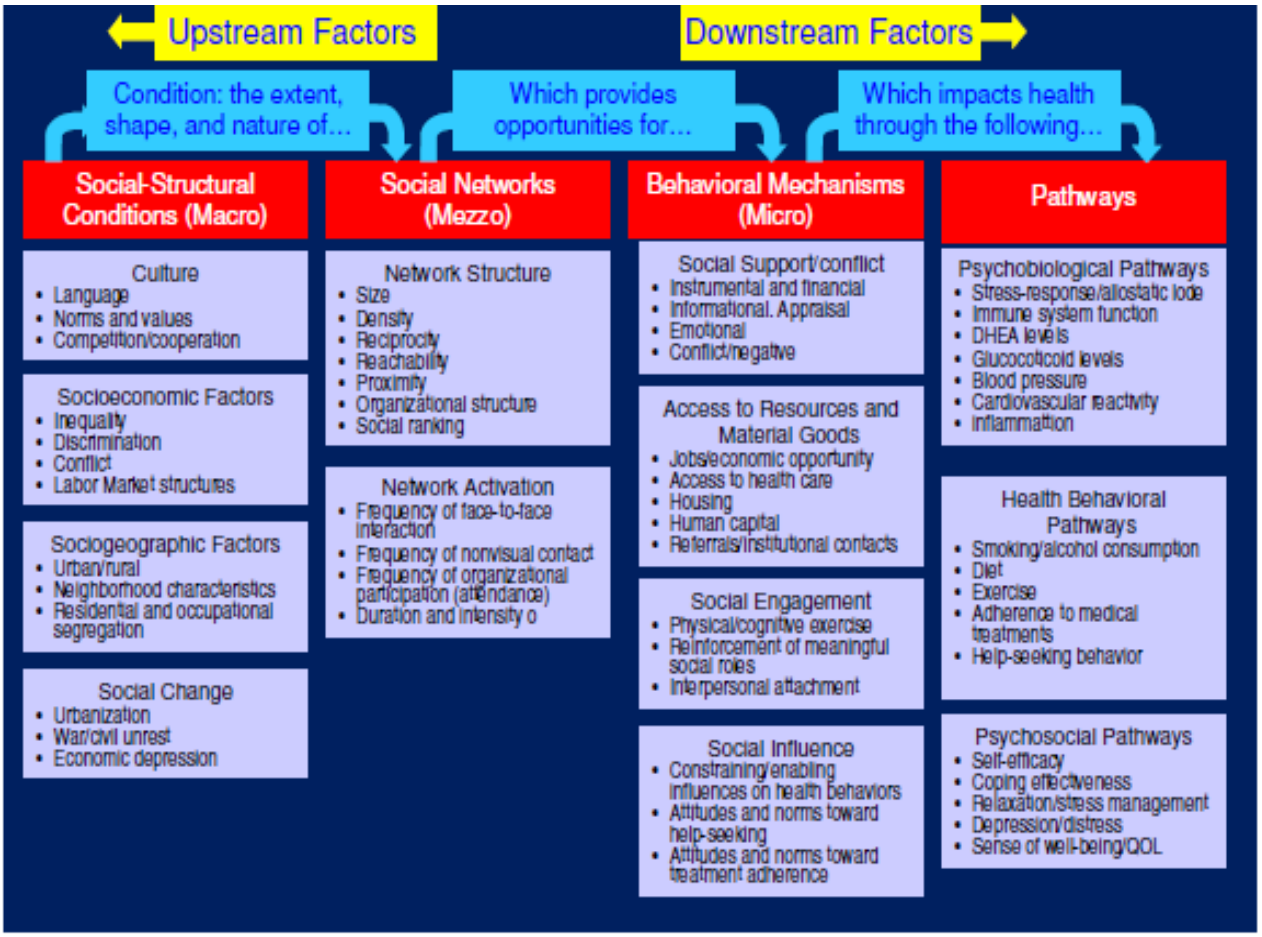

Figure 1. Conceptual model of how social networks influence health. Social networks and health by L. Berkman, 2010. Oral session presented at the meeting of the World Health Organization, Geneva, Switzerland. Copyright 2010 by Linda Berkman. Reprinted with permission.

Social networks. Social networks refer to the web of social relationships that surround individuals (Heaney & Israel, 2008). Social networks can be characterized along three dimensions: (a) structural, which refers to links in the overall network; (b) interactional, which refers to the nature of the relationships themselves; and (c) functional, which refers to the functions provided by the network. Different network members are likely to provide differing types and amounts of support. In addition, the

effectiveness of the support provided may depend on the source of the support. Research has been conducted on the effects of social networks on physical and mental health, help-seeking behavior, the diffusion of innovations, the use of services, compliance with medical regimens, promoting recovery, and coping with serious physical illness and injury (Heaney & Israel, 2008; Israel, 1982). Such research has found a correlation between improved health outcomes among individuals with an intact, supportive social network (Berkman, 2007; Boutin-Foster, 2005).

Social support. Social support is provided through interpersonal connections and includes four types: emotional support (expressions of empathy, love, trust, and caring); instrumental support (tangible aid and services); informational support (advice, suggestions, and information); and appraisal support (information useful for self-evaluation). Not every social relationship provides each type of support, but within a social network, each type of support is generally present. Cassel (1976) and Cobb (1976) were the first to suggest a link between social resources, support, and disease risk (Cassel, 1976; Cobb, 1976). They concluded social relationships provide support, which, in turn, can influence health.

For the purposes of this study, selected social networks and behavioral mechanism constructs were explored. Specific social network characteristics included size, reciprocity, reachability and proximity. In addition, behavioral mechanism constructs, explicitly social support/conflict and social influence were investigated. Social support/conflict was characterized by the four types of social support: information, instrumental, appraisal, and emotional. For social influence,

constraining/enabling influences on health behaviors and attitudes, and norms towards help-seeking were the characteristics examined.

Statement of the Problem

Health literature has documented obesity disparities among African-American, Caucasian, and Hispanic women. Multiple factors influence the prevalence of obesity, including the environment (physical and social), socioeconomic status, culture, and individual behavior. The literature, however, has not adequately explained the relationship between the weight-related beliefs of obese, young adult African-American women, their social networks, and the behaviors that lead to obesity. Thus, the questions that need to be answered include: (a) What are the weight-related beliefs and behaviors of obese, young adult African-American women? (b) What is the role of social networks in shaping these beliefs and behaviors? (c) How do weight-related beliefs translate into weight-related behaviors of these women?

Interventions that seek to facilitate lifestyle behavior change, with the goal of modifying obesity risk factors, represent promising means for effectively reducing the prevalence of obesity among young adult African-American women. Understanding complex weight-related beliefs and behaviors, as well as the social contexts from which they emerge, is essential to the development of culturally-appropriate interventions that could lead to African-American women achieving healthier weights. Thus, this exploratory study examined weight-related beliefs, behaviors, and social network characteristics of obese, young adult African-American women.

Purpose of the Study

The purpose of the study was to explore the weight-related beliefs, behaviors, and social network characteristics of obese, young adult African-American women.

Research Questions

The following questions guided the study:

1. What are the weight-related beliefs of obese, young adult African-American women?
2. What are the weight-related behaviors of this group?
3. How do obese, young adult African-American women describe the concept of social support?
4. What types of social support do they give and receive?
5. What characterizes the social networks of obese, young adult African-American women?
6. What characterizes the weight-management experiences of obese, young adult African-American women as it relates to their social networks?

Delimitations

The study has the following delimitations:

1. Participants are young adult African-American women, aged 20 to 35.
2. Participants had a one-year minimum of post-secondary education (e.g., college/university, trade school, certification program).
3. Participants are women who self-describe as "full-figured" or "plus-sized."
4. Participants are English speakers.

5. Only non-pregnant women are eligible to participate in the study

Limitations

The study has the following limitations:

1. A convenience sample of women, using snowball sampling techniques, was recruited, thereby limiting generalizability.
2. Identified members of the social network were not interviewed, thereby limiting the scope of the network analysis.

Assumptions

For the purposes of this study, the following were assumed:

1. Participants responded honestly in regard to their race/ethnicity, age, and gender.
2. Participants responded honestly and accurately during face-to-face interviews.
3. Participants were able to accurately recall past weight management experiences.

Definition of Terms

African American. A person who has origins in any of the Black racial groups of Africa (Office of Management and Budget, 1997).

Body mass index (BMI). For adults, BMI is calculated as weight in kilograms divided by height in centimeters squared. For most people, it provides a reliable indicator of body fat. It is used to screen for weight categories that may lead to health problems (CDC, 2011).

Curvy Girl Chats. Initial, informal conversations with potential participants for the three-prong purpose of study orientation, establish a relationship, and open dialogue of weight-related issues and concerns.

Full-figured. Positive descriptor of a large (e.g., overweight/obese) woman (Smith, Schmoll, Konik, & Oberlander, 2007).

Obese. For adults aged 20 years or older, a BMI $\geq$ 30 denotes obesity. Obesity may be divided into grade 1 (BMI, 30 to <35), grade 2 (BMI, 35 to <40), and grade 3 (BMI $\geq$ 40) (Flegal et al., 2010).

Obesity. The presence of excessive body fat or adipose tissue in relation to lean body mass (Last, 2007).

Overweight. For adults aged 20 years or older, a BMI between 25 and 29.9 indicates overweight (Flegal et al., 2010).

Plus-sized. Women who wear clothing size 14 or larger (Acosta, 2010).

Social network. The web of social relationships that surrounds an individual and the characteristics of the members or of participants in the networks (Berkman, 2007).

Social support. Aid and assistance exchanged through social relationships and interpersonal interactions (Berkman & Glass, 2000).

Weight-related behavior. The behaviors that influence an individual's weight and related health status (Last, 2007).

Weight-related beliefs. A set of core values (about weight), often outwardly manifested in behavior (Last, 2007).

Significance of the Study

Obesity adversely affects the health, wellness, functioning, and productivity of many African-American women. To the extent so many women are affected, and current interventions have yet to significantly reduce this chronic condition, this research

is important because it will give voice to the issues, concerns, and experiences of obese, young African-American women. While interventions have been developed to address obesity-related illnesses among women who are 40-plus, these interventions have not taken into consideration the beliefs, behaviors, or social networks of younger women. Understanding the weight-related beliefs, behaviors, and social networks of young adult women is crucial for the design of healthier weight interventions. This study advances knowledge and understanding of important factors which must be considered in intervention research and programs to reduce risks for unhealthy weights and associated co-morbidities later in life, particularly among young adult African-American women.

Chapter Summary

This chapter introduced the problem of obesity among U.S adults and the increased mortality and incidence of co-morbidities such as type II diabetes, hypertension, cardiovascular disease, and some cancers. According to national statistics, African-American women disproportionately experience obesity. Factors such as socioeconomic disparities, cultural acceptance of larger body types, sedentary lifestyles, unhealthy diets, and mixed social support messages for weight loss from social network members impede on long-term weight management. A review of the literature identified gaps in the understanding of the weight-related beliefs, behaviors, and social networks of young, African-American women. The purpose of the study was to explore the weight-related beliefs, behaviors, and social networks of obese, young adult African-American women. A conceptual framework based on social support and social network theory guided the study design. Six research questions were used to investigate weight-related

beliefs, behaviors; social support characteristics and practices and; social network profiles of this population. Key terms, assumptions and limitations are discussed. The study is deemed to be significant because it advances understanding of the weight-related beliefs, behaviors, and social support networks of a small sample of obese, young adult African-American women.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents the review of related literature. The chapter begins with a discussion of obesity as a public health problem in the United States. Age, gender and race/ethnicity are identified as contributing factors to the obesity epidemic. Four sections present the current literature on the diet/nutrition, physical inactivity, weight loss and weight management of African-American women. A final section discusses social and cultural factors, social networks and social support as related to weight management, as contributors to obesity disparities among African-Americans. The chapter concludes with a brief summary statement of the literature review.

Obesity: A Public Health Problem

Obese adults are at higher risk than normal weight adults for obesity-related illnesses such as cardiovascular disease, hypertension, diabetes mellitus, certain forms of cancer, and mobility limitations, as well as experience higher mortality rates (Braveman, 2009; Graves, 2010; Houston et al., 2009; Jia & Lubetkin, 2010; Meunning, Jia, & Lubetkin, 2008). For both clinical and public health purposes, overweight and obesity are defined by a continuous distribution of BMI, calculated as weight (in kilograms) divided by height (in meters) squared. The ranges that define overweight and obesity for adults are, respectively, a BMI of 25-29.9 and 30 or greater (USDHHS, 2011). For example, a 5’7” adult female who weighs 245 pounds would have a BMI of 35 and would be considered obese.

In the United States, national nutrition monitoring data from health examination surveys began to show evidence of a gradual, and then more marked, increase in the prevalence of adult obesity between the1960-62 and 1988-94 surveys. As a result of these data, obesity came to be seen as a serious public health issue (Flegal, 2005; Flegal, Carroll, Kuczmarksi, & Johnson, 1998). The data from these surveys were supported and augmented by data from the 1991-1998 Behavioral Risk Factor Surveillance System that showed an increasing number of states with significant proportions of adults who met the definition of obesity (Ford, Mokdad, & Giles, 2003; Mokdad et al., 1999).

The public health focus on obesity was heightened when, in 1998, NIH changed the categorization of overweight and obesity to align with the World Health Organization's (WHO) guidelines. The shift increased the number of adults considered to be at risk for obesity (Flegal et al., 1998; USDHHS, 1998; WHO, 2000). By the new definition, more than half of U.S. adult men and women were classified as overweight or obese. WHO concluded:

> Obesity is a chronic disease, prevalent in both developed and developing countries, and affecting children as well as adults. Indeed, it is now so common that it is replacing the more traditional public health concerns, including under-nutrition and infectious diseases, as one of the most significant contributors to ill health. Furthermore, as obesity is a key factor in the natural history of other chronic and non-communicable diseases (NCDs), it is only a matter of time before the same high mortality rates for such diseases will be seen in developing

countries as those prevailing 30 years ago in industrialized countries with well-established market economies. (pp. 1-2)

Academics from various disciplines (e.g., economics, health and kinesiology, sociology, bioengineering) and professionals from different settings (e.g., clinical, practice, and policy), business (life insurance industry), and sociological (social attitudes and response; Kumanyika, Ross, and Satcher, 2007) are concerned with obesity prevention and reduction, morbidity and mortality. Notably, public health guidelines encourage adults to be mindful of caloric consumption, consume healthy foods, and participate in regular physical activity.

Among the several risk factors associated with considerable weight gain in adulthood are age, gender, and ethnicity. The most notable prevalence of obesity is reported among African-American women. Although the increases in obesity have been statistically significant in all race and gender groups, the longitudinal data on the development of obesity indicates obesity rates among women have been consistently greater in African Americans, followed by Hispanics and then Caucasians (Baturka et al., 2000; Crossrow & Falkner, 2004; Graves, 2010). A number of studies highlight the epidemic of overweight and obesity among African-American women (Bronner & Boyington, 2002; Crossrow & Falkner, 2004; Geronimus, Bound, Keene, & Hicken, 2007; Wang & Beydoun, 2007).

One reason the number of African-American women who are overweight or obese has increased (as is the case for all individuals, regardless of race or gender) is the revised standard for identifying overweight as set forth by the NIH's National Heart,

Lung, and Blood Institute (Bronner & Boyington, 2002). For women, overweight was changed from a BMI of 27.3 to 25 (WHO, 2000). Under the new standards and according to the recent adult obesity prevalence data, over 82% of African-American women are overweight or obese (Flegal, Carroll, Kit, & Ogden, 2012).

Age as a risk factor. Within the adult population, the time during which individuals are at the greatest risk of gaining weight occurs during young adulthood (ages 20 to 44; Kumanyika et al., 2007). Longitudinal data show a gradual weight gain with age during young adulthood, which is consistent with the finding of a higher prevalence of obesity after age 40 (Lewis et al., 2000). According to the NHANES 1999-2004 data, women aged 20 to 34 had the fastest increase in both overweight and obesity compared to older women (Wang & Beydoun, 2007). Currently, among adults aged 20 years and over, the age-adjusted prevalence of overweight and obesity combined is 68.8%, of whom 35.7% are obese (Flegal et al., 2012).

Gender as a risk factor. In 2004, the overall prevalence of obesity assessed by BMI was similar in men and women (31.1% and 32.2%, respectively, with a BMI of 30 or more; Ogden et al., 2006). The prevalence of overweight and obesity combined was 70.8% in men and 61.8% in women (Ogden et al., 2006). A closer inspection of the data showed that men were more likely than were women to be categorized as "overweight" than "obese." This is further supported by the higher prevalence of extreme obesity in women (8.1%) than in men (4.4%; Flegal et al., 2012). The most recent data on the prevalence of BMI-defined obesity in adults in the United States show it continues to exceed 30% in most gender and age groups. The prevalence of both increased

significantly over a 12-year period from 1999-2010 for men and for non-Hispanic Black and Mexican-American women (Flegal et al., 2012).

Race/ethnicity. Ethnic differences in overweight and obesity prevalence are substantial for women but not for men. African-American women and Mexican-American men and women are more likely to become extremely obese compared to non-Hispanic Caucasians of both genders. Non-Hispanic Black women (58.5%) and Mexican-American women (44.9%) are more likely than are non-Hispanic Caucasian women (32.2%) to have overall age-adjusted obesity prevalence (BMI of $\geq$30: Flegal et al., 2012). The percentage of obese African-American women reflects the consequences of the combined prevalence of overweight and obesity over time among African-American women (82.1%; Flegal et al., 2012). The range for extreme obesity (BMI of 40 or more) among women aged 20 and over shows a similar pattern: it is highest among non-Hispanic Blacks (17.8%), followed by non-Hispanic Caucasians (7.1%), and lowest among Hispanic females (6.0%; Flegal et al., 2012).

Obesity Reduction: A National Objective

Since obesity is the second leading preventable cause of disease and death in the United States, national objectives for reducing the proportion of obese Americans and increasing the proportion of those at a healthy weight have been consistently included in the HealthyPeople (2000, 2010, 2020) agendas (National Center for Health Statistics [NCHS], 2001; NCHS, 2011). In 2000, the U.S. Public Health Service set a 15% obesity prevalence target for adults for 2003-04 (NCHS, 2001). Nevertheless, the current obesity prevalence in the adult population is substantially higher, at 35.7%, and is

consistently escalating (Flegal et al., 2012; Sherry et al., 2010). Not only did obesity levels fail to decrease toward the targeted goal, but they actually increased by 5-13% over the levels observed around 1990 (Flegal et al., 2012). The highest increase was observed among non-Hispanic Black females, who experienced an increase of 13% (Flegal et al., 2012).

Using a 1994 baseline of 24.7% overweight, estimated from the National Health and Nutrition Examination Follow-up Study, Russell, Williamson, and Byers (1995) estimated the 20% prevalence objective of HealthyPeople 2000 could be reached if all overweight persons were to lose 11.2 kg (24.6 lbs.) of body weight or through combining prevention of all weight gain by the non-overweight with a weight loss of 6.6 kg (14.5 lbs.) in all overweight adults. They stated, however, "it is highly unlikely that such population-wide weight changes will occur in the U.S. over the next 6 years" (p. 596). African-American women presented an additional challenge due to the high prevalence of overweight individuals. Their obesity prevalence was substantially higher than that of Caucasians or African-American men. The HealthyPeople 2000 goal for African-American women was set to reduce overweight to a prevalence of no more than 30% among these women aged 20 and older (USDHHS, 2001). "Reaching the 30% prevalence objective would require that all overweight African-American women lose and maintain a 12.2kg (26.8 lbs.) loss of weight or that all weight gain be prevented in combination with the loss of 9.3 kg (20.5 lbs.) of weight by all overweight African-American women" (p. 3).

The HealthyPeople 2020 agenda has several weight-status objectives intended to increase the proportion of healthier-weight adults and to reduce the proportion of obese adults (USDHHS, 2011). Under "Nutrition and Weight Status," objective 9 is "to reduce the proportion of adults who are obese." According to HealthyPeople 2020, in 2005-08, 34% of adults (aged 20 and over) were obese. The proposed goal for HealthyPeople 2020 is a 10% improvement (30.6%) in the proportion of obese adults. This improvement percentage is a reduction from the HealthyPeople 2010 target of 15%. The HealthyPeople 2010 final report indicated that the proportion of adults aged 20 years and over who were obese rose by 47.8%, from 23% to 34% (age adjusted), thus moving away from the 2010 target (USDHHS, 2011). In both the HealthyPeople 2010 and 2020 focus areas, specific objectives to reduce obesity among particular subpopulations were eliminated. Revised objectives to reduce obesity and increase healthy weight among all U.S. adults were identified as overarching goals. Yet, the data sources used to develop such objectives (NHANES, BRFSS) continue to report the growing obesity disparity observed between African-American women, other ethnic/racial groups, and men.

If the HealthyPeople 2020 goals are not reached, obesity will soon become the leading cause of disease. Wang and Beydoun (2007) predict that, by 2015, the majority (75%) of U.S. adults and nearly a quarter (24 %) of U.S. children will be overweight or obese (Wang & Beydoun, 2007). They also predicted that, by 2015, 85% of African-American women will be overweight or obese, of whom 62.5% will be obese.

The National Heart, Lung, and Blood Institute/North American Association for the Study of Obesity committee (as cited in Wang & Beydoun, 2007) also recommends

using waist circumference cutoff points of 40 inches (102 cm) for men and 35 inches (88 cm) for women to define "central obesity." Increasingly, research shows that waist circumference measures or central obesity is a better predictor of obesity-related diseases than is overall obesity assessed by BMI. Between 1960 and 2000, the prevalence of central obesity, as measured by mean waist circumference, increased by 10%, with the highest increase among women aged 20 to 29 years. The NHANES 1998-2004 data show that the overall prevalence of central obesity was 38.3% among men versus 59.9% among women. Large gender and ethnic differences also were observed. Central obesity prevalence was highest among African-American women (70.4%) and lowest among Mexican American men (35.5%; Mokdad & Giles, 2003).

National Nutrition and Physical Activity Recommendations

Preventing and reducing obesity require achieving energy balance through regulation of food intake and physical activity. Obesity develops as a consequence of chronically consuming more calories than the body expends or that are beyond the ability of the body's regulatory system to compensate. One pound is gained when an excess of 3,500 kilocalories has been consumed. Moderate or vigorous, regular physical activity improves physical fitness and lowers the risk of cardiovascular disease, diabetes, and certain obesity-related cancers. Physical activity is recommended for the entire population, including those with existing weight problems (Kumanyika et al., 2007). However, our body mechanisms work much more effectively to prevent weight loss than they do to prevent weight gain. Further, current societal conditions such as easier access to high fat, high sugar content foods (e.g., fast food drive thrus) and more sedentary jobs

have made it very easy to consume excess calories and expend fewer. Both food and beverage intake and physical activity levels have effects on health, independent of their effects on obesity. Dietary recommendations to lower the risks of cardiovascular disease and cancer include avoiding unhealthy fats (saturated and trans fats); eating ample quantities of fruits, vegetables, and whole grains; minimizing the intake of sodium; and engaging in moderate consumption of alcohol (U.S. Department of Agriculture, 2005).

African-American Women and Obesity

Over the past 20 years, a number of studies have focused on uncovering the factors that contribute to higher rates of obesity among African-American women. Some factors are the adoption of higher energy intake (diet/nutrition), sedentary lifestyles (physical inactivity), earlier menarche, and earlier age of first childbirth (Rowe, 2010). In addition to unhealthy diets and physical inactivity, African-American women are reported to be unsuccessful at long-term weight loss and weight management contributing to the obesity disparities observed later in life.

Diet/Nutrition: Food choices and portion control. African Americans are a group known to have diets low in consumption of fruits and vegetables (Johnson, Ralston, and Jones, 2010). This dietary pattern is related to higher rates of obesity, morbidity, and mortality in African Americans compared to Caucasians. Although African-American women traditionally have had diets low in fruits and vegetables, this pattern has been changing. The National Behavioral Risk Factor Surveillance System data on fruit and vegetable consumption between 1994 and 2005 show that the percentage of African-American women who eat fruits and vegetables increased from

22.9% in 1994 to 27.3% in 2005 and exceeded consumption for levels for all men during this period. However, in comparison to Caucasian women, African-American women consumed fewer fruits and vegetables during this period (29.8% and 29.1%, respectively; Blanck, Gillespie, Kimmons, Seymour, & Serdula, 2008; Johnson et al., 2010). In addition, African-American women consume less water than do Caucasian women (Johnson et al., 2010). Lower water consumption is speculated to contribute to African-American women having less-healthy eating patterns, as drinking water is a healthy practice and a strategy for weight loss (Johnson et al., 2010).

Numerous qualitative studies report a widespread preference for traditional foods among African Americans, and such goods are generally high in fat and salt (Airhihenbuwa et al., 1996; Befort et al., 2008; Blixen, Singh, & Thacker, 2006). Some African Americans mention the limited flavor of healthier foods which may increase the perceived cost of eating them. In addition, limited resources, lack of access to produce, and the inconvenience of preparing healthful foods are considered barriers to healthful eating by low- and middle-income African-American women (Lynch, Homes, Keim, & Koneman, 2012). In summary, on price, convenience, and taste, the cost of eating healthful is likely to outweigh the benefits of consuming a healthier diet (Lynch et al., 2012).

Although research has focused on social and cultural factors that influence African American food choices, less is known about their beliefs about healthier eating. Lynch and colleagues (2012) determined what information low-income African-American women use to judge the healthfulness of foods (Lynch et al., 2012). In their

study, 28 participants were asked to choose the more healthful of two foods and to explain their choice. Three main strategies were used by participants to decide which of the two foods was more healthful: food nutrient content, food health effects, and food category. First, foods that were perceived to contain more fat or grease were considered less healthful (nutrient content). Many participants believed that starchy foods were high in fat and that soda was unhealthy because it contained acid. Next, several health effects from foods were identified by participants, including change in weight and health outcomes related to the blood, arteries, and heart. For example, fish was considered to be low in fat and to facilitate weight loss, while cardiovascular problems were associated with foods such as pork chops and hamburgers. Finally, participants perceived certain categories of foods as being either healthful or unhealthful. Fruits and vegetables were considered the most healthful kinds of foods.

The researchers concluded the African-American participants had limited knowledge about the healthiness of food. Participants consistently acknowledged fats, oils (e.g. grease), and carbohydrates in selected foods. The study findings acknowledged potentially critical gaps in nutrition and health knowledge, including a lack of awareness of the need for certain foods, their nutrients, and potential health effects (Lynch et al., 2012). The findings were consistent with previous research that highlights confusion about how to eat healthier as a barrier to healthier eating among African-American women (Davis, Clark, Carrese, Gary, & Cooper, 2005; Malpede et al., 2007; Rowe, 2010).

In general, dietary behavior among African Americans has been shown to be strongly influenced by cost, cultural traditions, and the media (Blixen, Singh, & Thacker, 2006). Food selection, preparation, and quantity have been documented as reasons for lower weight loss success among African-American women (Baturka et al., 2000; Blixen, Singh, & Thacker, 2006; Bronner & Boyington, 2002; Kumanyika et al., 2007). Yet, there is evidence to support a need for nutrition education and skill development for the selection and preparation of healthier dishes. With many African-American women responsible for foods selected, purchased, prepared, and served within their homes and at social gatherings, they are the primary audience to engage in nutrition education. In addition, greater consumption of fruits, vegetables, lean meats, and less consumption of high fat, high sugar, and processed foods, can inhibit weight gain, promote weight loss, and sustain healthier weight over time among this population.

Physical inactivity. In addition to diet, sedentary lifestyles contribute to the prevalence of obesity among adults. African-American women are less physically active than are African-American men or Caucasian women (Harley, Odoms-Young, Beard, Katz, & Heaney, 2009). Analysis of data on African Americans in the National Behavioral Risk Factor Surveillance System, National Health Interview Survey, and NHANES show that the percentage of African-American women who engage in regular physical activity range from 19% to 32%, compared to 28.3% to 41.8% for African-American men (Johnson et al., 2010). Research on the social and cultural contexts related to participation in physical activity among African-American women identified

three main areas of concern: historical norms related to physical activity participation, norms and beliefs about body size and body image, and hair type (Harley et al., 2009).

Aforementioned study participants noted, traditionally, African-American women were not encouraged to participate in physical activity and had little exposure to different types of physical activities. Some women discussed how their mothers disapproved of physical activity participation, deeming it "selfish" because it removed them from taking care of their spouse and children. One woman expressed how her mother believed that physical activity was not "ladylike." Participants also believed that physical activity was influenced by cultural ideals of desirable body shape and historical beliefs about bigger body sizes as associated with affluence. Attitudes and beliefs that equate larger body size with affluence stems from a history of deprivation and economic stress faced by African Americans (Kumanyika, 2005).

Additionally, role conflicts such as family members' needs versus their need to engage in a healthy lifestyle as well as physical activity's being perceived by family members as selfish, contribute to a lack of physical activity (Kumanyika, 2005). Such beliefs and perceptions are reported as barriers to physical activity in other studies on African-American women (Henderson & Ainsworth, 2003; Samuel-Hodge et al., 2010; Wolfe, 2004). Understanding the social and cultural factors related to physical activity is important because long-term integration of health behaviors into daily life is embedded in social and cultural context (Eyler et al., 1998; Harley et al., 2009; Henderson & Ainsworth, 2003; Kumanyika et al., 2007).

Weight loss and weight management. Short-term weight losses are relatively achievable under the right circumstances, but permanent weight loss is extremely difficult to achieve. The National Weight Control Registry, which follows people who have previously lost an average of 30 pounds and maintained the loss for at least 5 years, found that participants reported an average of 90 minutes of physical activity per day to maintain this weight loss in addition to following a low-fat, low-calorie diet (Wing & Phelan, 2005). For African-American women, weight loss can occur, but rarely, and little is known about weight loss maintenance in African-American women (Barnes et al., 2007; Rowe, 2010; Walcott-McQuigg et al., 2002; Young, Gittelsohn, Charleston, Felix-Aaron, & Appel, 2001). Barnes et al. (2007) explored weight loss maintenance among African-American women and identified differences between "maintainers" ($\geq$10% loss of body weight and maintained $\geq$ 1 year) and "regainers" ($\geq$10% loss of body weight and regained). While both groups used a variety of weight loss methods, regainers used fad diets or over-the-counter supplements, while maintainers frowned upon the concept of diets noting healthier behaviors such as consistent physical activity as a "lifestyle change." Additionally, both groups identified health concerns and physical attractiveness as key motivators for weight loss.

The major difference between the groups was that maintainers described specific personal strategies that they employed when they struggled with weight loss-related challenges. These included open resistance to cultural and family norms in regard to food quantity and type, persistent vigilance in regard to physical activity, and tight-fitting clothing as a cue to reinitiate weight loss if weight gain occurred. The regainers

did not describe strategies for overcoming obstacles to losing weight. When asked what things resulted in their regaining weight, they cited laziness, lack of motivation, and inability to manage their time (Barnes et al., 2007).

Weight loss surgery is a clinical intervention performed to facilitate long-term weight loss. Bariatric surgery as a means to long-term weight loss has shown a large increase in use, from an annual average of about 10,000 surgeries between 1996 and 1998 to more than 100,000 procedures between 2002 and 2004 (National Center for Health Statistics, 2006). This surgery, however, cannot be viewed as a long-term solution to the obesity epidemic due to its costs and associated morbidity and mortality. Even when weight loss is achieved, not all of the longstanding consequences of obesity are necessarily reversible. Depending on when in the course of obesity the weight loss occurs, the damage might already have been done (Harris et al., 1997).

African-American women's perceptions about bariatric surgery further hinder the use of this treatment for long-term weight loss. In Lynch et al. (2007) study, 41 obese African-American women participated in 90-minute focus group sessions. In the focus groups, the researchers asked the women about the barriers for weight loss and of bariatric surgery (Lynch, Chang, Ford, & Ibrahim, 2007). The results indicated the most common barriers to weight loss were lack of time, issues regarding control, and identification with larger body size. The 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. Participants cited such reasons as not having control over the amount of weight lost, physical and lifestyle restrictions, and the surgery not being

"worth the risk." The acceptability of bariatric surgery seemed to be greatest in cases in which the perceived risks of obesity outweighed the perceived risk of surgery.

Despite reports of an increasing number of African-American women who have dieted or are currently dieting, obesity prevalence has not decreased. When African-American women participate in weight loss programs (formal or self-imposed), they are less likely than are Caucasian women to achieve weight loss or weight loss maintenance (Bronner & Boyington, 2002; Thomas et al., 2009; Walcott-McQuigg et al., 2002). Weight loss and weight management studies report mixed results in regard to the reduction of overweight and obesity among African-American women, in general, and young African-American women, in particular. Behaviors such as skipping meals, purging, and bulimia are methods used by many women, including African-American women, to reduce weight (Baturka et al., 2000; Blixen, Singh, & Thacker, 2006; Nothwehr, 2004).

Few studies have specifically tested interventions to reduce weight in African-American women. Often, African-American women are underrepresented in behavioral weight loss interventions trials, or outcome results are not reported by ethnicity or gender. One review examined weight loss interventions in African-American women only. Bronner & Boyington (2002) reviewed published reports of behavioral weight loss programs targeted to overweight African-American women and identified several program elements that may be useful in planning future weight loss program for obese African-American women. One element for long-term weight loss in response to a behavioral weight loss program included the use of group sessions. From a

programmatic perspective, group sessions incorporate efficient uses of money, time, and personnel. Group sessions are an effective element for participants because they utilize group dynamics (e.g., intact strong supportive networks), peer pressure, competition, and consistency in the delivery of the message to reduce attrition, promote program adherence, and sustain long-term behavior change. Application of adult literacy learning principles, by which the individual was guided to identify needs and develop skills to manage them, yielded clinically significant weight loss outcomes. Additional elements which contributed to intervention success and weight loss included, but were not limited to having culturally salient features such as modification of ethnic food recipes and culturally appropriate food guides, use of existing cultural networks (e.g., churches), use of ethnically appropriate group leaders and lay facilitators, use of formal adult learning principles, use of team approach and the inclusion of behavioral modification techniques as an integral part of the intervention (Bronner & Boyington, 2002).

Recently, a research team conducted a systematic review of the behavioral weight loss intervention literature, which included reported results separately for African-American women (Fitzgibbon et al., 2012). The researchers reviewed 25 studies from 1990 to 2010 that met inclusion criteria of (a) participants $\geq$ 18 years; (b) a behavioral weight loss intervention; (c) weight as an outcome variable; (d) inclusion of African-American women; and (e) weight loss reported separately by race and gender. Their findings indicated that well-designed and more intensive multi-site trials with medically at-risk populations offer the most promising weight loss results for African-American women. On average, African-American women in the lifestyle categories of

diabetes prevention and weight loss management trials lost more weight than did African-American women recruited into smaller trials that did not specifically target higher-risk women. The limitations of these trials were that none of the behavioral weight loss interventions addressed the powerful effects of socio-environmental influences on eating and exercise behaviors. In addition, most of the selected studies included women who were at least 25 years of age, with many studies' including participants with a mean age of forty years. None of the studies targeted women between the ages of 20 and 35 or of a specific BMI classification.

A qualitative examination of the racial and socioeconomic differences in weight loss experiences specific to obese African-American and Caucasian women provided insights into the failure of existing weight loss strategies to facilitate better weight loss maintenance among both groups of women (Davis et al., 2005). These failures included the focus on short-term weight loss and the lack of behavioral and psychological strategies. The African-American women in the study expressed the need for and importance of including spirituality into weight loss programs.

The connection between spiritual and physical health has been incorporated in some health interventions for African-American women such as using the Black American Lifestyle Intervention (BALI), Lose Weight and Win, and PATHWAYS (Kanders, Ulmann-Joy, & Foryet, 1994; Kumanyika & Charleston, 1992; McNabb & Rosing, 1993; McNabb, Quinn, Kerver, Cook, & Karrison, 1997; Young & Stewart, 2006). African-American women have expressed the need for the inclusion of spirituality in weight-management programs as a means to help them resolve the

emotional and psychological issues related to their weight. Contrary to what was found in other studies, African-American women in this study expressed negative body image views contrary to the cultural tolerance of heaviness (Davis et al., 2005). Some women described being teased about being overweight, but others recalled being pressured by family members to accept being overweight. They also believed that the societal expectation of thinness was difficult for them to achieve. None of the behavioral weight loss interventions included in the Davis (2005) review addressed the powerful socio-environmental influences on diet and physical activity (Davis, 2005).

Social and cultural factors of weight management. There are gaps in our understanding of effective weight loss or weight management interventions that will help African-American women to sustain long-term healthy eating and increased physical activity behaviors. Obesity is caused by many factors, but for most people, weight gain results from a combination of excess caloric consumption and inadequate physical activity. Individual behavior, however, can be exacerbated by social determinants that make less consumption of high calorie foods and increased levels of physical activity difficult to achieve. Social factors such as socioeconomic status, the built environment, public policy control, cultural and traditional values, and education contribute to the disparities in weight and weight management seen across age and racial/ethnic groups.

It is important to note a greater percentage of African Americans live below the federal poverty line (24.7%) than Americans in general (13.2%; Fitzgibbon et al., 2012). Such economic constraints may put African Americans at a disadvantage when participating in interventions that address only individual health behavior change.

Participants who have restricted choices in regard to their environment, affordability of healthful foods, or access to quality produce or lower-fat food choices are prone to unhealthy eating behaviors. Such factors influence individual intake and cultural ethnic preferences, reinforced by family, peers, and social networks who reside in similar conditions (Fitzgibbon et al., 2012).

Many social-structural aspects of obesity-promoting environments are more prevalent in African-American communities than in other racial/ethnic communities (Davis et al., 2005). Most often, the comparison is made to Caucasian communities, yet other communities of color are less accepting of the range of obesity that is seen among African Americans. Consider the significant disparities in obesity between African-American women and African-American men. They have similar family structures, genetic backgrounds, and living environments. A cultural tolerance for heaviness has been ascribed to African Americans as a group; however, any one individual's acceptance of his or her own weight is influenced by internal factors (e.g., social norms, attitudes) and external factors (e.g. social support, resources that help with weight-loss practices; Davis et al., 2005). Such cultural double standards, family influence, and societal expectations of acceptance of one's body weight are pervasive and seemingly have greater implications for African-American women.

Culturally influenced food, physical activity preferences, and attitudes about body weight are often cited as predisposing to positive energy balance in some ethnic minority populations. For all individuals, food preferences and attitudes about physical activity may be geared to feasting when food is available, worrying about not having

enough to eat, using food to cope with stress, and wanting to rest when not obliged to work, as personal or culturally determined responses to adverse historical or political circumstances (Kumanyika, 2005). Having very high levels of obesity within a community tends to render obesity socially normative (Ogden, 2006). At a community or social level, the reaction to increasing levels of obesity may be less negative than would be expected based on attitudes in the general (Caucasian) population. From an environmental and policy perspective, the circumstances of day-to-day life are also more likely to promote obesity, particularly in low-income or minority communities (e.g., less access to healthy foods, more exposure to less-healthy foods, and lack of access to safe and appealing options for physical activity; Kumanyika, 2002; Kumanyika & Grier, 2006; Taylor, Poston, Jones, & Kraft, 2006; Yancey et al., 2004). Yet, even with such obstacles, obese African-American women appear to be much less concerned about weight than are obese Caucasian women, and they are more than twice as likely to report being satisfied with their weight than are Caucasian women (Befort et al., 2008; Hebl & Heatherton, 1998).

Cultural and social factors that affect African-American women can be as damaging to their health behaviors as financial and educational constraints. Obesity in African-American women is more than an alteration in one's physiological processes. For some African-American women, obesity is a part of who they are. Obesity may be linked to the very essence of women's cultural, historical, and psychosocial well-being (Johnson & Broadnax, 2003). Being large can be a familial characteristic that bears no connection to the consumption of food or involvement in physical activity. In a

discussion about weight loss perspectives with obese African-American women, some of them indicated how mirroring the body type of female relatives fostered a sense of belonging within the family unit. This identity appeared to be lost when weight loss and a smaller body size were achieved (Lynch et al., 2007). Another argument about large-body acceptance concerns the resistance to, or rejection of, the ideal beauty messages of an oppressive, discriminatory society. As a protective coping mechanism, African-American women have rejected the slim woman as the ideal. Instead, African Americans have created positive, reinforcing terms such as *phat, big-boned, healthy, thick,* and *brick house* that refer to the larger, ideal physiques accepted among African-American women (Alleyne & LePoint, 2004). This creates a paradox. While there is a clear message that the African-American female body image must be protected, supported, and admired, messages that celebrate obesity are irresponsible and dangerous, given the serious health consequences of obesity.

Social networks and social support. It is widely recognized that social relationships and membership have powerful effects on physical and mental health. Social networks and support both may directly affect health outcomes and buffer the effects of other stressful events (Berkman, 2007). The social structure of the network is largely responsible for determining individual behaviors and attitudes by shaping the flow of resources that determine access to opportunities and constraints on behavior (Berkman, 2007). Social networks may influence health by primary pathways such as social support, social influence, social engagement and attachment, and person-to

person-contact. Given the importance of social support to weight loss efforts, examining social factors relative to obese African-American women is imperative.

Social support within the social networks of obese African-American women can be a powerful weight loss mediator or moderator but has not been extensively studied. Given the value of family and extended networks in the African-American community, the use of social support for weight loss may prove to be effective for African-American women (Thomas et al., 2009). The few studies that have examined the support needs of obese African-American women have identified a need for weight loss support (Barnes, 2007; Befort, et al., 2008; Kumanyika et al., 2009; Samuel-Hodge et al., 2010). Nevertheless, the obese women in these studies reported a lack of support among their family and friends (Thomas et al., 2009). Church or religious affiliations were noted as potential sources of support, yet study participants reported inconsistent support. Participants described social pressure to consume high-fat, high-calorie foods during church functions as a barrier to support. Participants also deemed important the person(s) chosen for support had previous success at losing weight. The success or failure of the weight loss partner had a direct impact on the participant. Behaviors of the partner believed to support weight loss included participating in physical activities with the individual who is trying to lose weight, providing nutrition education, using positive reinforcement, and avoiding criticism.

Chapter Summary

Obesity reduction is a national public health objective. This chapter presented the review of the literature that discussed (a) obesity as a public health problem; (b) age,

gender, and race/ethnicity as contributing factors to obesity; (c) the current research on adult obesity, sedentary lifestyles, and unhealthy diets. The chapter highlights obesity disparities literature about women, especially African-American women.

The chapter concludes with discussion of social and cultural factors that influence weight-related beliefs, behaviors, social networks and social support related to weight loss management among African-American women.

CHAPTER III

METHODS

Sampling

A two-tier criterion sampling method was used to develop the convenience sample for the study. The first-tier sampling determined the eligibility of 12 women recruited to participate in informal, one-to-one conversational chats. Eligibility was determined by three self-described criteria: age (20-35 years of age), race/ethnicity (Black/African American), and body size (full-figured or plus-sized). The second-tier sampling utilized the random assignment of 10 recruited participants (e.g., those with a confirmed BMI $\geq$ 30) to participate in semi-structured, in-depth interviews.

Procedures

Institutional Review Board approval was obtained in February 2012 from Texas A & M University Division of Research. Initially, the study was designed to be conducted in three phases. In the original design, participants were to be recruited from two African-American hair salons (African-American-owned and/or -operated salons that service primarily African-American clientele) located in Caldwell and Houston, Texas. Recruitment flyers were posted in selected African-American hair salons and at participating stylists' stations. Recruitment materials briefly described the study purpose and eligibility criteria to include women who: (a) self-described as "full-figured" or "plus-sized," (b) were willing to participate in a one-hour information session, and (c) (if

selected) were willing to participate in a 60- to 90-minute face-to-face interview about their weight-related beliefs, behaviors, and social networks.

Due to the poor response received during the initial recruitment period of March 15 through March 28, 2012, the recruitment strategy was revisited. The researcher discussed the low response rate to the initial recruitment strategy with the faculty advisor. The study protocol was reviewed and revised by the researcher in consultation with the faculty advisor and an experienced community participatory action researcher. A revised recruitment strategy using word of mouth and personal verbal invitations was implemented from March 29 to April 17, 2012. For the purpose of recruiting eligible women, the researcher: (a) verbally invited three women to participate in the study; (b) made an announcement about the study at a youth organization meeting; and (c) disseminated information about the study information to colleagues. Women who the researcher verbally invited were identified and approached at community, academic, and social settings. Before extending an invitation, the researcher observed and approximated the age, race/ethnicity, sex, and obesity status of potential participants. Based on these observations, the researcher approached 3 potential participants and verbally invited them to participate in the research study. As part of the verbal invitation, the researcher requested each potential participant to invite other eligible women to participate in the research study. The potential participants agreed to participate and identified other female friends and/or colleagues who, based on the selection criteria, they perceived to be eligible participants. These potential participants contacted eligible family members, friends, and colleagues; informed them of the study;

and forwarded the researcher prospective participants' contact information. A total of 12 women were recruited by using this combination of purposeful and snowball sampling techniques.

Phase I: Prospective participant eligibility screening. The original eligibility screening methods stipulated that recruited potential participants would be screened by phone to determine study eligibility. Identified participants self-described as: (a) Black/African-American female, (b) between the ages of 20 and 35, and (3) identified as "full-figured" or "plus-sized." Within one week of telephone screening, eligible participants were to be sent a reminder card that contained information about scheduling (date, time, and venue) for the information session. Each eligible participant was to receive an information session reminder phone call two days prior to the session. The research protocol was modified as follows.

Twelve recruited participants were screened by phone or in person using the Prospective Participant Eligibility Screening Questionnaire (PPESQ). Eligible participants were determined using the aforementioned criteria (procedure?). An information session (e.g., infosession) format was modified to informal conversation sessions (Curvy Girl Chat), in which the researcher and eligible participant engaged in informal, one-to-one conversations. Nine in-person and one by-phone Curvy Girl Chats were scheduled for a date and time agreed upon by the researcher and eligible participant.

Phase II: Curvy Girl Chats. The original protocol required four infosessions to occur at the hair salon recruitment sites in Caldwell and Houston, Texas. Each two-hour infosession was to include: (a) an orientation to the study; (b) a consent process; (c) record of height, weight, and waist circumference measurements; (d) enrollment; and (e) a focus group session. The researcher was expected to explain the purpose of the study, study protocol, and participant incentives. The orientation would conclude with a brief question-and-answer session. Two graduate research assistants, both affiliated with the Social and Health Disparities Research Lab and trained in consent protocol, would obtain study consent forms and administer a brief information session demographic questionnaire to each participant. Focus groups were to be conducted by an experienced facilitator, and group responses would be recorded (by hand) by a scribe. Focus group transcripts were to be used to revise the face-to-face, semi-structured interview guides. A revised protocol was implemented to complete the enrollment process.

As noted, due to the revised recruitment strategy, the infosessions were modified to Curvy Girl Chats. Eleven recruited potential participants were scheduled for Curvy Girl Chats. One potential participant was ineligible to further participate in the study after BMI < 30 was confirmed by the researcher at the onset of the Curvy Girl Chat. A total of 10 women met the BMI eligibility criteria and participated in the Curvy Girl Chats in its entirety. The researcher engaged eligible participants in these informal, one-to-one, conversation sessions. During the Curvy Girl Chats, the purpose of the study, study protocol, several health-related topics, and participant incentives were discussed. The researcher, trained in the consent protocol, obtained study consent forms and

administered a brief information session demographic questionnaire (Curvy Girl Participant Demographic Profile [Curvy Girl-PDP]) to each participant. Participants received a copy of the study consent form. The researcher, who is also a trained health professional, measured waist circumference (in.) 1 inch above naval, using a standard tape measure; height (in.), with the participant standing against a wall without shoes, using a standard tape measure; and weight (lb.) in light clothing without shoes, using a Health-O-Meter Professional Body Fat Scale (Model # BFM 884-60). Measurements were recorded, and BMI was calculated. Each enrolled participant was provided with a copy of her measurement information.

Throughout the Curvy Girl Chats, eligible participants: (a) disclosed current health status; (b) compared/contrasted current health status to health status 3 years prior; (c) presented initial reactions (words, ideas, thoughts, feelings) to the terms "obese" and "overweight;" (d) provided preferred descriptors for current weight status; and (e) shared ideas, thoughts, and concerns about how to improve health and healthy weight among young African-American women. Each participant was entered into a drawing for a $50 gift card or a hair care beauty basket ($125 value).

While conducting the Curvy Girl Chats, the researcher manually recorded participants' responses on individual ledgers. These notes were transcribed for the Curvy Girl Chats.

Phase III: Semi-structured, in-depth interviews. The semi-structured, in-depth interviews were comprised of two parts: Curvy Girl Essentials (part one) and Curvy Girl Circles social network profiles (part two). All ten participants completed part one of the

interview – Curvy Girl Essentials – that lasted approximately 60 minutes. Five of the ten participants were randomly assigned to part two of the interview – Curvy Girl Circles social network profile – that lasted approximately 90 minutes. These face-to-face interviews occurred at convenient locations predetermined by the participant and researcher and included residential (e.g., participant home), business (e.g., participant office), and commercial (e.g., local bookstore) locations. Two days prior to the scheduled interview, the researcher contacted participants by phone to remind them of the date, time, and location of the scheduled interview.

At the start of the interview, the researcher reviewed participant consent and explained the assigned interview protocol. The interviews were audio-recorded using a Sony ICD-PX312 recorder. The researcher used the appropriate interview guides (Curvy Girl Essentials and/or Curvy Girl Circles) to gather data related to the guiding research questions. At the conclusion of each interview, participants received a $25 gift card as a token of appreciation for their time and contribution to the study.

Instrumentation

Four researcher-developed tools were used in data collection. The Curvy Girl Prospective Participant Eligibility Screening Questionnaire (Curvy Girl-PPESQ) was a 9-item questionnaire used to record participants' race/ethnicity, gender, age, contact information, and availability to attend an information session data (Appendix A). The Curvy Girl-PPESQ was adapted from the *Baby Boomer Focus Group Participant Eligibility Screening Questionnaire* (Shaw, 2010).

The Curvy Girl Participant Demographic Profile (Curvy Girl-PDP) is a 10-item questionnaire used to record participants' gender, age, education, marital status, health status, and self-reported physical activity and dietary behaviors as well as measured height, weight, waist circumference, and calculated BMI (Appendix B). The Curvy Girl-PDP was adapted from the demographic profile of the Grande and Shaw (2009) study and the 2009 NHANES.

The two part semi-structured, in-depth interview guide was comprised of 46 open-ended questions derived from the research questions and categorized into six domains, with approximately three questions in each domain. The domains were: (a) weight-related beliefs, (b) weight-related behaviors, (c) social support, (d) types of social support given and received, (e) social networks, and (f) weight management experiences. Part one of the interview guide, the *Curvy Girl Essentials* (Appendix C) consisted of 36 questions from five domains (a, b, c, d, and f). Part two of the interview guide, the *Curvy Girl Circle* social network profile (Appendix D) included 46 questions from all six domains.

Treatment of the Data

This study utilized grounded theory principles and a thematic analysis process to examine the weight-related beliefs, behaviors, and social networks of participants and provide a richer understanding of their weight management experiences as related to their social networks. Interviews are a primary data collection method when using a grounded theory approach. Interviews were conducted by the researcher in locations agreed on by the researcher and each participant. These interviews employed a semi-

structured based on grounded theory. The approach allows some flexibility in the interview and does not set any a priori hypothesis but allows themes and categories to emerge once the data are coded (Creswell, 2007; Lincoln & Guba, 1985). The analytic process was based on immersion in the data and repeated sortings, groupings, codings, and comparisons that characterize the grounded theory approach (Boyastakis, 1998; Creswell, 2007). The analytic process was completed in 4 steps:

1. Open coding: independent researchers examined small sections of transcript data made up of individual words, phrases, and sentences. The participants' language guided the development of category labels which were identified with short descriptors. Repeated phrases or words were grouped and quantified.
2. Axial coding: Connections were made between the different categories between participants. Similar categories were grouped together and relabeled; differential categories were reassigned new labels.
3. Selective coding: independent researchers selected core categorical themes, by systematically relating it to other categories, and validating these relationships with participant data (e.g., words, phrases, responses).
4. Comparative method: categories were sorted, compared and contrasted until analysis produced no new codes or categories (saturation) and when all of the data were accounted for in the core categorical themes.

The criteria categorical themes were developed using the following criteria:

1) Centrality in relation to other categories

2) Frequency of the category's occurrence in the data

3) Inclusivity and ease with which it related to the other categories

Curvy Girl-PDP and Curvy Girl Chats data analysis. Curvy Girl-PDP data were entered and analyzed, and descriptive statistics were computed using the Statistical Package for the Social Sciences (SPSS), Version 16.0. Curvy Girl Chat transcripts were entered into Microsoft Excel® spreadsheets. The data spreadsheet was divided into ten rows, one for each participant, and nine columns: date, participant number, time, location, response to question 1, response to question 2, response to question 3, response to question 4, and notes. The following represents the steps taken to develop codes and emerging themes from the Curvy Girl Chats transcripts. First, the researcher sorted participants' Curvy Girl Chats transcript data into the aforementioned spreadsheet. The researcher highlighted and sorted words and quotes within individual participant transcripts as they related to the initial discussion question. Second, the researcher grouped similar words and phrases across participants to establish collective lists of responses per discussion question. Third, the researcher created codes or descriptive labels, represented by words or phrases in the collective lists, to identify emerging patterns or themes. Fourth, a summary report of the Curvy Girl Chats emergent themes was developed. The Curvy Girl Chats transcripts provided preliminary data on participants' perceptions of weight-related issues prior to conducting the semi-structured, in-depth interviews.

Semi-structured, in-depth interview analysis. The researcher and a trained qualitative inquiry researcher conducted independent thematic analyses of the 10

interviews. The analysis was conducted in five steps to develop the emerging themes from the data set.

First, each interview file was transferred to a laptop computer using Sony Sound Organizer software and saved as an audio file. Participant number, interview date, and type of interview labeled each audio file. Ten interviews audio files, approximately 12 hours of interview data, were transcribed to individual Microsoft Word® files by the researcher.

Second, the researcher created Microsoft® Excel binders for each individual transcript as a data management tool for the coding process. Each binder contained five to six spreadsheets corresponding to the domains of the interview (Curvy Girl Essentials or Curvy Girl Social Circles). Each spreadsheet contained the semi-structured interview questions as column headings and participant numbers as row titles. Transcript data were sorted into the corresponding spreadsheet. Third, the researcher highlighted, sorted, and grouped words and phrases for patterns, repetitions, or meanings within the data set. Phrases or words repeated across interviews were quantified and a note made for further review. An outline of responses across participants was developed for each research question.

Third, the researcher continued to review the sorted transcripts to derive potential themes from the data. The potential themes, represented by words or phrases in the transcript data, emerged as data-driven patterns or themes. Fourth, the researcher reviewed and organized the potential themes. Related themes were grouped together and differential themes rewritten. The grouped themes were recoded and used more

inclusive/descriptive words as needed. Themes were compared and contrasted until the analysis produced no new codes or categories.

Finally the researcher developed a narrative analysis to address each domain of the in-depth, semi structured interviews and respond to the six principal research questions. The researcher used the emergent categorical themes, participant excerpts, and phrases to illustrate participants' weight-related beliefs, behaviors, and social network characteristics

Chapter Summary

This chapter presented the study design, research methods, and data analysis plan. Initial, informal conversations called Curvy Girl Chats and semi-structured, in-depth interviews were conducted to explore the beliefs, behaviors, and social network characteristics of young, obese African-American women. Qualitative inquiry methods were implemented to analyze, interpret, and report findings gleaned from transcripts.

CHAPTER IV

RESULTS

The purpose of this exploratory study was to determine the weight-related beliefs, behaviors, and social network characteristics of obese, young adult African-American women. This chapter presents findings of the qualitative study that was conducted and how these findings related to the following research questions:

1. What are the weight-related beliefs of obese, young adult African-American women?
2. What are the weight-related behaviors of this group?
3. How do obese, young adult African-American women describe the concept of social support?
4. What types of social support do they give and receive?
5. What characterizes the social networks of obese, young adult African-American women?
6. What characterizes their weight management experiences as it relates to their social networks?

First, demographic characteristics of the study participants collected from the Curvy Girl Prospective Participant Eligibility Screening Questionnaire (Curvy Girl-PPESQ) and Curvy Girl Participant Demographic Profile (Curvy Girl-PDP) are presented. Second, a summarization of the Curvy Girl Chats presents participants' initial responses to the research study and other related topics. The chapter concludes

with a thematic analysis of the Curvy Girl Essentials and Curvy Girl Circles semi-structured, in-depth interviews.

Descriptive Characteristics of Curvy Girl Participants

Twelve African-American/Black women were recruited as potential participants for this study. One recruited participant, who did not respond to three follow-up contacts to complete the Curvy Girl-PDP, was eliminated from the study. Therefore, eleven recruited participants completed the Curvy Girl-PPESQ and Curvy Girl-PDP. The Curvy Girl-PDP was completed by participants at the onset of the Curvy Girl Chats. Upon completion of the Curvy Girl-PDP, one participant was ineligible to further participate in the Curvy Girl Chat after a BMI < 30 was confirmed. However, the demographic information presented here reflects the data from the eleven participants who completed the Curvy Girl-PPESQ and the Curvy Girl-PDP.

All Curvy Girl participants are Texas residents. The majority of participants reside in two primary regions of Texas: Bryan/College Station and Houston. One participant resides in the Dallas/Fort Worth area. Table 1 demonstrates the geographic distribution of participants by city and county.

Table 1

Texas Residences of Curvy Girl Chats Participants by Area and County

Area	Frequency	%
Brazos Valley		36.36
Brazos County - Bryan	1	
Brazos County - College Station	3	
Houston Area		54.54
Harris County	4	
Waller County	1	
Fort Bend County	1	
Dallas/Fort Worth		9.09
Tarrant County	1	

Note. n = 11

Participants identified how they were recruited to participate in the research study (Table 2). No participants responded to the initial recruitment method (recruitment fliers posted or distributed at beauty salon recruitment sites). The majority of participants (n = 9, 81.82%) were recruited by "word of mouth," in which participants were invited by, and discussed the study with, other potential participants.

Table 2

Curvy Girl Chats Participant Responses to Recruitment Methods

Recruitment Method	Frequency	%
Fliers (posted/distributed)	0	0
E-Mail	2	18.18
Word of Mouth	9	81.82

Note. n = 11

Participant eligibility was determined using four main criteria: race/ethnicity, gender, age, education, and current body size using the Curvy Girl-PPESQ. Table 3 describes race/ethnicity, gender, age, and education of screened potential participants. All screened potential participants were African-American, females whose ages ranged

from 29 – 35. All screened participants acquired at least one year of post-secondary education. Nine (81.82%) participants completed advanced degrees, one (9.09%) was a college graduate and one (9.09%) completed vocational school/professional training. The majority (n = 8, 72%) are unmarried.

Table 3

Curvy Girl Participant Profiles: Key Demographic Characteristics

Variable	Frequency	%
Race/Ethnicity		
African American/Black	11	100
Gender		100
Female	11	0
Male	0	
Age		
20 – 24	0	0
25 – 29	1	9.09
30 – 35	10	90.91
Education		
Elementary School	0	0
Some High School	0	0
High School Graduate/GED	0	0
Vocational Training/Professional School	1	9.09
Some College	1	9.09
College Graduate	0	0
Advanced Degree (MD, PhD, JD, etc.)	10	90.91
Relationship Status		
Married	3	27.27
Widowed	0	0
Divorced	0	0
Separated	0	0
Never Married	5	45.45
Dating	1	9.09
Living with Partner	2	18.18

Note. n = 11

Participants were asked to select the "best" description for their body size from the following list: full-figured, plus size, overweight, and obese. Table 4 shows the body size characterizations selected by participants. Participants also identified their dress size measurements to further describe and reiterate their perceived body sizes. Over half

(n = 6, 54%) of participants wear dress size 18W or greater and one participant reported none of the sizes listed as applicable.

Table 4

Curvy Girl Participant Profiles: Body Size Characteristics

Body Size Characteristics	Frequency	%
Descriptors		
Full-figured	3	27.27
Plus-Size	5	45.45
Overweight	2	18.18
Obese	1	9.09
Dress Size Measurements		
14/16 W	4	36.36
18/20 W	1	9.09
22/24 W	1	9.09
24/26 W	2	18.18
28 W Plus	2	18.18
Not Applicable	1	9.09

Note. n = 11

Participants' height (in inches) ranged from 61.5 to 69.7 (5'1 - 5'8); weight ranged from 176.8 to 344.6 pounds; and waist circumference from 34 to 62 inches. Body Mass Indices (BMI) were calculated for all participants using weight and height measurements. Table 5 shows a distribution of participants' BMI and BMI obesity classifications. Based on their BMI, ten out of eleven women can be categorized as obese. The ten obese women were further stratified into BMI obesity classifications based on the calculated BMI. Six women (54.54%) had a BMI of $\geq$ 40 and as a result, could be classified as being in BMI obesity class III. BMI obesity class III begins at a BMI of 40; the highest participant has a BMI of 59.3.

Each woman answered two questions regarding individual weight histories about appropriate weight perceptions and weight loss attempts. Participants were asked to answer "yes" or "no" to the following question: *During the past 12 months have you tried to lose weight?* One hundred percent of women (n = 11) had attempted to lose weight over the past 12 months. Each woman was asked: *Do you consider yourself now to be the appropriate weight, overweight, or obese?* Although the BMI measurements for 10 out of 11 were within the limits of obese categorization most participants self-identified as overweight (7, 63.64%).

Table 5

Curvy Girl Participant Profiles: Body Mass Index (BMI) Classifications

Determinants	Frequency	%
BMI		
Underweight (< 18.5)	0	0
Normal Weight (18.5 - 24.9)	0	0
Overweight (25 – 29.9)	1	9.09
Obese (≥ 30)	10	90.9
BMI Obesity Classification		
Class I Obesity (30 – 34.9)	2	18.18
Class II Obesity (35.0 – 39.9)	2	18.18
Class III Obesity (≥ 40)	6	54.54
Not Applicable	1	9.09
Body Size Perception		
About the right weight	0	0
Overweight	7	63.64
Obese	4	36.36
Weight Loss Attempt		
Yes	11	100
No	0	0

Note. n = 11

In response to: *At the present time, how would you rate your overall health?* participants' assessed their overall health and most (n = 8, 72.73%) indicated their overall health as being "good." However, none of the participants considered themselves

to be in "excellent" health (Table 6). They also reported frequency of physical activity they completed within the past seven days in accordance to the federal recommended amount of physical activity and rated the healthiness of their diets.

Table 6

Curvy Girl Participant Profiles: Overall Health Ratings

Rating	Frequency	%
Overall Health		
Excellent	0	0
Good	8	72.73
Fair	2	18.18
Poor	1	9.09

Note. n = 11

In response to the question: *During the past 7 days, how many days were you physically active for a total of at least 60 minutes per day?* (Any physical activity that increased your heart rate and made it hard to talk during the activity), less than 30% (3) of participants had no physical activity over the past 7 days (Table 7). None of the participants engaged in physical activity more than 5 days. Six participants (54.54%) engaged in ascribed physical activity at least 3 days over a 7 day period.

Concerning dietary practices, participants were asked: *In general how healthy is your overall diet? Would you say…?* In response to this question, over half of the participants reported positive descriptors of their overall diet. Most participants self-reported an overall "good" (n = 6, 54.54%) or "very good (n = 1, 9.09%) diet. Three participants reported a "poor" overall diet.

Table 7

Curvy Girl Participant Profiles: Diet and Physical Activity Factors Contributing to Overall Health Ratings

Factor	Frequency	%
Healthy Diet Rating		
Excellent	0	0
Very Good	1	9.09
Good	6	54.54
Fair	1	9.09
Poor	3	27.27
No. Days Physical Activity		
0	3	27.27
1	1	9.09
2	1	9.09
3	4	36.36
4	1	9.09
5	1	9.09
6	0	0
7	0	0

Note. n = 11

Curvy Girl Chats Summary

Eleven participants completed engaged in Curvy Girl Chats with the researcher. The Curvy Girl Chats provided the researcher with preliminary data about participants' weight related beliefs, behaviors, and weight management experiences. The four discussion topics correspond with three research questions: (a) *What are the weight-related beliefs of obese, young adult African-American women?* (b) *What are the weight-related behaviors of obese, young adult African-American women?* (c) *What are the weight management experiences of obese, young adult African-American women?* The following presents a summary of participant responses to these discussion topics.

Discussion Topic 1: Describe Your Overall Health

Research Questions: What are the weight-related beliefs of obese, young adult African-American women? What are the weight-related behaviors of obese, young adult African-American women? Participants were asked to describe their overall health. They provided a comprehensive illustration of their health by using examples of physical/mental functioning, presence and/or absence of chronic illnesses, and current lifestyle health behaviors. Categorical themes that emerged from participant responses were: health descriptors, presence/absence of illness, and health behaviors. The categorical theme, healthy behavior, was further sorted into three distinct categories: unhealthy behaviors, healthy behaviors, and future health behaviors. Table 8 portrays the negative and positive participant responses about their overall health. Table 9 illustrates categorical responses across participants, while table 10 shows categorical themes as derived from participants' characteristic responses.

Positive and negative descriptions of overall health. Participant descriptors of their current overall health were similar to those used in the Curvy Girl-PDP instrument. Their health status descriptions varied greatly from "extremely poor" "fair" "ok" "average" to "pretty healthy." In addition, participants evaluated their health, stating it "needs improvement" or had "improved." They also used feelings such as "tired" and "happy" potentially to include mental/emotional health in their assessment extending beyond their physical health – suggesting a holistic view of overall health.

Presence and/or absence of chronic illnesses as indicators of overall health status. Participants described their overall health either positively or negatively. This

determination was based on participants' ability to perform daily body functions (physical functioning) and the presence and/or absence of chronic illnesses. Physical functioning was described as the ability or inability to participate in activities such as exercise and running. One participant, who included her mental health as part of physical functioning, stated her "*limbs work, in right mind*" to support her positive overall health. Participants cited the absence or presence of chronic illnesses as support for a positive or negative perception of their overall health. Chronic illnesses such as hypertension, diabetes, heart disease were mentioned by most participants. The lack of illnesses such as asthma, sleep apnea, and thyroid problems were additional indicators of perceived positive overall health.

Table 8

Curvy Girl Chats Overall Health Discussion - Negative and Positive Categorical Responses

Participant	Participant Responses	Categories
001	--	
003	*Overall health is poor*	Negative
004	*Health has improved over the years because of lifestyle changes.*	Positive
005	*Health is good…no heart disease, high blood pressure…*	Positive
006	*Overall health is extremely poor*	Negative
007	*For the most part I'm pretty healthy*	Positive
008	*No real health problems…ever*	
009	*My health is fair…few things I could do better*	Positive
010	*My health is average*	Positive
011	*Health is good to fair*	Positive

Table 9

Curvy Girl Chats Discussion Topic 1: Overall Health Categories

Descriptors	Presence/Absence of Illness	Behaviors		
		Unhealthy	Healthier	Future Health
Poor	Knees and other joints "pop"	Eating out most of the time	Doesn't eat out a lot	Want to lose 10 -15 pounds
Could be better	Out of Breath	Eating carbs	Lots of home cooked meals	Needs to lose some weight to be "more shapely"
Could do better	Not inherently sick	Cooking at home it's cheese, pasta, sweets, ice cream	Not much frying	Better food choices
Fair	No real health problems	Stop eating out	Not a binge or emotional eater	Need to eat more leafy green foods, salads, drink more water, cook at home
Ok	No major illnesses	Wing Stop 4 days a week	Started a weight loss competition	Exercise and eating better will help to sleep better
Average	Not diagnosed with high blood pressure, hypertension, diabetes	Eat out every day 2 -3 times per day	Stop eating carbs	Better time management
Improved	No thyroid problems	Luby's and strawberry cake	Run	
Pretty healthy	No sleep apnea	Doesn't eat breakfast regularly	Exercise	
Tired	No asthma	Don't sleep well		
Happy	On low dose meds to manage high blood pressure	Doesn't get enough rest		
	Stress	Too tired to work out		
		Doesn't work out		

1

Table 10

Curvy Girl Chats Discussion Topic 1: Please Describe Your Overall Health – Categorical Responses

Participant Responses	Key Words/Phrases (# Times Used)	Categories
Mentally I think about weight all the time…I'm always hungry My overall health is poor. I don't eat or sleep well or exercise. *I eat out most of the time.* Not eating well, eating carbs	Poor Eat, eating (4) Hungry Don't sleep	Unhealthy BEHAVIORS
My limbs work and *in my "right mind." I have high blood pressure and take low dose medications to manage it.* Borderline diabetic. *I can do better.*	Blood pressure (2) low dose medications, border-line diabetic	PRESENCE OF ILLNESS
Heart issue not related to obesity. *I haven't been diagnosed with heart disease, high blood pressure, hypertension or diabetes.* No sleep apnea, no asthma.	No chronic illness	ABSENCE OF ILLNESS
Overall health is extremely poor. Very stressed…I work three jobs and one job is really stressful	Stressed (2) Extremely Poor	STRESS
For the most part I'm pretty healthy…no health problems	Healthy	ABSENCE OF ILLNESS
No real health problems ever…no high blood pressure, no diabetes, no health problems…	No real health problems (2) No chronic illness	ABSENCE OF ILLNESS
Overall health is fair; few things I would like to do better. My diet and my weight could be better. I need to make better food choices and better time management. Not inherently sick. Weight is a burden	Better (4) Fair	ABSENCE OF ILLNESS Unhealthy BEHAVIORS
Health is average. *I want to run a mile without stopping. I don't have diabetes, high blood pressure…no health issues, no thyroid problems.*	No health issues No chronic illnesses	ABSENCE OF ILLNESS
Good to fair. Post-surgery I feel marvelous…I can jog half a mile	Exercise, jog	Healthy BEHAVIORS

Behaviors affecting overall health status. During the discussion of overall health, participants described behaviors that contributed to their health. They identified current unhealthy and healthy behaviors and future health goals.

Unhealthy Behaviors

Participants reported unhealthy behaviors such as eating out regularly, eating carbs, not getting enough sleep, and not working out as contributors to their weight gain and overall health. Few participants mentioned cooking at home. The practice of cooking at home was identified as an unhealthy behavior because of what participants chose to prepare or eat when cooking at home. For example, several participants mentioned the over consumption of cheese, pasta, sweets, and ice cream as an unhealthy behavior contributing to weight gain and a barrier to more positive overall health status.

Healthy Behaviors

Participants described their healthy dietary/nutrition behaviors. These included food preparation (e.g., not much frying), food intake (e.g., stop eating carbs), and eating habits (e.g., lots of home cooked meals). For one participant, it was important to report she was "not a binge or emotional eater" which she perceived to be a characteristic of an obese person. Her ability to refrain from these negative eating behaviors was an indicator she did not qualify to be labeled an obese person.

Future Health Goals

Participant discussions of overall health status included future health goals such as weight loss, increased physical activity, healthier eating behaviors, and lifestyle changes. Participants explained what they should do in the future to improve their

overall health such as lose a specified amount of weight, eat more fruits and vegetables, drink more water, and get more sleep.

Discussion Topic 2: Compare/Contrast Your Health to Three Years Ago

Research Questions: What are the weight-related beliefs of obese, young adult African-American women? What are the weight-related behaviors of obese, young adult African-American women? The second topic discussed during the Curvy Girl Chats required participants to reflect on their health over the past three years and compare/contrast changes in their overall health over that period of time. During the comparison, participants discussed weight gain/loss, body size, and factors contributing to their health changes. Explanations for overall health status included changes in their personal lives (life changes); an increase/decrease in physical activity and diet/nutrition; and for some, participation in weight loss interventions. The categorical themes were: descriptors, absence and/or presence of chronic illness, body changes, and reasons for health status change. The body changes categorical theme was grouped into three distinct categories of weight gain, weight loss, and body size. Additionally, the categorical theme reasons for health status change, was sorted into four major categories of life changes, physical activity, diet/nutrition, and weight loss interventions. Table 11 portrays participants' comparison of their health over three years. The categorical responses of participants' comparison and contrast of their health over three years identified three categories: declined, improved, or same. Table 12 is an overview of participant responses across categories. Table 13 illustrates participants' characteristic responses and related categories.

Table 11

Curvy Girl Chats Discussion Topic 2: Please Compare/Contrast Overall Health to 3 Years Ago - Comparisons

	Participant Responses			
Participant	Health 3 Years Ago	Current Health	Key Words/Phrases	Categories
001	--	--	--	--
003	*Much better shape then, much better. Three years ago probably a size 20/22. My weight was lower…30 – 40 pounds lower.*	*Biggest I've ever been for sure compared to three years ago. Cholesterol is now up 20 points higher. I've had three asthma attacks since fall of 2011…my last attack was the worst one.*	Better then Was lower Biggest ever been Three asthma attacks since Fall 2011	Declined
004	*At my old job I would go to work come home and sleep, I was burnt out. Drinking soda, eating Wingstop.*	*Health is better now compared to three years ago. I'm more active now, started changing my diet.*	Old Burnt out Better now More active now	Improved
005	*Health three years ago was good, no changes. I was more stressed. Was active…was walking but stopped after I lost my job.*	*I cut back on food and am more active. Recently purchased a trampoline. For about three weeks I've been walking about a mile on Sunday.*	No change	Same
006	*Health three years ago still pretty poor but I had more time…stress was much lower.*	*My overall health is extremely poor.*	Pretty poor Extremely poor	Same
007	No chronic illnesses	*I'm pretty healthy*	Pretty healthy	Same
008	*I had just finished breast feeding my son. It was hard to watch the baby and kick box so I stopped going.*	*Physical activity is good. My goal is to run one mile without stopping. I don't get a lot of sleep.*	Was hard Just finished Is good Goal	Improved
009	*Significant difference in my health three years ago compared to now*	*I've gained quite a bit of weight.*	Significant difference Gained	Declined
010	*Probably at that time I was at my heaviest…mental health was horrible. Weight went up and down throughout the year.*	*This year during spring break I did a retreat. I shut down, didn't talk to anyone. Fasted, prayed, and read the Bible. I jog and eat differently when I am in the lower 190s.*	Heaviest Horrible Lower 190s	Improved
011	*It's good to fair. Always been physically active but not as consistent.*	*Post-surgery I feel marvelous. I'm more conscious of what I put into my body. Slight workaholic, I'm trying to get more rest.*	Good to fair Not as consistent Feel marvelous Conscious	Improved

Descriptors of health status changes over three years. Participants compared/contrasted their overall health using positive descriptors such as "healthier" "active" "satisfied," neutral descriptors such as "about the same" and "no changes," and negative descriptors such as "horrible" and "biggest" referring to their current size.

Absence and/or presence of chronic illness. The absence and/or presence of illness were again discussed by participants when they compared/contrasted their overall health. Participants described changes in current illnesses or the onset of new illness as reasons for changes in overall health status over the past three years.

Body changes: weight gain, weight loss, and body size. Participants' reflected on their body changes over time and how these changes impacted their overall health. Participants used weight gain/loss and body size to compare, contrast, and evaluate their overall health status. Participants noted weight gain, increase in body size, or decrease in muscle tone as indicators of less healthy status. Yet, even with weight gain, participants' lack of chronic illnesses related to a positive perception of their health status.

Reasons for health status changes over three years. For the purpose of this study, participants' reasons for health status changes were grouped into four categories: life changes, physical activity, diet/nutrition, and weight loss intervention.

Life Changes

Several life changes were identified to explain overall health status changes during the past three years. Participants listed job stress, relationship changes, family

responsibilities, pregnancy and childcare, and time constraints as conflicts for achieving improved health (shown in Table 12).

Physical Activity

Table 12 outlines the physical activities reported by participants as contributing to the overall status of their health. Participants repeatedly identified walking as a means of physical activity. Participating in an exercise regimen, or "working out," and gym attendance were also listed as physical activity. An unconventional physical activity – strip tease classes – was mentioned by one participant as part of her current dance activities. Physical inactivity was a result of time restraints, expense of preferred activities, and "laziness."

Diet/Nutrition

Changes in diet/nutrition practices contributed to the health status of participants (Table 12). They reported behaviors such as cooking meals at home, drinking water/tea, and resisting quick meals (e.g., fast food) as healthy options. Participants identified certain foods (e.g., cheese, sweets) and non-adherence to a prescribed diet regimen as unhealthy diet/nutrition behaviors contributing to overall health status.

Weight Loss Interventions

Participants identified a few weight loss interventions (commercial programs, physician supervised, and weight loss surgery) as underlying contributions to their overall health status. Each program required participants to change their diet/nutrition and physical activity behaviors to improve their health. Behaviors specific to weight loss interventions included tracking meals and physical activities, monitoring diet, and

Table 12

Curvy Girl Chats Discussion Topic 2: Please Compare/Contrast Your Overall Health to 3 Years Ago - Contrasts

Participants' Reasons for Health Status Changes				
Descriptors	Absence/Presence of Chronic Illness	Body Changes		
		Weight gain	Weight loss	Body Size
Healthier	Stress much lower	Biggest than has ever been compared to 3 years ago	Healthier now than at 276	Body is flabby now, was heavy but toned
Much better shape	Blood work was fine	20 pounds lighter 3 years ago	Three years ago at my heaviest	Three years ago probably size 22
Better	Cholesterol	Put on about 20 pounds	197 for one day…worked to get below 197	
Active	Build-up of fluid on optic nerve	Gained quite a bit of weight	Lost 4.5 inches about 20 -25 pounds	
Satisfied	Number and intensity of asthma attacks has increased			
Good	Cholesterol is now up 20 points higher			
About the same				
No changes				
Biggest				
Stressed				
Horrible				
Significant				

continued

Table 12 *(continued)*

Participants' Reasons for Health Status Changes			
Life Changes	Physical Activity	Diet/Nutrition	Weight Loss Interventions
Gastric Bypass Surgery	Lot more active	Cut back on food	Physician recommended weight loss
Had the time for physical activity	Exercise regimen Run up to 2 miles Walking approximately 1 mile	Watched what I ate, measured food, kept food log, didn't eat after certain time	Gastric Bypass Surgery Curves program – 6 months "Healthy Wage" district wide weight loss competition
No accountability after completing weight loss program	Worked out 3 days/week Jog differently at lower weight	Changed diet…stopped drinking soda eating Wing Stop	"Marathon Kids" 26.6 mile marathon – 6 months
Affordability	Gym 2 times/week	Drinking water/tea, eating salad	
Stressful life events	Approximately 3 mile walk 3 – 4 times/week	Refuses to stop for something quick	
Parent illness	Dance (2 step, Zumba, pole class) 2 times/month	Goes to grocery store	
Family responsibilities	Running	Cooks meals at home	
Relationship changes (e.g. break up)	Walking	Cooks at home	
Lack of health insurance	Walking 2 miles	Likes to cook, bake, and always tasting	
Job loss	Walking 1 mile	Didn't keep up with diet after weight loss program	
Job burn out	Trampoline	Weakness is cheese	
Stopped taking birth control	Work out at gym Personal trainer	Likes sweets	

Table 13

Curvy Girl Chats Discussion Topic 2: Reasons for Health Status Change – Categorical Responses

Characteristic Responses	Key Words (# Times Used)	Category
Biggest ever been for sure compared to 3 years ago.	Biggest	BODY (weight gain)
I was on an exercise regimen. Much better shape then.		INTERVENTION
Cholesterol now up 20 points higher. Three asthma attacks since the fall.	Cholesterol (3) Asthma attacks	ABSENCE/PRESENCE OF ILLNESS
More active now. Physical activity has changed a lot. Dance now.	Now (4) Physical activity	LIFE CHANGES PHYSICAL ACTIVITY
Recently purchased a trampoline. *I've cut back on food and more active.*	Walking (4) Trampoline (3) Active (2)	PHYSICAL ACTIVITY
Health three years ago was still pretty poor but I had more time.	Poor, Stress, Time (2)	DESCRIPTORS
Nieces didn't live in TX just me and my husband.	Nieces, husband	LIFE CHANGES
Put on weight about 25 pounds	Gained	BODY (weight gain)
Likes to walk in park 3 – 4 times per week	Walk (2)	PHYSICAL ACTIVITY
I had to start putting baby in a car seat or rocker while walking on the track.	Son (3) Baby (4)	LIFE CHANGES PHYSICAL ACTIVITY
Son is in track so I go run on Tues. and Thurs.	Run (3) Kickboxing (2)	
Equates weight gain to stressful life events, graduate school, and poor coping skills.	Weight gain (2) Graduate school	BODY (weight gain) LIFE CHANGES
Probably at that time was at my heaviest.	Heaviest	BODY (weight gain)
During dissertation "w*eight went up and down"*	Graduation, dissertation, breakup	LIFE CHANGES
Now I'm more conscious of what I put into my body.		DIET/NUTRITION
Exercise was the main thing missing.	Exercise	PHYSICAL ACTIVITY
Post-surgery I feel marvelous.	Gastric bypass surgery	INTERVENTION

meetings with health professionals (e.g., physician, dietician). Although weight loss was achieved during the interventions, participants did not maintain weight loss after exiting their programs (Table 13).

Discussion Topic 3: Describe Your Reactions to the Words "Overweight" and "Obese"

Participant reactions to the words "overweight" and "obese" ranged from expressions of apathy to acceptance to disgust. Tables 14 and 15 provide a summary of these reactions. Participants used words such as "statistic" to "bad monster" as initial reactions in response to the application of the word "obese" to their body size. The categories emanating from participant responses were hostility, morbidity, mortality, despair/fear, non-inclusive, label, and obstacle.

The word "overweight" generated less intense negative reactions from participants than when they responded to the word "obese," and implied greater opportunity for successful weight loss. In response to "overweight", participants saw this classification as "fixable" and were "hopeful" they could achieve healthier weight outcomes. Two categories were elicited from participant responses, severity and label. Participants regarded an "overweight" status as less severe than obese, but like the term obese, viewed overweight as another label to characterize their body size. Interestingly, there weren't many negative reactions to overweight or associations with morbidity/mortality. Although the researcher did not specifically ask about the term morbid obesity, a few participants described their reactions to "morbid obesity," a term previously applied to them by a physician or other health professional (e.g., physician,

nurse, personal trainer). This term again was not well received by participants who had hostile reactions (e.g., I hate the word) when the label was applied to their body size.

Morbidity was consistently discussed in regards to the absence or presence of chronic illness. In one instance participant 003 shared concerns about how her current weight may affect her ability to conceive, "*eventually I want to have kids. It's hard to have kids at this age and then the weight doesn't help.*" She continued by explaining how her weight and lifestyle could "trickle down" to her children and admitted she needed to change now in order to reduce the possibility of her children acquiring similar attitudes or behaviors. Difficulty to conceive while obese was not a health issue identified by other participants, regardless of whether or not they had children.

In addition to their personal reactions to obesity terminology when applied to them, participants shared their family or friends' perceptions of their size. One participant commented, *my husband says I'm fine. As long as he's still attracted to me I'm good.* Participant 005 elaborated on her husband's approval of her body size:

> *…morbidly obese I hate it…I had a doctor call me that at one time it was a bad idea….my husband makes it easy to be fat he doesn't make me feel that way… he makes it easy to have a "skinny girl mentality" and he likes me as a "big girl"… he supports me either way, whether I do it or don't do it [lose weight].*

These comments suggest the approval of their husbands has an impact on participants' body size perceptions and the urgency to lose weight. On the other hand, being labeled as "morbidly obese" by a health professional was negatively by participants.

Table 14

Curvy Girl Chats Discussion Topic 3: Reactions to the Word "Obese" – Categorical Responses

Participant Responses	Key Words/Phrases (# Times Used)	Category
I hate that word, I hate it. Such a dirty word.	Hate (2)	HOSTILITY
Sickness, disability, eventually leads to death.	Death	MORTALITY
I think of an ailment on me for the rest of my life.	Sickness OR disability OR	MORBIDITY
Don't like the word.	ailment	HOSTILITY
Obese is the bad monster. If put on my chart, I'm ruined.	Don't want (2) OR Don't like Ruin, "bad monster"	DESPAIR/FEAR
I think I'm going to die in a week if I don't get this off.	Die	DESPAIR/FEAR
Temporarily hurts my feelings if I'm in a mood or mindset for it to bother me. It makes me feel guilty at times, especially when I'm eating.	Feelings (2) OR Hurts OR Bother	EMOTION
Had to be hard on family for making reference to my size.	Guilt Hard on family	
It sounds lazy. The only remedy is surgery.	Remedy, surgery	DESPAIR/FEAR
Close to 400 pounds but I don't feel obese because I am active. I don't sit and eat all day every day.	Don't feel obese	NON-INCLUSIVE
Saw data on obese. *I fit into the category.*	Data OR fit OR category	LABEL
Family struggle. *All the women and little girls struggle with it.*	Struggle (2)	OBSTACLE
If I am, I am. It's a statistic so if that's what I am.	Medical term (2) statistic	LABEL
My body size is causing my health to be in danger.	Danger (2)	DESPERATION/FEAR MORBIDITY
I hate the word obese.	Hate	HOSTILITY
Don't like overweight or obese but the reality is I am.	Reality	LABEL
Does not account for life factors.		NON-INCLUSIVE
Challenging both socially and professionally. Dating is a challenge. Large barriers.	Challenge (2) OR barrier	OBSTACLE
Convicted by the word by being a public health professional.	Convicted	EMOTION
Personal trainer informed her she was obese according to the BMI.	informed	LABEL
That's why I'm here…you're not telling me anything ne.	BMI	
It's not representative of me	Representative	NON-INCLUSIVE
It's a medical term…I'm still considered obese.	Medical term	LABEL

Table 15

Curvy Girl Chats Discussion Topic 3: Reactions to the Word "Overweight" – Categorical Responses

Participant Responses	Key Words/Phrases (# of Times Used)	Category
--	--	--
Overweight means you can stand to lose a few pounds	Few, stand to lose	SEVERITY
I can deal with overweight	Deal	SEVERITY
Gives more hope. Overweight seems like you can fix it. About 1 – 5 pounds. It's not as dramatic as obese.	Hope Fix	SEVERITY
A little chubby	Chubby	SEVERITY
Most women are overweight or obese	Familiar	LABEL
Overweight compared to what I was before *It's a medical term meaning borderline obesity*	Compared borderline Medical term	SEVERITY LABEL
Being in public health overweight/obesity always thrown out there. *Don't like overweight or obese but the reality is I am.*		LABEL ACCEPTANCE
We have our own scale with our own terms. What society sees as overweight we see as OK. I could care less about the term…it doesn't mean anything to me.	Term (2) OR label (2)	LABEL
Overweight means a few pounds over normal average or what is recommended	Few, over Medical term	SEVERITY LABEL

For those participants who had negative reactions to the term "overweight", they were also "hopeful" it was "fixable." However, the amount of weight loss necessary to "fix" the weight concern was generally limited to only "a few pounds" or more precisely "1 to 5 pounds." Yet based on BMI measurements, these weight loss amounts would not be significant to reclassify participants as "overweight."

Characterizations of obese. During discussions concerning obese terminology, many participants explained characteristics of an obese individual to further support their reactions to the term and why it was not applicable. For participants, an obese person had "low endurance," "low energy," and was "weak." An obese individual was subjected to specific consequences including chronic illnesses, no insurance coverage, and inability to locate and wear "decent" clothing.

Table 16 illustrates the main categories by which "obesity" was characterized through euphemisms, offensive language, and "sugar coating" – a type of reframing to make the reality of obesity more palatable. Euphemisms included the descriptors used in the Curvy Girl-PPESQ such as plus-sized and full-figured. Some participants' realization of their obesity occurred after being informed by a health professional, while others acknowledge their obesity status was not "new information." Participants did not generally appreciate the practice of "sugar coating," or making "obesity sound good". Participants clarified health professionals did not need to undermine their obese status by using "overweight." Additionally, some accepted the use of "obesity" to describe their weight. One participant, in response to being classified as obese, commented "*if I am, I am*" with similar responses from other participants.

The word "big" was used by participants to describe their body size. However, they had mixed reactions to the use "big" to describe their bodies. Their responses ranged from a sense of shame to ascribing positive attributes to being a "big" woman. Again, "plus-size" and "full-figured" were used in place of the word "big" with descriptions of the differences between a "plus-sized" or "full-figured" woman. A plus-sized woman was described as someone with "big breasts" or "real busty" while a "full-figured" woman encompassed the entire body. The "plus-size" woman has "sass to her weight" and she carries herself in a certain way. One participant challenged descriptions of women in the media to support her defining characteristics of these terms:

> *As TV puts it Jennifer Hudson was full-figured but she wasn't that big…Tocarra is full figured but they [media] made her seem plus sized…made her like size 26/28 but really she was a 14/16. Kelly Price is a size 20/22, looks healthy and lost her weight the "right way." I like the way she is losing weight and how she looks doing it.*

Comparing the body sizes of the media personalities, the participant did not agree with media descriptions of these women. The media, in her opinion, had gotten it wrong and were incorrectly describing the body sizes of these women. This response is similar to participant responses to health professionals who, in their opinion, mislabel them as obese. Also, her approval of Kelly Price's healthy appearance, even while losing weight the "right way," suggests there are multiple ways to lose weight and if done "the right way" one may continue to appear healthy during the process.

There were mixed reactions to the use of obesity terminology. Regardless of how obesity is defined and characterized by health professionals, most study participants disagreed with these descriptions. Those who disagreed with health professionals' obese

characterizations provided their own criteria and justified why they challenged the labeling. Participants who accepted being labeled obese disapproved of people using more positive descriptors (e.g., sugar-coating) to state the obvious. Additionally, although sugar-coating was not an acceptable practice, participants described the physical characteristics of two main euphemisms "plus-sized" and "full-figured." Participants' vivid descriptions illustrate how these more positive descriptors can be accurately applied to obese, African-American women.

Discussion Topic 4: Healthy Weight Intervention Recommendations

Research Question: What are the weight management experiences of obese, young adult African-American women? Participants were asked to discuss what they perceived to be necessary interventions intended to assist them in achieving a healthy weight (Table 17). Participants identified social support as a major component of healthy weight interventions. Examples of social support included the aid of personal trainers and chefs to teach them respectively exercises and recipes that promote weight loss; affordability and access to healthier food options, physical activities, childcare and; support groups to discuss weight and weight loss issues, stress coping mechanisms, time management and improve mental/emotional health.

Curvy Girl Chats were informal conversations with research participants. During the chats participants completed a demographic profile, study orientation, and engaged in conversations about their reactions to obese classifications, weight-related beliefs, and behaviors. Curvy Girl Chats also provided preliminary data about participants and prepared the researcher for interviews with eligible participants.

Table 16

Curvy Girl Chats Discussion Topic 3: Preferred Descriptors for " Obese" – Categorical Responses

Participant Responses	Key Words/Phrases (# Times Used)	Category
All the words applied to me but plus-size sounded the best	Plus-size	EUPHEMISM
Likes	Full-figured OR curves OR plus-size	EUPHEMISM
When I hear the word "big" you're still calling me "fat"	Big OR fat	OFFENSIVE
Don't need to sugar coat it	Sugar-coating	SUGAR-COATING
Likes descriptors such as "pleasantly plump" or "big girl"	Pleasantly plump OR big girl	EUPHEMISM
Really, I don't hear the word "fat." I don't even pay attention to it.	Fat	OFFENSIVE
To be plus-size means you have a savvy swag, a sass to your weight, you carry yourself in a certain way, you're not just round….my husband likes me as a "big girl."	Savvy, swag, sass Likes, big girl	EUPHEMISM
To call someone fat is like calling someone "punk" or "faggot."	Fat (2)	OFFENSIVE
Curvy, curvaceous…my husband says I am "fine." As long as he is still attracted to me I'm good.	Curvy OR curvaceous	EUPHEMISM
Use the word chunky to refer to kids	Chunky	EUPHEMISIM
I tell my son not to call people "fat" to call them "big" it's more tactful.	Big Fat	EUPHESMISM OFFENSIVE
Don't try to make obesity sound good by using overweight	Sound good	SUGAR-COATING
I mean plus-size or full-figured are more palatable but not ideal	Palatable	EUPHEMISM
Changing labels may be sugar coating….out culture has become accustomed to this label	Sugar coating Label (2)	SUGAR-COATING LABEL
Plus-size/full-figured sounds better	better	EUPHEMISM

Table 17

Curvy Girl Chats Discussion Topic 4: Healthy Weight Intervention Recommendations – Categorical Responses

Participant Responses	Key Words/Phrases (# Times Used)	Category
Obesity encompasses everyone not just African-American women. May need to focus on how to help African-American women….Michelle Obama is trying to help everyone	Help (2)	ASSISTANCE
Affordability can hinder….healthy food costs, physical activity, besides walking costs	Cost (2) OR affordability	ASSISTANCE
Learned TV and media are not talking about me because I don't see me…When the media uses the word they show the biggest person they can find….they don't show curvaceous women.	Media, TV	POSITIVE MEDIA IMAGES
Healthier foods cost more than regular foods	Cost	ASSISTANCE
Due to my weight and height most doctors expect me to have diabetes, high blood pressure, sleep apnea	Absence of chronic illnesses	MORBIDITY
Mental exhaustion intensifies physical exhaustion. Mental aspect needs more work when someone has been overweight for a long time.	Mental Exhaustion (2)	MENTAL HEALTH
A trainer to push you harder	Trainer	SOCIAL SUPPORT
Educate people about obesity. Education on this is needed.	Education (3) OR teach	EDUCATION
Daycare at gyms helps….free affordable classes	Daycare, affordable classes	ASSISTANCE
Set up things that are convenient for what women are going through as professionals, as parents.	Convenience	
Celebrate small goals. Create support systems. *Someone to cook for me and a personal trainer…really that would help.*	Celebrate Someone, OR Personal Trainer OR Support systems Cook for me	SOCIAL SUPPORT
Great music to get into the zone. Likes change gets bored easily. Can't feel like work.	Change	VARIETY
We don't talk about a lot of things. Don't talk about weight. Don't share weight.	Discuss OR share	SOCIAL SUPPORT
Willing to try alternative eating styles. Didn't grow up eating asparagus, humus, or baked chicken.	Alternative	VARIETY
We must realize we are our most important thing. Take care of you first; everything else will fall into place.	Most important You first	PRIORITIZE

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Semi-structured, In-depth Interviews Part One: Curvy Girl Essentials

The Curvy Girl Essentials interview guide was used to elicit participant responses in five domains: weight-related beliefs, weight-related behaviors, social relationships, social support given and received, and weight management experiences. The domain and primary research questions begin each section and are followed by results of the thematic categorizations. Themes generated from participant responses will be illustrated in the following sections.

Domain 1 - Weight-related beliefs. *Research Question: What are the weight-related beliefs of obese, young adult African-American women?* Participants described their weight-related beliefs about physical activity, diet/nutrition, and body image. First, participants explained what it meant to be "physically fit." Participants described physical fitness in four distinct categories: physical benefits, function, feelings, and activity (Table 18).

The physical benefits category includes endurance, stamina, and strength. Participants believed in order to be "physically fit," one should not become "breathless" when participating in activities such as climbing stairs, walking or running a mile, or doing "daily tasks." Participant 001's response about physical fitness and breathlessness was typical of those of the participants: "*…doing everyday tasks and I don't feel out of breath…it's an indication that I am doing well with working out consistently.*" Participants discussed the ability to function and perform daily tasks as another characteristic of physical fitness. Participant 008 explained *"…able to do uhh a lotta routine activities without lotta stress…able to lift my son or help him get dressed bend*

over tie my shoes pick up different things" as physical fitness. Participant 003 gave a similar response, "*…able to function on a daily routine without those inabilities to be able to function normally.*" Participant 011 further expanded on functioning as *"…being able to use your body for most of the things you need to do in daily life…healthy enough to do what you need to do on your own.*" The desire to have independent mobility and normal physical functioning was a common theme related to participants' attitudes toward physical fitness**.**

Table 18

Curvy Girl Participants' Meaning of "Physically Fit" - Categories

Physical Benefits	Function	Feelings	Activity
Stamina	Everyday tasks	Better	Run a mile
Endurance	Ability to function	Pleasurable	Walk a mile
Strength	Move around easily	Reduce stress	Jog
Energy	Normal functioning	Reduce depression	Move
Toned	Climb stairs	Reduce tiredness	Train
Weight loss	No need for aides		Practice
Breathlessness			

Feelings associated with physical fitness were discussed throughout the interviews. Participants reported feeling "better," "healthier," and even expressed "pleasure" in doing physical activities. Only two participants (003 and 006) discussed mental health as part of physical fitness. Participant 006 addressed depression specifically, "*…deals with the mental aspect because working out and then having maybe depression or some form of depression…working out's gonna help but it's not going to alleviate the symptoms that deal with depression or mental illness*." The final category activities include participants' beliefs of what they would be able to do if they were physically fit**.** Activities included walking and running for a specified distance

(e.g., run a mile) without stopping or being short of breath. Other activities were not as specific, such as to "practice" or "train" or "move." Once again participants' ability to move, even in a variety of ways, was key factor of physical fitness.

Table 19

Curvy Girl Participants' Reasons for Physical Activity – Categories

Physical Benefits	Function	Feelings	Reduce Illness
Toned	Clarity	Enjoy	Heart healthy
Digestion	Sleep better	Need	High blood pressure
Weight loss	Keep up with son(s)	Fun	Diabetes
Strength	Keep up with students	Soreness	Get off medications
Energy		Accomplishment	Hypertension
Shape		Encouragement	
Look better		Comfortable	
		Passion	
		Better	
		Healthier	

Participants' reasons for engaging in physical activity were grouped into four categories: physical benefits, function, feelings, and illness reduction (Table 19). There were several feelings associated with participation in physical activity, ranging from a "need" to a sense of "accomplishment" to "passion." Participant 010 described that after a "good workout" the "soreness" gave her a "sense of accomplishment." She stated, "*…kinda feel sore, just the feeling of laying in the bed and kinda having all that soreness kinda dissipate into the mattress.*" In addition, participants reported by engaging in physical activity, they reduced their risk for chronic health illness or improved their ability to manage current illnesses. At the time of the interviews, participant 004 and participant 010 had both been diagnosed with high blood pressure. Both participants felt physical activity was a means for them to control their conditions and, for participant 004, the possibility of eliminating high blood pressure medication.

Participants described components of a healthy diet and reasons to maintain a healthy diet. The most common responses included "*lots of fruits and vegetables.*" Seven out of ten participants believed a healthy diet would help with weight loss. Participants used phrases such as "*maintain a good body weight*," "*won't blow up*," "*negative consequences to my weight*," or "*bustin' outta my pants*." These phrases described the benefits of having a healthy diet, such as to control or reduce weight, and conversely the liabilities of an unhealthy diet, such as weight gain.

Finally, participants described what they believed "healthy weight" to mean. Four main themes were apparent: (a) healthy weight is not about numbers on a scale or thinness, (b) healthy weight is individually determined, (c) healthy weight includes the ability to perform daily functions and (d) healthy weight is about having self-esteem. No participant described themself at a healthy weight. However, they did not believe their weight hindered them from being physically active or being able to function (e.g., walk, play with children, work). Table 20 presents these categorical themes and participant responses about healthy weight.

Table 20

Curvy Girl Participants' Descriptions of "Healthy Weight" – Categorical Responses

Participant Responses	Key Words/Phrases (# Times Used)	Category
Reasonably close to the weight range white people say you are supposed to be in…I don't want to be that thin.	BMI, "super skinny"	SCALE or THINNESS
Happy with how I look. I can wear clothes that make me feel good.	Happy, feel good	SELF-ESTEEM
A point where your body feels that it can maintain itself.	Maintain	FUNCTION
All a part of how you view it yourself not how media views it.	You view, yourself	INDIVIDUAL
A weight you feel comfortable in simply put. Whatever you feel comfortable in.	Comfortable (2)	SELF-ESTEEM INDIVIDUAL
Who are you to tell me what is a healthy weight when I have hips and I have breasts.		
Don't see a number as far as weight.	Number	SCALE or THINNESS
I can't really just say.	Don't know, can't say	INDIVIDUAL
It's more about what's going on inside.		FUNCTION
Don't necessarily agree with what the scale. I wouldn't necessarily go by that.	Scale Don't agree	SCALE or THINNESS
I really didn't pay attention to my weight went out and did what I wanted to do I wasn't really stressed.	Comfort, feel good	SELF-ESTEEM
A healthy body weight is not consistent for everyone. Varies based on their body. Depends on the person, not necessarily what's on the scale.	Varies, inconsistent Scale	INDIVIDUAL SCALE or THINNESS
Whatever a person feels is healthy for them.	Healthy for them	INDIVIDUAL
It doesn't hinder anything you need to do. It's a combination of your self-esteem.	Comfortable (2)	SELF-ESTEEM
It doesn't hinder anything you need to do.	Hinders (2)	FUNCTION
Anywhere between a 11 a 10/11 or a 14	Ideal size	SCALE
The numbers shouldn't matter.	Numbers Shouldn't matter	SCALE
Being a size zero does not automatically make you a healthy weight.	Smaller, zero	SCALE or THINNESS
Smaller is not always better.	Not always better	

Participant 011 summarized the differences between healthy and unhealthy weight.

> *…because you're a size zero does not automatically make you a healthy weight. Smaller is not always better. I feel like a healthy weight is not too big, being small may not also be too healthy. If your weight is impeding on what you can and cannot do, can't take a flight comfortably…people who cannot find clothes not even at plus size stores. Able to live a normal life, just carrying, conducting business as usual…can you get around by yourself…do you have to be assisted by people or other things…*

Similar sentiments as described by participant 005:

> *…by sight people would see me and say gosh she's huge. I know I'm big but I don't feel as big I don't feel unhealthy. I'm big but when I look at other people that I see that to my eyes oh she's bigger than me, he's bigger than me…they're top heavy and they have respiratory problems…just too much when you lose your ability to walk…if you're not walking due to your weight or you have extreme respiratory problems due to your weight…they 150 drippin' wet and I'm 450 I may be healthier than this person…I can't really just say.*

Finally, participant 004 also explained unhealthy weight and its effect on functioning:

> *…I honestly don't believe the doctor standards are up to par. If that's the case everybody's overweight. If you are what the doctor says you are supposed to be then you are extremely too skinny…then the skinny people become underweight…There is unhealthy weight where you can't walk up the stairs and you start breathing really hard and that kinda stuff that's an unhealthy weight…where you feel uncomfortable in your skin, that's unhealthy weight, that's a self-esteem thing too. When somebody cannot walk up just one flight of stairs without breathing hard, if I had to run up the stairs I could. If you have to go from the bottom to the top of one flight and you are (breathes heavily) that's unhealthy weight that's a problem.*

All three participants provided explicit examples of unhealthy weight and how this could not be determined by a person's size. According to these participants, a larger sized person could be healthier than a smaller sized person. Additional factors, such as "what's going on inside" as stated by participant 005, should be considered when ascribing healthy or unhealthy weight. The women referenced their ability to function at levels they believed uncharacteristic of someone who was an unhealthy weight. As a

result, although each woman was aware she was not a healthy weight, they were unwilling to label themselves as unhealthy weight.

Domain 2 - Weight-related behaviors. *Research Question: What are the weight-related behaviors of obese, young adult African-American women?* Behaviors related to physical activity, nutrition, and body image were addressed during the second section of the interview. Participants were asked, *what are some physical activities you do during the week*? "Physical activities" were defined as any activities that raised participants' heart rate and made it difficult to speak.

Table 21 lists the types of activities in which the women participated during the week and are categorized by exercise type. These activities specifically state the types of exercises performed such as jump roping, elliptical machine strides, and swimming. The "multiple types" category included activities that incorporated several types of exercise. Physical activities such as home videos, personal trainers, and "gym attendance" were not descriptive of the type of exercises they performed. The most common forms of physical activity included walking, group exercise classes, and the nondescript response of "going to the gym." Two participants reported sex as a physical activity in which they engaged weekly. Participant 005 indicated she wanted to talk about the subject of sex during the Curvy Girl Chat but was reluctant to bring it up. She whispered as she explained her hesitation.

> *I wanna say sex so bad last time but...I thought about this when you left and it was on my mind when we were talkin' and sex is one of the activities where my heart rate is raised and I can't talk…umm other than that that's really it.*

Sex as an enjoyable physical activity was mentioned by two participants. This suggests intimate activities, like sex, may be included when investigating exercises performed by Curvy Girls.

In addition to listing weekly physical activities, participants described what conditions made it easier for them to participate in such physical activities. Table 21 lists the four categories of conditions thought to facilitate continuous physical activity. Equipment necessary for performing physical activity included punching bags, free weights, and machines. Participant 006 excitedly talked about her joy of boxing and how her investment in "*cute pink boxing gloves*" enhanced her boxing experience. The activity experience was shown to be an important component of physical activity by participant's use of words such as "fun," "new," and "fresh."

Participant 011 explained how the environment and even the clothes she wears during her work out make it easier for her to participate in physical activity.

> *…being in the gym, at home there are so many distractions. If I'm at home I can't really focus. I have to without a doubt get out of the house to exercise. Gold's Gym or sometimes I'll go to [local high school] 'cause I like the track. Something about being in that different environment my mind just automatically switches. I don't necessarily have to have a partner, I do prefer to have a gym machine, different weights. I enjoy lifting weights with like the men. It makes me feel strong. I buy like little cheap shirts from Wal-Mart with little sayings on them. Like, I have one that has a super woman logo on it. I put it on…I know I am a tough lady today.*

For this participant, the type of clothing worn motivated and promoted her self-efficacy to complete a difficult physical activity. Clothing typically is not considered to be athletic equipment. However, for this participant, the right clothing is a "cue to action" and consistent reminder of one's ability to complete challenging physical activities.

Table 21

Curvy Girl Participants' Weekly Physical Activities

Aerobic	Anaerobic	Strength & Flexibility	Multiple Types
Jump rope	Jump rope	Yoga	Gym attendance
Pilates		Weight lifting	Group exercise
Elliptical		Stability ball	Personal trainer
Bicycle		Lunges	Horseback riding
Dancing			Home videos
Kickboxing			Wii
Walking			Plyometric exercise
Stairs			Roller skating
Trampoline			Ice skating
Running			Sex
Gardening			
Boxing			
House cleaning			

Table 22

Curvy Girl Participants' Preferred Conditions for Physical Activity

Environment	People	Equipment	Experience
Gym	Nephew/Nieces	Treadmill	Routine
Park	Instructor	"pink" boxing gloves	Fresh
Temperature	Partner(s)	Jump rope	New
Track	Child	Weight machines	Exciting
		Free weights	Competitive
		Punching bag	Fun
		Music	Challenging

The behavior of consistent healthy food consumption was discussed by the participants. The common response, fruits and vegetables, was supported by specific types of fruits and vegetables the women enjoyed. Other foods included items such as dairy (yogurt), protein (fish, beans, and nuts), and water (Table 23). Participants identified 14 protein items but only one participant included red meat as a healthy food item consistently included in her diet. Other food products were included but were identified as snacks used to reduce hunger during the day.

Table 23

Curvy Girl Participants' Diets - Healthy Foods

Fruits	Vegetables	Dairy	Protein	Drinks	Herbs	Products
Bananas	Salads	Cheese	Almonds	Water	Mint	Luna bars
Oranges	Broccoli	Yogurt	Pistachios			Slim Jims
Grapes	Green beans		Granola			Trail Mix
Fruit salad	Greens		Pumpkin seeds			Crystal Lite
Grape Fruit	Bell peppers		Beans			Steamers
Apples	Celery		Turkey			
Pineapple	Ginger		Seafood			
Lemons	Lettuce		Tuna			
Melons	Spinach		Fish			
Mangos			Chicken			
			Tilapia			
			Catfish			
			Steak			
			Peanut butter			

These foods were considered healthy and consistently included in the diets of participants because of the protein, vitamins, and minerals they contained. These lean, fibrous, low carbohydrates, low calorie foods were a source of "roughage" that "helped with digestion," and were needed to "clean the body, keep the body cleansed." Five participants stated they learned or were informed these foods were healthy by someone such as a physician, an elementary teacher, or "someone told me they were." Participant 008 learned about the benefits of juicing from a television documentary. Participant 010 indicated she grew up eating vegetables with her family and continued this practice as an adult.

As participants discussed the healthy foods consistently included in their diets, they reported unhealthy foods as well. Table 24 illustrates the foods reported by participants as being unhealthy foods consistently in their diets. Interestingly, participants identified fast food restaurants as a general description of the unhealthy foods they consistently include in their diets.

Table 24

Curvy Girl Participants' Diets – Unhealthy Foods

Restaurants	Fast Foods	Desserts	Food	Drinks
Burger King	Hamburgers	Ice cream	Sausage	Soda
Jack in the Box	French fries	Frozen yogurt	Pepperoni	
McDonalds	Chicken nuggets	Cookies	Pork	
Pizza Hut	Burritos	Cheesecake	Ham hocks	
Spoons	Onion rings	Brownie	Wings	
Wing Stop	Biscuits	Cookie dough	Cheese	
	Breakfast sandwiches	Cake batter	Pot pies	
		Chocolate	Rice	
			Cereal	
		Candy coated peanuts	Pasta	
			Tortilla shells	

Participants listed these foods as unhealthy because of their high calories, fat, and sugar contents. They noted these foods were not good for their health. Two participants (004 and 010), diagnosed with high blood pressure, expressed how these foods affected their condition. The high sodium content or "salt" was "not good for my high blood pressure". Four participants (001, 003, 004, 008) also labeled these food as either "a weakness," "a trigger," or "a worst enemy." Participant 009 stated she was "a slave" to the pasta and rice she consumed, while participant 007 identified the candy coated peanuts she regularly eats as "one of my down falls."

Body image behaviors were explored through a set of questions which required participants to contemplate and classify what parts of their bodies they considered to be the most and least attractive (Table 25). Participants described what they did to accentuate their attractive attributes and what they did to compensate for the least attractive attributes. The common most attractive attributes identified by participants were their faces and smiles. Participants described using make-up to accentuate this feature. They also included finding clothing that accentuated their bodies, clothing that

fit well, and made them feel good. The stomach was commonly cited as the least attractive attribute. Participants used clothing "girdles," "Spanx," or "spandex" to "keep everything smooth" and toned.

Domain 3: Social support. *Research Question: How do obese, young adult African-American women describe the concept of social support?* During this part of the interview, participants were asked to describe positive and/or negative relationships they had which contributed to weight management. Identified social relationships included family, friends, church members, and coworkers. A total of three types of relationships were reported (Table 26). Each participant had positive social relationships. Four participants reported not having any negative relationships, each making such statements as "I don't really have any negative relationships," or "I cancelled all the negative" or "nobody ever comes to me with negative stuff 'cause they know I don't really deal with that." Although participants were asked to identify positive and negative relationships, a third category—non-positive relationship—emerged. A non-positive relationship as described by participant 001 was:

> *I am a very social person at the gym I want to go with somebody else I want to interact with that person it makes it easier for me to consistently go so he's not necessarily a support when it comes to going to the gym he'll encourage me to go but he's not my go to gym buddy which is fine but it's not a positive support it's not negative either but it's not a positive.*

These non-positive relationships were not conducive to weight loss and weight management experiences of participants. The lack of positive support from these relationships did not help participants facilitate weight loss or management.

Table 25

Curvy Girl Participants' Body Attributes – Categorical Responses

Most Attractive	Accentuation Behaviors	Least Attractive	Compensation Behaviors
Face, Hair, Skin, Hands, Feet	*I do things that make me feel good. I don't necessarily do things to bring attention to positive attitudes. I like wearing clothes I feel fit me well.*	Stomach (belly) *My belly it's harder for me to lose weight in that area*	*I try to wear clothes that fit, so things aren't sticking out and bumping out and lumping out, never a good sign when you have stuff on that's too tight and you have to keep adjusting it.*
Legs, calves, smile, face	*I wear make-up getting my hair done that makes my face stand out.*	Stomach and thighs *Stomach and thighs are outta control….I need to get those in shape.*	*Wear like some type of girdle to keep everything smooth. I may wear like an undershirt, a tighter fit to keep everything kinda smooth…pulled in some*
Legs	*Short skirts. Heels…I wear heels a lot.*	Stomach *I will say my stomach, if I could have a six pack I'd be alright.*	*Spanx. Wear clothes becoming of my shape…I do sit-ups. I had to go research for dresses I need to wear.*
Breasts, face	*Make-up, hair, lashes, lots of cleavage .*	Stomach, thighs, arms *Stomach, thighs, and arms. I hate my arms, I call'em my wings…I forgot to tone…it didn't used to be like this.*	*Enjoy the few pieces of items they do where we actually can fit and look good in….I know my arms are big, I can do something about it I am doing something about it, it's not gon happen overnight.*
Smile	*Doesn't seem to change too much. I am consistent with going to the dentist.*	Abdomen area *My abdomen area there's a lotta fat surrounding my organs there I know.*	*Tried to do planks, I have like a Wii Fit, pushups I've done pushups.*

continued

Table 25 *(continued)*

Most Attractive	Accentuation Behaviors	Most Attractive	Accentuation Behaviors
Smile	*I don't really do much…lip gloss, lip stick.* *I get more compliments on my smile*	Thighs *My thighs they're just big, man what happened….my thighs I'd like to slime down my thighs*	*Wear things that maybe kinda cover a lil' more….cover up my hips and thighs. Spandex keeps everything looking toned and together.*
Proportionate	*Wear something long and tight so you can get the full shape of my body.*	Cellulite in legs *Dimples in my legs are not attractive at all.*	*I don't wear short stuff.*
Legs, face	*One thing I enjoy about being plus-size is I have to be creative about the way I dress myself. Even if they don't fit I try to adapt them.*	Backside, back fat, stomach, thighs, arms	*Girdles. Spanx. Shorts or layers to smooth out areas. In some instances there's just nothing I can do to compensate.*
Face, smile, body shape	*I love my body shape…just want it to tone to slim it in. Wear clothes that fit well.*	Back fat	*There's not much I can do…a good fitting bra…. Little tanks underneath my clothes*
Eyes, lips	*I love make-up. I learned how to apply it…I like eye shadow in all shades…I'll wear red on my lips*	Arms *I've gotten accustomed to the arms, but this used to be a major issue for me because my arms are a little bit larger than the rest of my body.*	*I just deal with it…it is what it is….people don't pay as much attention to them as I thought they did*

Table 26

Curvy Girl Participants' Supportive Social Relationships – Categorical Responses

Positive Relationships	Negative Relationships	Non-Positive Relationships
Husband/Partner	Husband	Husband
Parents	Parents	Mom
Siblings	Sister	Friends
Children	Brother	
Friends	Uncle	
Church Members	Boyfriend	
Co-Workers	Friend	

Other participants described similar experiences with friends and family, particularly a parent. One participant discussed the non-positive relationship with her mother as it related to her eating behaviors.

> *When I'm around my mom I'm not gonna like eat a cup of ice cream I may get a small bowl when I'm in front of her if we're out eating I kinda watch what I'm gonna order not that she's gonna say anything just cause I know in the past she's always made us be kinda aware of what we're eating.*

Participants who had non-positive support relationships were reluctant to ascribe these relationships as negative, yet were sure they were not explicitly positive.

Domain 4: Social support received and given. *Research Question: What types of support do obese, young adult African-American women receive? What types of support do obese, young adult African-American women give?* Participants were asked, (a) what types of support from their family, friends, and social networks would help them manage (and/or lose) weight and (b) what types of support do you give to your family, friends, and social network? These research questions were to elicit the types of support (informational, instrumental, emotional, and appraisal) these women received and gave to their social networks.

In response to questions about support received, participants described the support they would like to or did receive from their social networks (networks which included family, friends, and even coworkers). The four overarching types were informational, instrumental, emotional, and appraisal (Table 27).

Table 27

Curvy Girl Participants' Family, Friend, and Social Network Member Support Behaviors for Weight Management

Informational	Instrumental	Emotional	Appraisal
Recommendations	Cooks	Encouragement	Check-in
	PA together	Consideration of healthier lifestyle	Model healthy behaviors
	Same diet		Acknowledge
	Same routine		Weight loss
	Eat healthier		
	Consistency		
	Lived closer		

Note. PA = Physical Activity

According to participants' responses, instrumental and appraisal types of support were reported as helpful in managing or losing weight. Participant 001 discussed how her husband is helpful when he cooks because she can "modify what he's made" to better fit her healthier lifestyle. Another participant described how proximity of family members was supportive in her effort to eat healthier.

> *When they lived here…it was easier, I had my support just right there. I could call and say, 'hey what did ya'll have to eat today? Oh we had baked fish and … a salad' so you think oh I got tilapia…just havin' that around you helps…other people eating healthy helps.*

Regarding family location and their ability to provide support, participant 007 expressed how she is able to interact with her family members who live out of state.

> *My family's not here. The only support I get from them is the conversations we have on the phone and knowing that they care about me. There's not much else they can do 'cause they're not here…I like to*

> *go home to work out with my brother. He's tough but he's good. When I go home I work out with my brother.*

Participants also expressed the importance of emotional and appraisal types of support, particularly the need for role models in practicing healthier behaviors. Participant 003 explained role model behaviors in detail:

> *…continuously support each other. If we're out eating I don't have to order pizza in front of her, she can't have that I need to be considerate of her and what she's going through…show her I can eat healthy with her. I see you eating healthy, you see me eating healthy it encourages me to continuously do it. If I see you eating bad I need to be eating good. I see you eating bad nine times outta 10 I'm just gonna convert and do what you're doing.*

A variety of support types was given to participants from social network members to help with weight management and weight loss.

Each participant reported giving support to her family, friends, and social network members. The responses are separated into family (Table 28), friend (Table 29), or social network member (Table 30). Family and social network members received three out of four types of support while friends received the four types of support — informational, instrumental, emotional, and appraisal.

Table 28

Curvy Girl Participants' Social Support Given to Family - Categories

Instrumental	Emotional	Appraisal
Portion Control	Encourage healthy behaviors	Acknowledge healthy behaviors
Cooks healthy meals		Check-in
Plan PA and healthy meals		Model healthy behaviors

Table 29

Curvy Girl Participants' Social Support Given to Friends - Categories

Informational	Instrumental	Emotional	Appraisal
Share ideas Share information	Split/share meals Participate in PA	Encourage healthy behaviors	Acknowledge weight loss

Table 30

Curvy Girl Participants' Social Support Given to Social Network Members – Categories

Informational	Instrumental	Appraisal
Information	Time	Acknowledge healthier behaviors Acknowledge weight loss

Domain 5: Weight management experiences. *Research Question: What characterizes their weight management experiences as it relates to their social networks?* During this section of the interview, participants detailed their weight management experiences by addressing the following weight management issues: weight loss attempts, weight loss strategies used, benefits and barriers to weight loss strategies, shared social support for weight loss, and preferred social support for weight loss.

Participants were asked to report the number of times they attempted weight loss over the past 12 months. These attempts ranged from "daily" to "at least 4 times within the last 12 months." Participant 007 reported daily weight loss attempts, *"I'm always tryin' to lose weight, it's a constant battle…it's just a constant thing. It's always been a struggle…my weight has always been a struggle. I'm always trying not to do too much so that I don't gain weight.*"

Another woman, Participant 010, also discussed multiple attempts at weight loss: "*It's all the time; it's constant like almost daily*." Participant 004 reported attempts at

weight loss "everyday" and participant 011 stated "*I don't have enough fingers to tell you how many times I've attempted weight loss through different means*."

Strategies for weight loss were described by the participants and are demonstrated in Table 31.

Table 31

Curvy Girl Participants' Weight Management Strategies and Reasons for Use - Categories

Weight loss strategies	Informed about strategies	Decision to use strategies
Scheduling PA	Prior experience	Marketing/Commercials/
Planning PA/meals Tracking	Physician Marketing/Commercials/	Advertisements
PA/meals	Advertisements	Friend referral
Gym memberships		Witness
Group exercise class	Friend	Convenience
Increased PA	Conversations	
Portion Control	Program Representative	
Weight Loss Program	Independent Research	

Note. PA = Physical Activity

Five participants discussed using a nationally recognized commercial weight loss programs as a strategy. These women were informed of the commercial weight loss programs by television commercials, friends, and by witnessing the weight loss of program participants themselves. Prior experience with the weight loss program and positive results were cited as reasons for one participant to enroll in the weight loss program several times. Participant 001 was "*probably on (weight loss program) at least 15 times since the first time.*" Another, participant 006, who had used the same weight loss program, enrolled again after watching a commercial with an African-American female celebrity spokesperson. Her decision to re-enroll was based on "*how much weight she [celebrity spokesperson] has lost*" and her comparison of their respective lifestyles reasoning "*I could probably do that, she's busier than I am*." Successful weight loss

Table 32

Curvy Girl Participants' Selected Weight Management Strategies – Categorical Responses

Characteristic Responses	Key Words/Phrases (# Times Used)	Category
I was probably on Weight Watchers at least 15 times since the first time I was on it, it's a plan I know works. I look for what gym do they have and do they offer these classes.	Weight Watchers, Gym, classes	COMMERCIAL PROGRAM GYM MEMBERSHIP GROUP EXERCISE CLASS
Years and years and years of going through weight loss programs. Physical activities you know are things I just know.	Weight Watchers Physical activity	COMMERCIAL PROGRAM INCREASED PA
It was nothing for me to leave work and then go work out and then come home and eat a sensible dinner.	Work out Sensible dinner	INCREASED PA PLANNING MEALS
I am constantly moving all day.	Exercise, gym (2), walk, trampoline	INCREASED PA
I did Weight Watchers I had to keep up with everything on-line. Moffett Foods...I don't have to cook and it's saving me time.	Weight Watchers, Moffett Foods Saves time	COMMERCIAL PROGRAM PLANNING MEALS
Started tryin' to work out a lil harder than I do on my own…tryin' to watch what I eat.	Work out harder Watch, eat	INCREASE PA PORTION CONTROL
I have to adjust the way I eat so I can work smarter not harder. I joined a gym. The insanity workout.	Joined, gym Work, Insanity workout	GYM MEMBERSHIP INCREASED PA
Planning out a work-out schedule, purposely take the stairs, parking further away. Walk a little bit further	Walk, work out, stairs Planning Schedule	INCREASED PA PLANNING PA SCHEDULE PA
LA Weight loss in terms of a diet that was the most successful. It's just about the balance and the portion control.	LA Weight Loss Balance, portion control	INCREASED PA COMMERCIAL PROGRAM PORTION CONTROL
	Weight Watchers, planning, point value, calorie count	COMMERCIAL PROGRAM PLANNING MEALS

Note. PA = Physical Activity

experiences whether personally or by others, was a common theme among study participants for engaging in commercial weight loss programs (Table 32).

Each participant further discussed the benefits and barriers of the weight loss strategies they used. Table 33 presents themes for the strengths and barriers of the weight loss strategies. Categorical themes and participant responses are listed in Table 34. One of the benefits reported by participants was the physiological changes they noticed, which included "more energy," "better sleep," "better clarity," toning, "stress relief," and "feel better." Another theme, structure, was associated with several descriptive words such as stability, repetition, guidelines, guidance, pattern, and regimen. The barrier "lack of variety" was a direct reference to the food selections associated with weight loss programs such as Weight Watchers and Moffett Foods programs identified by participants. Participants mentioned "lack of variety" as a barrier because they would revert back to eating foods they previously labeled as unhealthy or believed contributed to weight gain.

Table 33

Curvy Girl Participants' Selected Weight Management Strategies Benefits and Barriers - Categories

Benefits	Barriers
Weight loss	Expensive
Physiological Changes	Required cooking
Structure	Time
Convenience	Tracking PA/meals
Access	Lack of variety
	Inconsistency

Note. PA = Physical Activity

Table 34

Curvy Girl Participants' Selected Weight Management Strategies Benefits and Barriers – Categorical Responses

Characteristic Responses	Key Words and Phrases (# Times Used)	Category
I know the choices I am going to make…puts some stability in my life.	Stability	STRUCTURE
I have to work the program…that's not always consistent.	Not always consistent	INCONSISTENCY WEIGHT LOSS
I need to lose weight and become more healthy, be much healthier than what I am right now. The fact that I would be losing the weight, I need my mind to be much clearer, if I'm working out and I'm getting the activity it just kinda clears my mind and gives me more energy.	Clear (2), more energy Health (2)	PHYSIOLOGICAL CHANGES REQUIRED COOKING WEIGHT LOSS
I don't like to cook. I hate cooking. I don't care to cook. I'll take the ingredients and I'm like forget this and I'll put'em back.	Cook(3)	
I lost my weight, I was healthier. I had energy I wasn't fatigued all the time.	Healthier, lost weight Energy OR fatigued	PHYSIOLOGICAL CHANGES WEIGHT LOSS
That wasn't extra money that I had to play with, that was money I needed to live on.	Money (2)	EXPENSIVE
Being at home…able to have access to it any time of the day.	Being at home	ACCESS
With this it's the cardio aspect of it you're toning at the same time. You can feel you can see the changes.	Toning OR feel, see changes	PHYSIOLOGICAL CHANGES
I can lose weight by doing this. I haven't come across any that are longer than 2 minutes to heat up. It has a limited variety. Snacks are all the same.	Lose weight 2 minutes to heat up Limited variety, same	WEIGHT LOSS CONVENIENCE LACK OF VARIETY
It was a stress reliever…always sleep better….I feel better the next day…. noticed I was toning up cause my clothes fit a lil different.	Stress reliever, sleep better, feel better	PHYSIOLOGICAL CHANGES
Boxing wasn't cheap. The time wasn't really good for my work schedule.	Cheap (2), cut, scrapped Time, schedule	EXPENSIVE TIME

continued

Table 34 *(continued)*

Characteristic Responses	Key Words and Phrases (# Times Used)	Category
Better health better energy. Overall strong….I want to be able to defend myself. Stay as young and strong as I can for as long as I can.	Better health, better energy Strong (2), young	PHYSIOLOGICAL CHANGES
Just getting' busy…finding time to cook right and work out.	Busy OR Time	TIME
Weight Watchers almost seems too easy…they calculate your points…input the foods that you eat into their calculator, track what you eat all day, you can really see if you're eating over your calories, see what types of food you're eating, track your physical activity…something that makes you constantly think about what you're doing, deliberately makes you an active participant in your weight management, a reminder that I have these things here and I can do this cause it's already here,	Easy Track (2)	CONVENIENCE TRACKING PA/MEALS
Having to log in and record everything…typing it in sometimes gets daunting.	Log in, type in	TRACKING PA/MEALS
Ultimately time and availability become an extreme barrier.	Daunting Time OR availability	TIME
Anytime a fee is associated with anything I think that's definitely a barrier.	Pay OR fee	EXPENSIVE
There's guidance it's a guideline of how to do it…a better guideline of how to do it.	Guidance OR guideline (2)	STRUCTURE
Financial barriers trying to keep up with the fresh foods on a weekly basis. Some of the neighborhoods I lived in I would not go to the grocery store for fresh foods. Have to go out of my way to travel somewhere else to find it.	Financial Go out of my way OR Travel	EXPENSIVE ACCESS
With Weight Watchers I learned a lot going through the program….weight loss surgery and the dieticians I've learned a lot about healthy eating and a healthy diet.	Learned (2) OR information	EDUCATION
Weight Watchers point values of foods from different restaurants…nice to have access to that information	Keep up OR keep track	TRACKING PA/MEALS
Having to keep up with the points…keeping track of what you're eating that's the hardest part. *Once per month for 6 months I had to drive to Houston. Having to go weekly is an issue for people with time management.*	Time OR monthly (3) OR weekly (2)	TIME

Note. PA = Physical Activity

Two questions concerning social support and weight management experiences concluded this section of the interview: (a) *What kinds of support is shared among social network members for managing (or losing) weight and* (b) *What kinds of support do you prefer from your social network to help with weight management (or loss)?* The types of weight loss support shared among social network members included weight loss knowledge, encouragement, strategies, invitations for physical activity, and spirituality in the form of bible verses, discussions, and inspirational quotes. They were sorted according to the four overarching types of social support: informational, instrumental, emotional, and appraisal (Table 35).

Table 35

Types of Social Support Shared to Manage Weight Loss - Categories

Informational	Instrumental	Emotional	Appraisal
Knowledge	Invitations for PA	Encouragement	Check-in
Ideas	Formation of	Inspiration	
Strategies	weight loss groups		
Recipes	Discussion		

Note. PA = Physical Activity

In addition to the categories listed in Table 35, Participant 003 discussed at length, the importance of spiritual support for managing her weight loss. She reported her walking group was comprised of fellow church members and that it was a major source of appraisal (encouragement) and instrumental (walking group) support. She explained, "*We keep in contact with one another and ask each other, 'how's it going, how are things moving forward?' We'll ask 'what happened we missed you we had a very good walk' and try to encourage you to come to the next walk.*" Participant 003

further explained how her pastor was also a source of appraisal (self-evaluation) and emotional (encouragement) support,

> *Our pastor at our church me and her have had a lot of conversation. She continuously mentions in order for me to do the things God has for me that I need to be at a more healthier state. She said the same thing for her…all the things God has laid out for me I have to be more healthy so I can fulfill those plans he has for me so…*

For participants, spiritual support was identified as an important support type for managing weight loss.

To conclude this section of the interview, participants discussed their preferred types of support for weight loss from social network members, and these were categorized into the four overarching types of social support: informational, instrumental, emotional, and appraisal (Table 36). Table 37 shows the categorical themes and participant responses of preferred types of support.

Table 36

Curvy Girl Participants' Preferred Types of Social Support to Manage Weight Loss - Categories

Informational	Instrumental	Emotional	Appraisal
Knowledge	Invitations for PA	Encouragement	Check-in
PA plans	Formation of weight loss	Motivation	Affirmation
Recipes	groups		Non-confrontational
	Discussion		Share Experiences
	Accountability		
	Time together		
	Relationships		

Note. PA = Physical Activity

Table 37

Curvy Girl Participants' Preferred Types of Social Support to Manage Weight Loss – Categorical Responses

Characteristic Responses	Key Words and Phrases (# Times Used)	Category
I need accountability. I need people who will encourage me…go to the gym consistently...support the activities I want to do….overly explicit support….encourage me to make a healthy choice…those in the moment…daily.	Accountability (2) Encouragement (3) Healthy choice	INSTRUMENTAL EMOTIONAL APPRAISAL
I don't need for them to be a crutch…I need them to help me through this process…not just allowing me the easy way out. i hear it from a friend, you need to do this this and this, it's gonna push me to get it done….t's just different when your friend or somebody on the outside pushes you to do it	Help Crutch (3) Push (2)	APPRAISAL INSTRUMENTAL
Financial so I can get a trainer. The subtle, 'that's a good job, oh you're losin' weight' you know that kinda stuff I'm good with.	Financial "good job"	INSTRUMENTAL APPRAISAL
The support I get is fine I have no complaints. They do push me they do advise me…they do their part.	Push (2) Advise (2)	APPRAISAL
I guess maybe concern, sometimes you go then you stop going so nobody asks about you so it's not really like you're part of a group, it's not they're asking about you to be nosy but they're asking about you like 'uh we really missed you common back' so that helps. Go to the movies spend time outside of just working out. It helps me in order to have somebody to go with me, if I had like a close friend that lived close by, somebody to hold me accountable, I need accountability and for me to hold them accountable.	Check-in, concern (2) Spend time together Accountability (3)	EMOTIONAL APPRAISAL INSTRUMENTAL
I guess when they do something with me that's helpful….I have really good friends so we talk a lot we go to dinner once a week. We text a lot…they're pretty active in my life.	Accountability Talk (2) OR text	INSTRUMENTAL
I prefer honest information. I really don't need you to do anything for me. Like information…recipes, exercises, what's going on	Experiences Information (3)	INFORMATIONAL
I really just want them to be my friend. Something that didn't require anybody talking we're just doing…I've already decided I'm going to go walk this trail you can come with me if you want	Be my friend Just doing Come with	INSTRUMENTAL
Someone that lived close by right next door…we're able to go the gym at the exact same time…I don't feel like goin' that person is pulling me outta the house and tellin' me to go and when they don't feel like goin' I'm doin' the same thing to them.	Go to the gym at exact same time Pullin' me Tellin' me Doin' the same thing	INSTRUMENTAL
I just kinda prefer that 'girl you doin' good or how things goin today'…that little pat on the back I see you and keep it movin'	Affirmation OR check-in Pat on the back	APPRAISAL

Note. PA= Physical Activity

Semi-Structured, In-depth Interviews Part II: Curvy Girl Circles

Domain 6: Social networks. *Research Question: What characterizes the social networks of obese, young adult African-American women?* Five out of ten participants were randomly selected to discuss social networks as part of their interviews (Participants 005, 006, 007, 008, 010). They described the size, relationship, frequency of contact, and location of their social network members. Participants identified people in their lives who they considered part of their close social circles. Each woman named five to seven people including family members, friends, and coworkers. Family members included husband, parents, grandmothers, and siblings. For three women, family members – grandmothers, siblings, and parents – lived out of state. Friends and co-workers lived in surrounding areas. For two women (Participant 005 and 010), their closest friends lived out of state or were not in close geographical proximity. This suggests the geographical distance between participants and their social network members limited the amount of face-to-face contact, but not overall contact. Despite the distance, participants used multiple modes of communication to interact with social network members. These include phone conversations, e-mails, text messaging, and social media sites such as Facebook and Twitter. Participant 007 discussed the use of texting and Twitter to communicate with members of her social network, stating:

> *She's a real good friend, we talk a lot we text a lot she's one of my closest friends. We text all the time and talk all the time about whatever's going on. My friend…she's the one that likes to be on Twitter she likes to blog and she likes to tweet…I can tell her anything.*

The increase in communication styles and social media has changed the way social networks members can instantly interact with each other even though they are miles apart.

Social network members played multiple roles in the lives of participants, the most reported of which are described in Table 38. Participants depended on their social network members for honesty, fun, and problem solving. Participants who have family, friends, and coworkers in close geographical proximity engaged in physical activities with these members.

Table 38

Curvy Girl Participants' Characterizations of Social Network

Size	Relationship	Location	Contact Type	Contact Frequency	Member Role
5. 2 people	Family Friends Coworkers	Near: In-State Far: Out of State	Face-to-Face Phone Text E-mail Facebook Twitter	Daily Weekly Not often enough	Spiritual Honesty Advice Fun Problem solve Physical Activity Partner

Note. PA = Physical Activity

Additionally, each participant was asked to describe the body types of their social network members (Table 39). Most social network members' body types were described using perceived height and weight measurements, as well as euphemisms. Based on heights and weights provided, BMIs were calculated for each participant's husband, mother, grandmother, sister and female friends. The BMIs indicated female social network members are overweight or obese. One participant suggested a female friend was in the "morbidly obese range," while another participant stated she was the

"biggest" person in her social network. Yet, male social network members were not described as overweight or obese by study participants.

Table 39

Curvy Girls Participants' Body Size Characterizations of Social Network Members

Females	Males
Medium build	Super slim
Chunky (3)	Very in shape
Heavy set	Great shape
Tall	Overweight
Morbidly Obese Range	

Note. PA = Physical Activity

Participants were also asked to discuss the physical activity and healthy diet behaviors of their social network members. See Table 40.

Table 40

Curvy Girl Social Network Members' Physical Activity and Healthy Diet Behaviors

Physical Activity	Diet
Walking	Food preparation
Group exercise classes	Dieting
Home workouts	Increased Fruits and Vegetables
Job requirement	Medical Requirements
Non-specific	No healthy diet behaviors
No physical activity	

Note. PA = Physical Activity

Each participant gave examples of the types of group exercises their social network members participated in including aerobics, weight lifting, and boxing. Home workouts such as Wii games, exercise videos and playing with children were also cited

as group exercises. Participant 006 described a physical activity game created by her husband:

> *My husband he's pretty diligent and he always does this while I'm sleeping and I dunno how in the world he does it but he does like sit ups and pushups he does it with like cards I think he'll like flip over x number of cards and however many number of cards he'll calculate. I don't even know if everything has the same value or not but that's how many push-ups or sit ups of that nature.*

In the above example, it is clear that home-based work outs can be independently created by social network members.

One participant (006) stated physical activities performed by social network members were dictated by the roles and responsibilities associated with their employment. Phrases such as "moving, always moving" or "walking back and forth all day" were used to describe the types of work-related physical activity of social network members. A representative example of a work-related physical activity was shared by Participant 006 about her sister. She describes how her older sister's position as a full-time nanny contributes increased physical activity:

> *My older sister now she's a nanny and what she does is she'll take the kids to the park but they'll actually walk to the park and walk from the park um or walk to the library walk back from the library and then she always takes them to the zoo and walks around the zoo with them too.*

Participants were asked to discuss the healthy diet behaviors of their social network members. These findings were mixed. Participants reported some members of their social networks ate fruits and vegetables, stopped frying and started baking foods, used diets and other restrictive eating behaviors, while other members of their networks had no healthy diet practices at all.

In addition to the physical activity and healthy diet behaviors of their social network members, participants were asked about the weight management experiences of their social network members. Each participant discussed: (a) how social network members manage or lose weight, (b) types of weight management information shared among social network members, and (c) how the information is shared among social network members. These findings were grouped into four categories: physical activity, diet, dieting/programs, and behaviors. See Table 41.

Table 41

Curvy Girl Social Network Members' Weight Management Behaviors

Physical Activity	Diet	Dieting/Programs	Behaviors
Obsessive exercise	Increase fruit and vegetable intake	Weight Watchers Master Cleanse	No breakfast Cooks at home
Body toning	Increase fish intake	Join gym	Bakes food
Aerobics	Protein shakes/powder Diet supplements Limits starches	Raw food diet Pills	

Note. PA = Physical Activity

During interviews, two participants stated most members of their social network did not do anything for weight management. Participant 005 stated:

> *Everybody else pretty much don't have no worry, pretty much worry free. They gain it they ok, they lose it they ok, they manage it well. Oh, everybody complains about 'oh my stomach this, oh my thighs that' but it's not to the point where they're obsessed.*

Participant 010 had a similar response about one of the females in her social network:

> *The girls aren't active at all… one that is overweight it just occurred to her she should do something about it she never saw it as an issue never had a desire to ever wanna lose weight…hates going outside and she does not like to sweat does not do exercise….not going to diet….she just listens and says "yay for you."*

These Curvy Girl social networks included few members who practiced weight management behaviors. By implication, these networks may be limited in the types of social support (informational, instrumental, emotional, appraisal) provided for weight loss management.

Social network members indicated a variety of weight management information with each other. See Table 42. They also discussed how information is shared. See Table 43.

Table 42

Curvy Girl Social Network Members' Shared Weight Management Information

Plans	Events	Products	Reviews
Diets	5K walks	Foods	How to's
Physical Activities	Physical Activities	Pills	Results
Recipes	Intramural Sports	Phone apps	Comparisons
			Pros/cons
			Personal Experiences

Note. PA = Physical Activity

Table 43

Curvy Girl Social Network Members' Methods to Share Weight Management Information

Visual Aids	Social Media	Verbal	Written	Demonstrations
Photos	Texts	Testimonials	Books	Cooking
Product	Blogs	Reviews	E-mails	Invitations to classes
packaging	Twitter	Discussion		Introduce variety of foods
	Facebook			
	Websites			

Participant 008 offered another type of weight management information, "motivational sayings." However, she was the only participant who reported members of her social network using this method of support.

Social network members also shared photographs of prepared foods, products, clothing, and body changes due to healthier lifestyles, and these actions were categorized as a method of sharing information. Popular social media methods such as Facebook and Twitter helped members communicate, connect, and share information with other members in their social networks whether they lived near or far. Even with those who live close by, texting is another form of sharing information with social network members.

The five participants were asked to discuss the supportive weight loss behaviors of their social network members. Participants responded to the following two part question: *Have you ever asked anyone from your social network to help you manage (or lose) weight? What were the types of help requested?* Four participants (005, 007. 008, 010) reported never asking their social network members for help with weight loss. A resounding "no" was repeated from the women, each briefly describing why they have never requested help from their social network members.

> Participant 005: *No, I haven't asked. To them I'm comfortable in my skin and I am.*
>
> Participant 007: *No we talk about if we wanna lose weight or something like that… "oh I wanna lose weight I wanna slim down."*
>
> Participant 008: *No I don't think I really asked anybody for help…don't think I've ever asked anybody to do something with me….I will ask people about their experiences. A lady here at the school asked me to do this diet with her.*

> Participant 010: *It wasn't kinda "help me lose weight," it's more "let's work out together"…usually I approach him and he usually just goes along with it.*

Only one participant discussed asking her husband for help:

> *Uh I did ask my husband to help me but man his plans were so strict uh they're so hard (laughs)...um like he would come up with like uh a list in terms of like uh a diet plan and these are the foods and this is how it's supposed to be prepared. I dunno I guess it was too rigid and then he would adapt it to make it to where it was a little bit easier for me. Um I haven't yeah I'm very inconsistent I'm noticing (laughing) I haven't stuck to not one he's done for me and he's cooked it for me too which is sad um I don't really like his cooking (laughs) so we've done that.*

Although she sought the help of her husband, while presenting no specific strategies of her own, Participant 006 expressed dissatisfaction with the type of help her husband provided (e.g., meal plans, cooking healthier dishes). Her excuses were his meal plans were too rigid; she did not like the healthier meals her husband prepared; or she inconsistently followed her husband's recommendations.

In addition to requesting help, participants were also asked, *has anyone in your social circle ever offered to help you lose weight? How did they offer? What was your response?* Two participants (008 and 010) stated network members did not offer to help. Three participants (005, 006, and 007) responded someone from their social networks had offered to help them lose weight (see Table 44). However, the two participants who were not offered help did identify individuals who either "agreed" or "recommended" a weight loss strategy such as walking together. Participant 010 stated that her boyfriend "never approached me with it, he's never been forward" but after further discussion and consideration decided "maybe that's his way of telling me." In Table 44, it is apparent in response to weight management help from network members,

Curvy Girl participants declined, reluctantly accepted, or passively agreed to the types of help offered.

Table 44

Curvy Girl Participants' Responses to Weight Management Assistance from Social Network Members

Participant	Social Network Member	Offer Type	Participant Responses
005	Female Friend	Physical Activity (walking)	*I was too busy dancin', clubbin', I didn't have time. I was in my late teens I didn't care…my answer was no.*
006	Husband	Meal plans, supports enrollment in weight loss programs	*I'll complain about it…then I wasn't consistent. I guess he's more into it than I am.*
007	Brother	Meal plan, physical activity regimen	*Sometimes I'm like ok I'ma try it…I was on board for like a week. He's extreme like make it happen in 3 days.*
008	Sister	Prepare meals together at home	*It was more less like we agreed to do it. We agreed to lose a certain amount of weight. She could help by motivating me…we never really agreed to help each other lose weight.*
010	Boyfriend	Physical activity (walking) together	*Usually I approach him and he usually just goes along with it. He's never been forward, it's just kinda let's go walking together, maybe that's his way of telling me.*

Chapter Summary

The research study results presented in section addressed six primary research areas: Weight-related Beliefs, Weight-related Behaviors, Supportive Social Relationships, Types of Social Support Given and Received, Weight Management Experiences, and Social Network Characteristics; and detailed the weight-related experiences of 10 obese, young adult African-American women. The characterization of their social relationships with family, friends, and other social network members

provided rich contextual data on the roles these relationships have in their efforts to attain healthier weights.

CHAPTER V

CONCLUSIONS

This chapter will be organized into three sections: findings, implications, and conclusions. First, the findings address the weight related beliefs, behaviors, and social networks of participants. Second, the broad implications of the findings for the development of healthy weight interventions for this group will address the following questions: How do these findings impact our understanding of the weight-related experiences of obese, young adult African-American women? What can health professionals, partnered with the social networks of African-American women, do to facilitate healthy weight achievement and long-term maintenance among obese, African-American women? How can the positive attributes of social networks be enhanced and utilized to support healthy weight achievement and long-term maintenance among obese, African-American women? Finally, the conclusion outlines the limitations and strengths of this exploratory study and proposes recommendations for future research in this area.

Study Findings

This study explored the weight-related beliefs, behaviors, and social networks of a sample of obese, young adult African-American women. Six primary research questions were: (a) What are the weight-related beliefs of obese, young adult African-American women? (b) What are the weight-related behaviors of this group? (c) How do obese, young adult African-American women describe the concept of social support? (d) What types of social support do obese, young adult African-American women give and

receive? (e) What characterizes the social networks of obese, young adult African-American women? (f) What characterizes their weight management experiences as it relates to their social networks.

Weight-related Beliefs

Research question: What are the weight-related beliefs of obese, young adult African-American women?

Physical activity improves performance of daily functions. Overall findings of this research study suggest participants believe physical activity is necessary to maintain or improve their ability to (a) perform daily tasks, (b) retain independent mobility (c) reduce stress and improve mental health and, (d) reduce risks for chronic diseases. Several themes suggest participants experience improved physical appearance and body function, psychological well-being, and reduced illness as benefits of physical activity. Participants acknowledged physical benefits including increased strength, stamina, energy, body shape, and body tone. Of particular interest, participants believed independent mobility was the most important benefit of physical activity. The importance they placed on independent mobility was not affected by their own weight.

Although the Curvy Girl participants believed consistent physical activity reduces risk for chronic diseases and improved body functioning, the majority of them did not engage in the recommended amount of weekly physical activity. When asked to identify reasons for physical inactivity, three themes emerged: laziness, tiredness, and lack of time. Participants overwhelmingly used “lazy” or “laziness” to describe their inactivity. Yet, participants’ competing responsibilities and multiple roles, jobs did not

support the "laziness" description. When probed further, tiredness and lack of time interfered with their ability to increase physical activity.

Curvy Girl participants cited improved mental clarity and reduction in stress and symptoms of depression as psychological benefits of physical activity. Feelings of stress and depression resurfaced and were believed to inhibit physical activity behaviors. Such feelings suggest emotional and mental health impacts the consistent practice of weight management behaviors. Inconsistency of physical activity behaviors contradicted participants' beliefs about the benefits of physical activity which included improved body functioning and weight control. Participants believed their bodies, even though obese, were capable of performing a myriad of physical activities. In addition, self-efficacy was not identified as a deterrent to performing moderate-to-vigorous physical activities. However, the interviews elicited a more salient concern of participants' inability to sustain physical activity behaviors over an extended period of time (e.g., consistency).

The participants' beliefs about physical activity are consistent with the established link between physical activity and health (Hurley et al., 2009; USDHHS, 1998). According to the USDHHS, regular physical activity is linked to a reduction in the risk of premature mortality, in general, and in psychological well-being (USDHHS, 1998). Additionally, routine physical activity is associated with improved psychological well-being (Hurley et al., 2009). On the other hand, this finding is inconsistent with research specific to the beliefs and attitudes of African-American women regarding physical activity (Harley et al., 2009; Kumanyika, 2005; Samuel-Hodge et al., 2010;

Walcott-McQuigg, 1995; Wolfe, 2004). Those studies indicate that African-American women beliefs about physical activity are culturally based, stem from a history of deprivation and economic distress, and serve as barriers to physical activities.

Little is known about the impact of obesity in young adulthood and weight gain from young adulthood on functional limitations and disabilities later in life. Few studies have examined the association between obesity in young adults and functional limitations and disability in late adulthood, and most of these studies combined data from adults over a broad age range (Houston, Stevens, Cai & Morey, 2005). According to the ARIC study, in African-American women, obesity was associated with increased risks of mild and severe functional limitations, activities of daily living, and instrumental activities of daily living. In addition, compared with weight maintenance, large weight gain from ages 25 to ages 45 to 64 was also associated with functional limitations and active daily living and instrumental activities of daily living in both white and African-American men and women. The highest prevalence of functional limitations was generally seen among those who were obese at ages 25 or who were large weight gainers or weight losers (Houston, Stevens, Cai & Morey, 2005). The Curvy Girl participants' concerns of independent mobility or functional limitations are valid. Results of the aforementioned study and the few others that have researched obesity and functional limitations indicate obese young adults are at greater risk for functional limitations later in life. This can lead to an increase in functional limitations and disability over the next generation. Maintenance of a healthy body weight throughout adulthood may help

prevent or delay the onset of functional limitations and disability, resulting in increased quality of life.

Several reviews of the literature have focused on observational and intervention studies which have assessed the relationship between physical activity and mental health, particularly depression (Lotan, Merrick & Carmeli, 2005; Penedo & Dahn, 2005; Saxena, Ommeren & Tang, 2005; Warburton, Nicol, & Bredin, 2006). These reviews generally report similar conclusion: physical activity is positively associated with improved mental health. Some studies have found obesity to be associated with compromised quality of life and mental well-being. Moreover, weight loss has been found to be associated with improvement in psychological well-being.

Healthy lifestyle habits such as consistent physical activity are associated with a significant decrease in obesity-related morbidity and mortality regardless of baseline body mass index (Matheson, King & Everett, 2012). Motivational variables such as knowledge, attitudes and beliefs related to health benefits of physical activity, have been associated with initiation and maintenance of physical activity across populations. The role of knowledge and attitudes has been identified as of primary importance during the initiation of physical activity programs among women (Fluery & Lee, 2007). For example, older African-American women cited "strengthening the heart" as a reason for exercise and decreasing joint stiffness as a benefit of increased physical activity. In another example, a focus group of African-American women found that personal knowledge served to facilitate physical activity. African-American women were convinced of the utility of physical activity. A concern with disease prevention and the

consequences of illness was an expressed value of knowledge regarding physical activity (Fluery & Lee, 2007).

Self-efficacy has been a good predictor of treatment success in weight management programs. However, other research suggests a weaker relationship between self-efficacy and weight loss (Martin, Dutton & Brantley, 2004). Findings from a study conducted in 2004 suggest high self-efficacy for weight loss before treatment may be detrimental to success, whereas treatments that improve patients' self-efficacy may result in greater weight loss (Martin, Dutton, & Brantley). The assumed positive self-efficacy of Curvy Girl participants, although not directly measured but by virtue of their participation in a multitude of moderate-to-vigorous physical activities, may be indicative of short-term weight loss. According to the researchers, the lower weight change among African-American women with higher self-efficacy prior to the weight loss intervention may be a consequence of overconfidence or lack of experience with the difficulties associated with weight loss. This may be a possible explanation of Curvy Girl participants' consistent cycling through weight loss interventions with limited weight loss and no long-term maintenance. They exude a confidence prior to participating in selected weight loss interventions, but because they have less experience working through more difficult weight loss scenarios (e.g. plateaus, maintenance) prematurely exit these interventions without developing the skills and self-efficacy required to continue physical activity and weight loss practices.

A couple of possible explanations may account for these findings. First, the highly-educated sample of participants is not representative of obese African-American

women in general. The women in this study could have more exposure to health messages, and this exposure may reinforce in their thinking the critical linkage between physical activity and health. The reinforcement might militate against cultural influences on their beliefs. Second, African-American women are not a heterogeneous group, meaning that their beliefs and perceptions about weight and physical activity may vary considerably. Unless previous research used large representative samples, it is possible that the findings portray obese African-American women as a homogeneous population with respect to their beliefs.

Increasing physical activity among African-American women to promote weight loss and improve overall health is a public health priority. Research has provided cross-sectional evidence regarding patterns of physical activity and corresponding risk among African-American women. Yet, there is still much to discover about the social and contextual correlates (e.g., social norms, environment, social networks, organizational support) influencing the adoption and maintenance of regular physical activity among African-American women in general, young adult African-American in particular (Fleury & Lee, 2006). Healthy weight intervention design must be structured to address the beliefs about physical activity and participants' ability to consistently perform behaviors. There is rich and consistent literature on factors that influence physical activity levels among African-Americans that are directly modifiable (e.g., behaviors) or addressable (e.g., environments) with theoretically based counseling programs. Such factors relate directly to important theoretical concepts such as self-efficacy, normative expectations, and outcome expectancies (Whitt-Glover & Kumanyika, 2009). The

overall literature on behavior change suggests that successful interventions should address factors that directly or indirectly influence behavior as well as behavior itself (e.g., attitudes and expectations about exercise, neighborhood conditions, and role expectations; Whitt-Glover & Kumanyika, 2009). While many approaches to increasing physical activity among African-American women have been attempted, most studies have not adequately addressed the major factors that may influence adoption and long term maintenance of a regular physical activity program.

Fruits and vegetables are primary components of a healthy diet. Curvy Girl participants appeared to be knowledgeable about the weight management benefits of a healthy, balanced diet. Curvy Girl responses suggest for these women, a healthy diet is composed of "lots of fruits, vegetables" with low-to-no fats or sugars. Food preparation (e.g. broiling, baking, and steaming), low sodium content, and non-fried foods were seen as healthy options. Participants shared the belief that increased consumption of healthy foods (e.g., fruits and vegetables) could reduce risk for chronic illnesses, increase weight loss, and prevent further weight gain. Consequently, approximately half of the Curvy Girl participants characterized unhealthy foods as "foods I want to eat" or foods that "taste the best." Fried foods, fast food, and desserts were commonly identified as unhealthy because of the high fat, high sugar contents. Several participants identified "processed foods" and ice cream as unhealthy food choices.

Internal and external factors informed participants' evaluation and labeling of foods as healthy or unhealthy. An internal factor commonly referenced by participants to evaluate a food choice as healthy verses unhealthy was the body's reaction to foods.

For other participants, physician recommendations, public health messages, and health organizations were external factors which assisted in their evaluation of foods as healthy or unhealthy. Media, another external factor, informed participant evaluation of healthy vs. unhealthy foods. Media outlets, like documentaries, television shows, and internet websites such as Google informed their decisions to label foods as healthy or unhealthy.

The findings suggest participants are aware of messages communicated by the public health and health care systems, health professionals. However, the precise impact these messages have on Curvy Girl participants' behaviors cannot be determined from this study. A common treatment option for obesity is nutrition education aimed at restricting total energy intake by eating healthier foods (Kennedy et al., 2009).

Obesity, overweight, and "healthy weight" are individually determined and less influenced by the opinions of those outside of one's social network. Curvy Girl participants appeared to have strong negative feelings toward use of the words "obese" and "obesity" to describe their body size. Feelings of hatred, shame, guilt, and fear were ascribed to the use of "obese" as a descriptor. As one participant commented, "*I think I am going to die in a week if I don't get this off,"* while another participant stated, *"…obese is the 'bad monster"*" and "*eventually leads to death*." In contrast to this, other participants felt health professionals used "obese" as medical terminology to categorize individuals who meet particular criteria. However, many Curvy Girl participants did not agree with guidelines used by health professionals, such as the BMI scale, to classify obesity. Most of the women did not "feel like an obese person" and did not view themselves as obese. In their opinion, an obese person weighed 500 to 600 pounds, was

physically inactive, constantly eating, was unable to get out of bed, walk without an aide (e.g. cane or wheelchair), was unable to find clothing even at plus-size department stores, and weight-related co-morbidities. In addition, if a person is "big" or "full-figured" but not diagnosed with health problems, he or she is overweight but not obese.

On the other hand, more positive feelings were ascribed to the term "overweight" and it was the preferred classification among Curvy Girl participants. One Curvy Girl commented, "*Overweight means you can stand to lose a few pounds*" another participant suggested, "*... [overweight] gives more hope. Overweight seems like you can fix it*." Curvy Girl*s* assigned lower weight loss amounts of 20 to 100 pounds, to categorize and individual as "overweight." One participant commented,

> *…so if I see somebody who to me when they say well they're overweight but they only need to lose 10 to 15 pounds but I feel to me that's not being overweight to me you know if you need to lose like a number of pounds you know 25, 30, 40, 100 you know that to me is overweight you know 5 to 10 pounds here or there to me that's not to me that's not overweight.*

The ways Curvy Girl participants identify and define overweight and obesity do not align with the clinical guidelines used by health professionals. Curvy Girl participants' definitions suggest at minimum a misunderstanding and possibly rejection, of the guidelines currently referenced.

For participants, a healthy weight was individually determined and was not predetermined by BMI scales or other weight and measurement guidelines. Curvy Girl*s* were overwhelmingly dissatisfied with the scales and guidelines used by health professionals to determine obesity. They suggested the guidelines were too extreme and excluded many people. Participants articulated people *can* be healthy at larger sizes.

Some participants rejected these scales because they believed them (a) irrelevant for African-American women and (b) not developed to accurately measure their health in relation to size. Curvy Girl participants did not express a desire for thinness, nor did thinness equate to healthiness.

In relation to their weight and health they wanted to "feel good" about themselves. Participants were more interested in a toned, curvy, "shapely," healthy body, rather than a thin body perceived as unhealthy. In terms of dress size, size 10 to 18, were considered "not too thin" and the "ideal size" among participants. These observations are consistent with Befort and colleagues (2008) which suggest that African-American women believe larger body sizes, (including those categorized as obese) can be healthy. Furthermore, such beliefs about body size and healthy weight were also observed among adolescent African-American females (Boyington, Carter-Edwards, Piehl, Hutson, Langdon & Mcmanus, 2009). These findings suggest African-American females' beliefs about and acceptance of larger body sizes is cultivated early in life and consistently reinforced by social and cultural norms within African-American communities throughout adulthood.

This is particularly important because women's plus-size clothing begins at a size 10 and can extend beyond size 28. Obese, clinically defined as "having excess body fat" is more than a classification of obesity (Flegal et al., 2012). Such findings contradict research that reported obese African-American women had a desire for thinness (Blixen, Singh & Thacker, 2006). Previous research has compared body image attitudes and perceptions of African-American to white women, often reporting African-American

women with greater body satisfaction (Becker, Yaneck, Koffman, & Bronner, 1999; Kronenfeld, Reba-Harrelson, Von Holle, Reyes & Bulik, 2010; Rucker & Cash, 1992). However, the research was focused on body size and did not address muscle tone, shape, or body functioning in relation to body size. Such body characteristics may provide a more comprehensive understanding of body size and what this entails for obese, young adult African American women. Understanding factors that promote body satisfaction could become a tool in healthy weight interventions.

Weight-related Behaviors

Research question: What are the weight-related behaviors of obese, young adult African-American women? In the following sections, Curvy Girl participants articulate their physical activities, food choices, and body image behaviors as related to weight.

Preferred conditions to promote consistent physical activity. Physical activity is often used to maintain or improve body function, physical appearance, and mental wellness. Participants listed several types of physical activities including walking, dancing, weight lifting, and gardening. Aerobic activities (running, jump rope, dancing), walking, and group (or partnered) exercises such as kickboxing and organized sports were also commonly reported as weekly activities. Two participants reported sexual activity as a type of physical activity they practiced during the week, while others identified horseback riding, home videos, and Wii games as ways of being active. Such variability among the types of physical activities performed suggests Curvy Girls regard a variety of activities as important to sustain physical activity. Social interaction was still another condition for physical activity. Participants who enjoyed walking or

attending the gym did so with a partner such as family members, friends, children, and co-workers.

Team-based sports such as basketball, volleyball, and softball were identified as enjoyable physical activities by several participants. Although these were not weekly physical activities, participants expressed desire for opportunities to be active, competitive, and social. Organized team sports fit these criteria, reminiscent of sports participants played at younger ages. Curvy Girl*s* associated sports with physical fitness, competition, positive social relationships and their youth. Even with such positive attitudes, inconsistent physical activity persisted. Inconsistency and lack of accountability were common themes for physical inactivity. Among participants, inconsistency was the result of perceived laziness, lack of time, and tiredness. When probed about their "laziness," each discussed laziness more as a result of being tired from their multiple roles and responsibilities. Curvy Girl participants' demanding schedules included multiple jobs, graduate studies, family, and public service organizations and were reasons for the lack of time for physical activities.

The majority of participants claimed to hold gym memberships purchased independently, provided by employers, or through universities and/or residential areas. This allotted participants access to space, equipment, group exercise classes, informed personnel, and other active individuals. Curvy Girl participants' interest in pursuing competitive activities like boxing, and more challenging activities such as weight lifting, horseback riding, and intense home videos (e.g., Insanity) adds to conversations about the types of physical activities African-American women will perform. Curvy Girl

participants walked, but preferred and enjoyed more vigorous activities. In general, affordability was not voiced as a barrier to physical activities. But specific activities such as boxing, personal trainers, and team registration fees for organized sports resulted in discontinued participation. Participants' excitement over these moderate-to-vigorous physical activities was overshadowed by related costs. Such activities were deemed non-essentials and eliminated during times of financial strain. This suggests encouraging, organizing, and reducing barriers to participate in team-based sports may engage Curvy Girl*s* to increase their physical activity. Healthy weight interventions, designed to attract and retain the interests of Curvy Girl*s*, should rotate a variety of non-traditional, competitive and team-based activities. Reduced registration fees, intense recruiting of team members from community settings, and rotating sports schedules may increase interest. Encouraging Curvy Girl*s* to engage in team sports may require non-traditional incentives for participation. Trophies may be enhanced by additional rewards in the form of gift cards for goods, services, or money; free to low cost personal training sessions to encourage physical activity off the field (or court), and in-home healthy cooking demonstrations.

These findings suggest a need to address the issues of variety, relevance, affordability and accessibility to promote weight loss among this population of African-American women. One particular study provided evidence of a culturally specific dance intervention delivered over an 8 week period. A community partnership was established to promote the church-based culturally specific dance intervention to address the issue of obesity and improve the health of African-American women. The conceptual

framework utilized social cognitive theory to which posits that physical activity is a result of a complex set of personal, behavioral, psychosocial, and environmental factors (Murrock & Faye, 2010). Through community partnerships with participating churches, the intervention was designed to incorporate and address the values, beliefs, and daily lived experiences of African-American women. The utility of such design can be replicated among this population of women. The women of this study discussed their beliefs, experiences, and needs related to physical activity. Although they were not recruited specifically from a church or religious sect, spirituality and religion were included as a component of health or healthy lifestyle. The conclusions of the culturally specific dance intervention reflected the concerns of the women in this study. The intervention, held twice a week, was flexible for participants' work schedules, they were able to select their own intensity making individual decisions about their bodies, and not every woman is affiliated with the church but the intervention could be located in other community settings. There was no cost to the participants and they could continue the physical activities beyond the completion of the program.

Interventions must be able to address the needs of more vigorous activity, flexible schedules, group or team-based, at low to no cost, and conducted within the communities they live. As shown in the culturally specific dance intervention, this can be achieved with theoretically based interventions facilitated through community partnerships.

Body acceptance and dissatisfaction. Consistent with prior research, Curvy Girl participants expressed acceptance of larger bodies yet identified dissatisfaction with

weight and maintained self-consciousness about their bodies (Befort et al., 2008; Kumanyika, 1998). Participants commonly identified their faces and smiles as the most attractive features. These attributes were enhanced by clothing, make-up and hair styles. At the same time, these women were dissatisfied with their weights and were self-conscious about specific body parts, mainly their stomachs and thighs. This was illustrated by strategies they used to conceal these areas of their bodies. For example, clothing was emphasized as a way to feel attractive despite feeling self-conscious. Shaping and contouring clothing items such as "girdles" and "Spanx" helped women present a "smooth" appearance. These strategies provide insight about Curvy Girl participants' behaviors to retain feelings of attractiveness and healthiness despite weight dissatisfaction and self-consciousness. Previous research indicated that larger body acceptance, dissatisfaction, and the use of clothing as methods to reduce self-consciousness (Befort et al., 2007; Young, 2001). Curvy Girl participants went further to discuss specific undergarments, which contoured their bodies to portray a smooth, shapely appearance. Interestingly, body shaping, through the use of girdles, spandex, and Spanx achieved results similar to what participants stated could be attained through consistent physical activity.

Weight Management Experiences

Research question: What are the weight management experiences of obese, young adult African-American women? Curvy Girl participants' acceptance of larger body types yet dissatisfaction with their personal weight was reflected in weight loss attempts or management strategies they had used within the past 12 months. Weight loss

strategies included diets, increased physical activity, and/or weight loss interventions or programs. One specific commercial weight loss program, Weight Watchers, was used by most participants several times during their young adult life.

Participants' were made aware of such weight loss strategies through advertisements, referrals from friends and family, physician recommendations, or prior experience and knowledge. Participants had the following criteria for selecting weight loss strategies: (a) convenience (b) affordability (c) accessibility (d) variability (e) the successes and experiences of others (d) personal readiness and commitment to change. Several participants expressed personal readiness and commitment to change. Selected weight loss strategies helped participants achieve short-term weight loss, but not long-term management. Curvy Girl participants experienced increases in energy, mental clarity, and overall health; personal, structured guidance for healthier eating behaviors and physical activity; stress relief; body satisfaction and weight loss. The positive physical and psychological changes were not sustained and participants were unsuccessful with long-term maintenance. Inconsistent behavior was cited as the primary reason for not attaining substantial weight loss.

Two major contributors to participants' unsuccessful long-term weight loss were inconsistent adherence to weight loss program guidelines and early resignation. Reasons cited for inconsistency and/or discontinued use of selected weight loss strategies included unwillingness to track daily foods and physical activities, feeling disconnected from weight loss group members, physical ailments, affordability and, lack of support from family and friends.

Lack of support from family and friends was described as (a) an unwillingness to, or discouragement from, incorporate a healthier diet as recommended by the program (b) brining unhealthy foods into the house (c) encouraging unhealthy food selections while dining out (d) unwilling to participate in similar physical activities (e) discouraging remarks about healthier lifestyle practices (e.g. increased physical activity and/or healthier food choices).

These types of non-supportive behaviors from social relationships (e.g., family and friends) support prior research (Barnes, et al., 2006; Boutin-Foster 2005; Strickland et al., 2007). These findings suggest participants' weight loss success was not solely dependent on motivation or willpower but also depends on social network members' behaviors. Conversely, Kumanyika and colleagues (2009) formally tested the impact of social support and found that African-American participants who enrolled in a weight loss program with a family member or friend did not lose more weight than those who enrolled alone. Moreover, greater participation in the program and greater weight loss by the significant other was associated with greater weight loss in the participant (Kumanyika, et al., 2009). Interestingly, the participants with significant others consistently discussed their spouses' contributions in their weight loss experiences. Consequently, the spouses were not described as active participants in their weight loss process but wanted them give more instrumental support.

This implies inconsistency in weight management behaviors is not independent of the social environment and networks of Curvy Girl participants. Curvy Girls consistently made statements that suggested needs for accountability to maintain healthy

weight behaviors for long periods. The networks they had in place, although comprised of positive relationships, may require coordination of the supportive behaviors provided by the relationships to sustain healthy behaviors over time. In other words, Curvy Girls' positive relationships may need to be strategically developed so if one member is unable to provide the social supported needed at that time, another member, previously identified, can fulfill the role. Healthy weight interventions that teach Curvy Girls how to restructure their social networks to be more efficient and effective in their provision of support may result in more consistent, long term weight loss behaviors.

Social networks and social support in weight management experiences. *Research questions: What characterizes the social networks of obese, young adult African-American women? How do obese, young adult African-American women describe the concept of social support? What types of social support do obese, young adult African- American women give and receive?* Curvy Girl participants' social network members included family, friends, co-workers, and church members. These social networks were limited in size (approximately five people) but members provided positive, negative, and non-positive support for weight management and weight loss behaviors. Positive relationships included parents, siblings, spouses/significant others, children, and female friends. These relationships supported participants (a) by acknowledging weight loss and checking-in (appraisal), (b) encouraging healthy behaviors (emotional), (c) participating in physical activities together (instrumental) and (d) sharing weight management information such as recipes, work out plans, or introducing new exercise methods (informational). Participants more often reported

appraisal as the common social support type. Appraisal support was given in the forms of acknowledgement and encouragement of healthy behaviors by social network members more than other types of social support. Additionally, social network members who would "check-in," meaning they asked participants about their experiences, feelings, and general condition, were appreciated by participants.

On the other hand, negative relationships included parents, spouses/significant others, and female friends. These negative relationships (a)discouraged physical activity or healthier eating habits (emotional), (b) voiced negative comments (appraisal), were highly competitive at weight loss, (c) purchased unhealthy food items (instrumental), or (d) were perceived as disingenuous when they offered weight loss "recommendations" (informational). Most participants had either no negative relationships or a limited number of them.

Participants also described relationships that did not provide positive support but were not negative. Participants used the term "non-positive" to describe such relationships that included mothers, husbands, boyfriends, and female friendships. Non-positive behaviors included passiveness, unwillingness to participate in physical activity, inconsideration of lifestyle changes, or consistently reminding participants of food selections. Participants did not categorize these relationships as negative but recognized they did not provide explicitly positive support.

Social network members were not always in close geographical proximity to participants. Participants expressed a desire for family members and friends to live closer so they could participate in physical activities together. Participants who had

family, friends, coworkers, and church members that lived in close proximity described engaging in group exercise, preparing healthy meals, or spending time together.

Regardless of distance, social network members continued to find ways to connect and share their weight loss strategies and support, specifically through social media sites such as Facebook and Twitter, text messages, instant photo sharing, and e-mails. Social network members shared recipes, workout plans, locations for new activities and products. They acknowledged the weight loss of others through posts on Facebook, and expressed motivational and inspirational quotes through a number of channels. Phone and face-to-face conversations are the predominant methods for providing emotional support, but this type of support could also supplied through text message, social media sites, and e-mails.

Although support for weight management is shared among social network members, participants did not specifically seek assistance from social network members for weight loss. When social network members offered to assist with weight loss management, participants rejected, dismissed, or inconsistently complied with their recommendations.

Under Berkman's model, social influence includes the attitudes and norms toward help-seeking. Berkman suggested interpersonal relationships may influence physical activity and healthy eating by providing social support and establishing social norms that constrain or enable health promoting behaviors (Berkman, 2000). Furthermore, individuals are more likely to engage in healthier behaviors if it is established as a positive social norm in their social networks. Participant responses

suggest they did not seek help from social network members for the purposes of achieving weight. Although participants desired support from social network members, asking members for help was not a normal behavior. Participants' responses suggest apathetic attitudes in seeking help from social network members. However, it is less clear why this is the case, particularly since instrumental support is the preferred type of support from social network members. To recall participants' responses about their social network members, many of the female family and friends were overweight or obese, either attempting weight loss or were complacent with their obesity. Again, it is unclear how much of an impact such social norms influenced by the attitudes of social network members, constricts or enables the adoption of and maintenance of healthy weight achievement and maintenance. Identifying help-seeking behaviors for weight loss within one's social network among this population of women would be the next step to understanding social norms within these networks and how they can be utilized to promote long term weight loss and healthy weight maintenance.

Implications

The findings from this exploratory study suggest study participants have established social networks which provide positive, negative, and non-positive social support for weight management.

First, African-American women must identify network members and specify their roles in the weight management process. Participants' network members were long-time friends, family, or community members who shared information, communicated emotional and appraisal support, and actively participated in the weight

management process. Participants acknowledged that the support was received but that they were also interested in more instrumental support from their social network members. They expressed the need for accountability, physical activity partners, someone to eat healthier meals with, someone to purchase and prepare healthier meals, role models, and someone to be as committed to the weight loss process as they were. Participants believed that social network members wanted them to be healthy and happy but admitted that they could also hinder their progress by discouraging behaviors that would help them achieve a healthier weight.

Second, network members should be informed about weight loss decisions in a formal manner. This has the potential for women to engage in an open dialogue about her health concerns, reasons for weight loss, communicate her support needs, and engage network members in the process. This also presents an opportunity for other social network members to actively engage in their own weight loss efforts. For Curvy Girls to achieve long-term weight loss goals, it is imperative they have the support from family, friends, and other social network members. Their social networks are involved in many aspects of their lives, fulfilling multiple roles (friend, role model, confidante), and providing various types of support. Their reliance on social network members to be actively engaged in their lived experience creates an opportunity to strengthen their weight loss behaviors because these members can act as consistent "cues to action" for increased physical activity and healthier eating practices. These findings support existing recommendations for tailoring weight loss programs for African-American women, such as the importance of involving social networks and strengthening those

relationships as a way to support each other throughout the process (Befort et al., 2008; Fitzgibbon, 2012). Participants were able to express their needs during the research study. However, these discussions were not facilitated between network members. Healthy weight interventions are a potential setting for ensuring health issues are discussed, needs communicated, and that network members are informed of the changes.

Third, African-American women should be able to communicate developing social support needs to network members and critically evaluate whether the support given is helpful or is a hindrance to their progress. This is an important step in restructuring their social networks to optimize the support available through network members to sustain weight loss and weight management. Healthy weight interventions could assist participants in evaluating the social support given by each member of their social network and, if necessary, communicate what they need from social network members in order to assist in continued weigh loss. Communication must be concise and direct. For example according to the study participants, inconsistency with weight management behaviors continued to be a barrier to successful weight loss. Participants voiced the desire of an accountability partner, physical activity partner, a role model but could not identify someone within their social network to fulfill the role. For participants, this type of instrumental support was not often found among their social network members. But, when asked if they ever requested help for weight management from social network members, the majority of participants replied they did not. Participants stated that they had made general statements about the desire to lose weight in conversation, but did not commonly request help.

Fourth, African-American women must be able to seek out, build, and engage people outside of their social networks for the purpose of weight loss. Social network members may be unable to meet every need of an individual. African-American women may need to seek relationships outside of their social networks in order to be successful at long-term weight loss. Healthy weight interventions that enhance the skills of African-American women in developing relationships with individuals outside their social networks for the explicit purposes of weight loss may be beneficial to their weight loss efforts. For example, participants may have started an activity with a member, but because their physical activity partner was unreliable, inconsistent, or had to stop, they became inconsistent in the activity and eventually stopped as well. A healthy weight intervention could assist African-American women in identifying members outside of their social network who could fulfill the need of accountability and partnership. Using these skills to extend their social networks would give African-American women more options in their relationships as a way to provide consistency and accountability in their weight loss efforts.

Fifth, there is a need for continuing health education and health promotion at key points throughout the lives of obese, young adult African-American women. During the Curvy Girl conversations participants highlighted major transitions which were prioritized over health such as college, career change, family and personal illness, relocation, marriage and children. These transitions were reasons for interruptions in their healthy lifestyle behaviors or as underlying factors for weight gain. Such

transitions may provide opportunities to discuss coping mechanisms, focusing on healthy coping strategies for major transitions without compromising personal health goals.

Finally, the limitations of existing health education and health promotion models emphasize the need to shift toward a more comprehensive approach that acknowledges the importance of the social network and member support. This study illustrated the interdependence between people and their social networks through social networks and social support conceptual framework. This conceptual framework provides an understanding of how the nature of social networks, provide opportunities for the provision of social support, to impact the physiological, behavioral, and psychosocial health pathways (Berkman, 2010). Therefore, applying a social network and social support conceptual framework to understanding the weight management experiences of obese, young adult African-American women allows us to extend traditional, individualistic and behavioral theory to provide an analysis of social networks and members, the utility of support within their networks for weight management and healthy weight achievement.

Social networks are unique with support nuances that may or may not inform the development of healthier beliefs or behaviors among members. The network and network members, as identified by the individual, is a primary focus of the intervention. Network members impact the weight-related decision-making process of the Curvy Girl. The complexities of social networks and the provision of social support for the purpose of weight management among network members illustrates the need for developing multi-level interventions that address the complexities of healthy weight achievement,

management, and long-term maintenance. This study described the Curvy Girl social circles (network) as one with similar members (e.g. young, African-American, female and obese). Such similarities among network members may influence the types of support given and received among members for the purposes of achieving healthier weight. Enrolling key network members into health education sessions focused in obesity and obesity prevention could potentially improve the support functions and health behaviors of these networks. Through network members improved understanding of obesity; physiological and psychosocial consequences; prevention, weight loss, and maintenance behaviors and; maintenance the Curvy Girl and her close knit social circle are able to positively impact each other's weight-related decision-making.

Next, Curvy Girl social networks, armed with health education knowledge, attitudes, and beliefs related to the multiple benefits of healthy weight, are positioned to revise the social norms within their networks and communities. This is due to the potential of social network members' influence extending to the larger community. The implication here is that because social network membership may overlap, members may be able to apply the skills learned in one network to another network in which they belong. For example, some Curvy Girl participants discussed the importance of church membership and those relationships. Church relationships were included as part of their social networks. Social support behaviors that encouraged healthy weight management could be extended and applied to a larger community such as the church. This presents another network supportive of healthy weight management for the individual but to a greater extent, the church community where several networks can supply the various

types of social support Curvy Girls desire to sustain healthy weight behaviors for long-term maintenance.

Limitations

This study was limited by the following conditions. This study was exploratory and had a small sample size that may not generalizable to all obese, young adult African-American women. Only women willing to participate in the study were included which limited generalizability. The recruitment methods initially used for the study did not yield the anticipated results. While the use beauty salons and stylists to promote and engage African American women in research have been reported a "promising health promotion setting," it was not effective for this particular study. It may be that, although women were invited by their stylists to participate in the research study, African-American women may be unwilling to discuss weight-related topics in a research format with an unknown individual. Another reason may be that eligibility to participate required women to acknowledge and report that they were overweight. The women may not have been prepared to acknowledge they were overweight and as a result, declined to participate in the study.

This sample includes only African-American women who are 20 – 35 years of age living in two central Texas locations. Additionally, the participant sample consisted of formally educated women of which the majority had attained at least a master degree. The recruitment of women with advanced education may be a consequence of who the researcher initially invited to participate and the social settings from which they were obtained. The women initially invited to participate were African-American women

with advanced degrees from various social settings (e.g., college campuses, research/practice conferences, churches). Although these settings may include women with a range of educational backgrounds, it is highly plausible most have at least a college education or greater. Less education attainment is associated with lower socioeconomic status which is routinely coupled with increased morbidity and mortality for numerous health conditions (Wilcox et al., 2011). Yet, the obese women in this study were highly educated and most were not affected by chronic illnesses. The higher educational attainment of participants may pose a limitation because of study findings non-generalizability to less formally educated African-American women. But, these findings provide another perspective about obesity and healthy weight management among an understudied group of African-American women.

The interviewer used a semi-structured, in-depth interview guide using additional probes to gather more detailed information. During the analysis stage, coding and theme development were independently conducted and could provide opportunity for variability in meaning. The researcher and a trained qualitative analyst met three times during the process to discuss and compared notes. Any differences in opinion about themes were discussed and final themes and categories were established by the researcher.

The primary strength of this study was its in-depth nature, particularly because participants were able to discuss their weight-related beliefs, behaviors, and social networks. Participants expressed interest in the final results and hoped that the information would assist African-American women achieve healthier bodies. They were

eager to participate in a research study that focused on a health concern important to them, that gave them the opportunity to share their health and weight management experiences, and that gave their voice to a topic they believed was often overlooked.

Recommendations for Future Research

This exploratory research added important findings to current literature on the social networks of obese, young adult African-American women. This research characterized the networks in size, members' health practices, body types, and social support behaviors based on participant information. Future research should conduct a network analysis including interviews with the social members identified by participants. This is a comprehensive approach to understanding the social networks of obese, young adult African-American women. A social network analysis of each member could uncover overlaps and gaps in the social support given and received as reported by network members. Including all network members in the social network analysis would allow researchers to pinpoint areas of improvement for offering and soliciting social support. Prospective outcomes of interventions that focus on social networks range from capacity building, to establishing supportive relationships for the purposes of weight loss, to linking "like-minded" obese African-American women in such a way as to promote and sustain healthy weight behaviors. Healthy weight interventions that address social support and include network analysis to identify areas of improvement and build on the social relationships already in place may lead to individual and network level changes.

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APPENDIX A

Curvy Girl-Prospective Participant Eligibility Screening Questionnaire

Curvy Girl-Prospective Participant Eligibility Screening Questionnaire – Phase I

Screener Script: Hello, this is _____. I thank you for contacting me about participating in the *WEIGHT-RELATED BELIEFS, BEHAVIORS AND SOCIAL NETWORKS OF OBESE, YOUNG ADULT BLACK WOMEN: IMPLICATIONS FOR HEALTHY WEIGHT INTERVENTIONS* research study information session. This session is designed to engage "full-figured" young women in a conversation about their weight-related beliefs, behaviors and social circle (network) characteristics. Each info session will orient you to the study, collect demographic information, height, weight, and waist circumference measurements, and answer any follow-up questions.

Right now, I need to ask you a few questions to determine your eligibility to participate in the study:

Which of the following best describes your race/ethnicity?

a. African American/Black __
b. Asian/Pacific Islander __
c. Hispanic/Latino __
d. Native American __
e. Non-Hispanic White __

2. What is your gender
   a. Female __
   b. Male __

3. What is your year of birth?(YEAR) _____

4. Which of the following BEST describes you?
   a. Full – figured __
   b. Plus – Sized __
   c. Overweight __
   d. Obese __

5. Which of the following BEST describes your dress size?
   a. 14/16Women __
   b. 18/20Women __
   c. 22/24Women __
   d. 24/26Women __
   e. 28Women plus __

6. What is your highest level of education?
   a. Elementary School __
   b. Some High School __
   c. High School Graduate/GED __
   d. Vocational Training/Professional School__
   e. Some College __
   f. College Graduate __
   g. Advanced Degree (MD, PhD, JD, etc.) __

7. How did you find out about this study?
    a. Flyer __
    b. E-mail __
    c. Word of Mouth __

8. What is your name, phone number and/or e-mail so that I may contact you with further information to determine your availability for one of the scheduled focus groups.

    a. Name _____

    b. Phone Number (____) ____ - _____

    c. E-Mail _____

    d. Physical Address _____
    _____
    _____
    _____

This concludes the eligibility questionnaire. As a reminder, the info session will be held at (LOCATION INFORMATION). Refreshments will be provided.
Do you have any questions for me? _____
_____
_____
_____
Thank you for your interest in the *WEIGHT-RELATED BELIEFS, BEHAVIORS AND SOCIAL NETWORKS OF OBESE, YOUNG ADULT BLACK WOMEN: IMPLICATIONS FOR HEALTHY WEIGHT INTERVENTIONS* info sessions. Good bye.

Date of Eligibility Screening	
Prospective Participant Number	
Follow-up Date	
Date/Location Assigned Info Session	
Date/Location Assigned Focus Group	

APPENDIX B

Curvy Girl-Participant Demographic Profile

Curvy Girl Participant Demographic Profile – Phase II

Please provide the following information about yourself. All information will be reported as aggregate data. Your answers will remain confidential. Please mark you answer with an X.

1. What is your gender?
   - *a.* Female __
   - *b.* Male __

2. What is your year of birth? (YEAR) _____

3. What is the highest grade or level of school completed or highest degree received?
   - a. Elementary School __
   - b. Some High School __
   - c. High School Graduate/GED __
   - d. Vocational Training/Professional School __
   - e. Some College __
   - f. College Graduate __
   - g. Advanced Degree (MD, PhD, JD, etc.) __

4. Are you now married, widowed, divorced, separated, never married, dating or living with a partner?
   - *a.* Married __
   - *b.* Widowed __
   - *c.* Divorce __
   - *d.* Separated __
   - *e.* Never Married __
   - *f.* Dating __
   - *g.* Living with a partner __

5. Where do you live? Please indicate city/county and zip code.

   - *a.* City/County: _____
   - *b.* Zip Code: _____

6. At the present time how would you rate your overall health?
   - *a.* Poor __
   - *b.* Fair __
   - *c.* Good __
   - *d.* Excellent __

7. During the past **7 days**, how many days were you physically active for a total of **at least 60 minutes** per day? (**Any** physical activity that increased your heart rate and made it hard to talk during the activity)
    a. 0 days __
    b. 1 day __
    c. 2 days __
    d. 3 days __
    e. 4 days __
    f. 5 days __
    g. 6 days __
    h. 7 days __

8. In general, how healthy is your overall diet? Would you say…
    a. Excellent __
    b. Very Good __
    c. Good __
    d. Fair __
    e. Poor __

9. Do you consider yourself now to be…?
    a. About the right weight __
    b. Overweight __
    c. Obese __

10. During the past **12 months**, have you tried to lose weight?
    a. Yes
    b. No

THANK YOU!

To be completed by Research Team Only

Height (inches)	
Weight (pounds)	
Calculated BMI (kg/cm^2)	
Waist Circumference	
Age (years)	

Curvy Girl Chat Discussion Questions:

1. Please describe your overall health.

2. Please compare/contrast your health over the past 3 years

3. When you hear the word overweight what words, thoughts, reactions come to mind? When you hear the word obese what words, thoughts, reactions come to mind

4. What recommendations would give towards the development of healthy weight interventions for young adult African-American women?

APPENDIX C

Interview Guide Part One: Curvy Girl Essentials

Interview Guide Part One: Curvy Girl Essentials – Phase III

Domain 1: What are the weight-related beliefs of obese, young adult African-American women?

Topic	Question
Beliefs about physical activity	What does it mean for you to be physically fit?
	If you are physically active, what are some reasons you participate in physical activity?
	If you are not physically active, what are some reasons you do not participate in physical activity?
Beliefs about diet/nutrition	What are the components of a healthy diet?
	What are some reasons to have a healthy diet?
	How do you determine which foods are healthy?
	How do you determine unhealthy foods?
Beliefs about body image	How would you describe a healthy weight?
	How would you describe your body to others?
	When you hear the word "overweight" what comes to mind?
	When you hear the word "obese" what comes to mind?

Domain 2: What are the weight-related behaviors of obese, young adult African-American women?

Topic	Question
Behaviors related to physical activity	What are some physical activities you do during the week? (any activity which raises your heart rate and makes it difficult to talk)
	What physical activities do you enjoy?
	What conditions (people, places, equipment) make it easier for you to participate in physical activity?
Behaviors related to diet/nutrition	What are some healthy foods you consistently include in your diet? Why do you consider these foods healthy?

	What are some unhealthy foods you consistently have in your diet? Why do you consider these foods unhealthy? How would you add more healthy foods to your diet? How could you decrease the unhealthy foods in your diet?
Behaviors related to body image	What about your body do you consider most attractive? What do you do to accentuate the parts of your body you believe are most attractive? What about your body do you consider least attractive? What do you do to compensate for the parts of your body you consider least attractive?

Domain 3: How do obese, young adult African-American women describe social support?

Topic	**Question**
Social Support	Some relationships are or may be affected by one person helping another to change behaviors associated with eating and physical activity. Which relationships would be positive and negative? Adapted from the *Support needs of overweight African-American women for weight loss* Moderator's guide

Domain 4: What types of social support do obese, young adult African-American women a) receive and b) give?

Topic	**Question**
Social support (receive)	What types of support from your family would helpful to manage (lose) weight? What types of support from your friends would be helpful to manage (lose) weight? What types of support from your social circle (network) would be helpful to manage (lose) weight?
Social support (give)	What types of support do you give to your family? What types of support do you give to your friends?

	What types of support do you give to members of your social circle (network)?

Domain 5: What characterizes the weight management experiences of obese, young adult African-American women within their social networks?	
Topic	**Question**
Weight Management	Over the past 12 months, how often have you tried to manage (or lose) weight?
	What were some of the strategies used to manage (or lose) weight?
	How did you find out about these weight management strategies?
	Why did you decide to use the weight management strategies listed?
	What were/are the benefits of using these weight management strategies?
	What were/are some of the barriers to using the listed weight management strategies?
Weight Management & Social Networks	What kind of support is shared among the social circle (network) members for managing (or losing) weight?
	What kind of support do you prefer from members of your social circle (network) to help with weight management (or loss)?

APPENDIX D

Interview Guide Part Two: Curvy Girl Circles Social Network Profiles

Interview Guide Part Two: Curvy Girl Circles Social Network Profile – Phase III	
Domain 6: What characterizes the social networks of obese, young adult African-American women?	
Topic	**Question**
Social Network Characterization	Who makes up your close social circle?
	Describe each person. What is the role of each person in your life?
	What do these people do to be physically active?
	What do these people do to maintain a healthy diet?
	How would you describe the body size of each person in your circle?
	What do people do to manage (or lose) weight?
	What types of weight management information is shared among people in your social circle?
	How is information about weight management shared among people in your social circle?
	Have you ever asked anyone in your social circle to help you manage (or lose) weight? Types of help requested.
	Has anyone in your social circle ever offered to help you lose weight? How did they offer? What was your response?