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CULTURAL INFLUENCES ON BODY SIZE IDEALS AMONG  
AFRICAN AMERICAN WOMEN IN THE MISSISSIPPI DELTA

A Dissertation  
presented in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the department of Health, Exercise Science and Recreation Management  
The University of Mississippi

by

Lois M. Coleman

May 2019

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## ABSTRACT

**Background:** African American (AA) women are the most obese subpopulation within the United States. A critical aspect of obesity reduction among AA women is examining potential influences on their body size ideals, particularly in regard to weight underestimation and acceptance of larger body sizes. One commonly posited influence is culture. However, culture is a multidimensional construct, so more in-depth explanation is needed. Therefore, the primary aim of this study was to identify specific cultural factors that impact AA women's body size ideals.

**Methods:** Twenty-five AA women were interviewed. Participants were guided through a cognitive mapping exercise by asking, "Think of all the things that influence how you or we (i.e., Black women) feel about body weight and body size—what are they?" Variables were listed and any perceived relationships between the variables were identified by drawing arrows. Each arrow was labeled positive or negative to denote the nature of the relationship. Each arrow was also assigned a value between 1 and 10, to represent the extent of impact variables have on each other. Findings were presented to a follow-up focus group of 7 AA women.

**Results:** One-on-one interviews yielded 25 cognitive maps. The maps contained a total of 169 concepts with 294 connections among them. The lowest number of variables identified on a participant's map was 4 and the highest was 11. The lowest number of connections made on a participant's map was 4 and the highest was 39. Through qualitative condensing and matrix addition, the 169 concepts were used to create 27 variables with 134 connections. Feedback from focus group participants resulted in the addition of 3 variables and 9 connections.

## **DEDICATION**

This dissertation is dedicated to my late father, Dennis Lane Coleman.

## **LIST OF ABBREVIATIONS**

AA	African American
BIA	Bioelectrical Impedance
BMI	Body Mass Index
CDC	Centers for Disease Control and Prevention
DEXA	Dual-Energy X-ray Absorptiometry
HRQL	Health Related Quality of Life
ODPHP	Office of Disease Prevention and Health Promotion
SFRS	Stunkard Figure Rating Scale
TV	Television
WHO	World Health Organization

## **ACKNOWLEDGEMENTS**

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## **CHAPTER I: INTRODUCTION**

Overweight and obesity rates throughout the United States have risen drastically over the last several decades. According to the Centers for Disease Control and Prevention [CDC] (2018), 39.8% of adults are currently obese. Additionally, time trend forecasting suggests that by 2030 there will be a 33% increase in national obesity rates—such an increase would result in 51% of the United States' adult population being classified as obese (Finkelstein et al., 2012). Finkelstein et al. also indicated there will be a 130% increase in the number of adults classified as severely obese.

Due to the significant number of adults exceeding and expected to exceed weight recommendations, increasing the proportion of adults who are a healthy weight was identified as a national health objective for Healthy People 2020 (Office of Disease Prevention and Health Promotion [ODPHP], 2017). A primary reason excess weight remains at the forefront of current public health discourse is the associated negative health outcomes. For example, overweight and obesity has been linked to an increased risk of weight-related morbidity and premature mortality (Jia, Zack, & Thompson, 2016). It is also problematic as a result of the economic burden created by weight-related medical expenditures (Finkelstein, Trogon, Cohen, & Dietz, 2009; Wolfe & Colditz, 1998).

Despite obesity being widespread throughout the United States, certain states and subgroups within the general population are disproportionately burdened by the epidemic. As of 2017, seven states had an obesity prevalence of 35% or greater—Alabama, Arkansas, Iowa, Louisiana, Mississippi, Oklahoma, and West Virginia (CDC, 2019). Furthermore, African Americans, Hispanics, and individuals of low socioeconomic status suffer from higher prevalence rates of overweight and obesity in comparison to other subgroups within the general population (Paeratakul, Lovejoy, Ryan, & Bray, 2002; CDC 2019). Despite body weight disparities affecting many Americans, AA women have the highest overweight and obesity prevalence rates in the United States (Flegal, Carroll, Ogden, & Curtin, 2010; Fryar, Carroll, & Ogden, 2012; Ogden, Carroll, Kit, & Flegal, 2014).

According to the CDC (2017), 80.6% of AA women in the United States are overweight or obese. That percentage is consistent with the Office of Minority Health's (2017) estimate that about 4 out of every 5 AA women are overweight or obese. In terms of obesity alone, data from the 2013–2014 NHANES indicate 57.25% of AA women were classified as obese—versus 38.25% of AA men, 46.6% of Hispanic women, 38.7% of White women, and 12.4% of Asian women (Flegal, Kruszon-Moran, Carroll, Fryar, & Ogden, 2016). Additionally, the percentage of AA women who suffer from severe obesity (i.e., BMI >40) is two times greater than that of AA men and is nearly two times greater than that of Hispanic women and White women (Flegal et al., 2016).

### **Statement of the Problem**

Due to the associations between weight, health, and medical expenditures in the United States, attention must be given to identifying ways by which clinicians and health promotion practitioners can develop more efficacious obesity treatment and reduction protocols. This will

also aid in achieving an important national health objective—increasing the proportion of adults who are a healthy weight. Doing so requires investigating a variety of factors related to reducing the number of overweight and obese adults. Such factors are weight perception and other body size ideals. This is plausible given that a large percentage of Americans are objectively classified as overweight or obese, but a significant proportion do not perceive themselves as such, especially AA women (Gilliard, Lackland, Mountford, & Egan, 2007; Hendley et al., 2011; Kemper, Sargent, Drane, Valois, & Hussey, 1994).

Weight perception has been defined as how an individual perceives his or her body weight, and it is influenced by their “ideal” and “normative” body images (Park, 2011). When individuals’ perceived and actual weight statuses are incongruent, they are considered to possess an inaccurate weight perception. For example, some individuals perceive themselves as being underweight or normal weight despite being overweight or obese (i.e., underestimation of weight). Conversely, other individuals perceive themselves as being overweight or obese, but are actually normal weight or underweight (i.e., overestimation of weight) (Duncan et al., 2011; Haring, Montgomery, & Harding, 2010).

Both overestimation and underestimation of weight are problematic in terms of health behaviors and the resulting health outcomes. For example, studies suggest individuals who overestimate their weight are more likely to engage in negative behaviors such as substance use, alcohol abuse, disordered eating, and smoking (Antin & Paschell, 2011; Eichen, Conner, Daly, & Fauber, 2012; Haring et al., 2010). They are also at an increased risk of suffering from depression (Haring et al., 2010). However, overestimation of weight is more prevalent among White women and persons with higher educational attainment and income levels (Kuchler, & Variyam, 2003; Paeratakul, White, Williamson, Ryan, & Bray, 2002). Conversely,

underestimation of weight is more prevalent among AA men, AA women, and persons with lower educational attainment and income levels (Kuchler, & Variyam, 2003). This is particularly true among AA women; not only do they have a tendency to underestimate their weight, they typically prefer larger body sizes than women of other races (Kemper et al., 1994; Schuler et al., 2008).

Though overestimation of weight is clearly concerning, underestimation of weight should be a phenomenon of interest in regard to obesity reduction efforts. Park (2011) suggested it is a proximal contributor to the obesity epidemic. Prior studies have, in fact, demonstrated relationships between underestimation of weight and weight control practices—for example, individuals who underestimate their weight are less likely to attempt weight loss, pursue dietary changes, or engage in moderate to vigorous physical activity (Coleman & Loprinzi, P.D., 2016; Kuk et al., 2009; Yaemsiri, Slining, & Agarwal, 2011).

### **Purpose of the Study**

Despite the role perceptions regarding body size may have in precluding national obesity reduction efforts, few studies have examined the mechanisms by which they are formed, particularly in AA women. One explanation frequently given involves differing attitudes and ideals regarding body weight and body size (Becker, Yanek, Koffman, & Bronner, 1999; Kemper et al., 1994; Schuler et al., 2008). Although it is often suggested those differences are correlated with African American culture, there is a dearth of literature which identifies specific cultural variables that are associated with AA women's perceptions of their weight. Additional studies are needed to determine which aspects of AA culture contribute to the discordance between AA women's objective and subjective weight statuses and why they are more accepting of larger body sizes.

Therefore, the primary purpose of this study is to identify specific cultural factors that influence AA women's body size ideals. Secondary objectives for the study include assessing how participants perceive their overall health, whether participants possess an accurate perception of their weight, and whether participants are satisfied with their body size. Data will be collected and analyzed to answer the following research questions:

### **Research Questions and Hypotheses**

#### **1. What factors influence AA women's body size ideals?**

Consistent with the exploratory nature of qualitative research, there are no hypotheses for this research question.

#### **2. Do AA women in the Mississippi Delta have an inaccurate perception of their body weight?**

H<sub>0</sub>: AA women in the Mississippi Delta have an inaccurate perception of their weight.

H<sub>1</sub>: AA women in the Mississippi Delta have an accurate weight perception.

#### **3. Do AA women in the Mississippi Delta underestimate their body weight?**

H<sub>0</sub>: AA women in the Mississippi Delta underestimate their body weight.

H<sub>1</sub>: AA women in the Mississippi Delta do not underestimate their body weight.

#### **4. Are AA women in the Mississippi Delta satisfied with their current weight status?**

H<sub>0</sub>: AA women are satisfied with their current weight status.

H<sub>1</sub>: AA women are not satisfied with their current weight status.

#### **5. Does AA women's self-rated health status align with their weight status?**

H<sub>0</sub>: AA women's self-rated health status will align with their weight status.

H<sub>1</sub>: AA women's self-rated health status will not align with their weight status.

## **Significance of the Study**

The present study is significant to the field of health promotion due to the fact that AA women's perceptions regarding body weight are a feasible explanation for their low adherence to weight reduction recommendations and the decreased efficacy of targeted health promotion programs. For instance, studies suggest overweight and obese individuals who misperceive their weight status are less likely to want to or have tried to lose weight (Duncan et al., 2011; Kuk et al., 2009). This is critical given that overweight or obese AA women who underestimate their weight will probably lack motivation, which is a necessary antecedent for eliciting the desire to initiate health-related behavior changes. In order to address this issue, it is important to gain a better understanding of factors that contribute to the increasing percentage of AA women who are not only overweight or obese, but who possess inaccurate perceptions of their weight.

The findings from this study could aid in discerning the roles specific aspects of culture have in shaping AA women's perceptions of their weight. The cultural variables identified by study participants could also lead to increased success of obesity reduction efforts by enabling health practitioners to develop and implement culturally relevant interventions. Though not a primary aim of this particular study, research such as this will also raise awareness of the need to focus on factors beyond traditional weight reduction strategies (e.g., nutrition and physical activity); clinicians and health promotion practitioners should consider other approaches such as converging individuals' perceived and actual weight statuses, thereby increasing the likelihood of engagement in behaviors that are conducive to health and effective weight management.



## CHAPTER II: BACKGROUND

### Adult Overweight and Obesity

#### Defining Weight Status

When an individual's weight exceeds what is medically considered healthy for their height, they are classified as overweight or obese. Conversely, those weighing less than what is considered healthy for their height, are classified as underweight. These classifications are most commonly derived from identifying one's Body Mass Index (BMI). BMI is simply a weight-for-height index, and in adult populations (i.e., 20 years and older), it is calculated by measure of weight in kilograms divided by the square of height in meters (CDC, 2016). As listed in Table 1, BMI is interpreted based on standardized weight status categories.

Table 1

Standard Weight Status Categories for Adults.

BMI	Category
Below 18.5	Underweight
18.5–24.9	Healthy Weight
25.0–29.9	Overweight
$\geq 30.0$	Obese
30–34.99	Obese Class I
35–39.99	Obese Class II
$\geq 40$	Obese Class III

Note. Adapted from "BMI classification," World Health Organization [WHO], 2017, Retrieved from [http://apps.who.int/bmi/index.jsp?introPage=intro\\_3.html](http://apps.who.int/bmi/index.jsp?introPage=intro_3.html)

BMI is globally recognized as a useful means of identifying the ideal weight for a specific height, and a high BMI can also serve as an indicator of a high body fat percentage; however, a limitation manifests in regard to its precision as a diagnostic measure of body composition (Romero-Corral et al., 2008). This is also true of other anthropic measures such as waist circumference and skinfold measurements (CDC, 2016; Duran et al., 2008). However, there are more appropriate techniques that are commonly used as diagnostic measures of body composition: bioelectrical impedance (BIA), dual-energy x-ray absorptiometry (DEXA), and total body water estimates (Duran et al., 2008).

Despite its inability to differentiate lean body mass from fat, BMI is still considered a practical screening tool. This is primarily due to the fact that it is safe, simple, and does not require expensive equipment. Therefore, BMI is commonly recommended for use by clinicians. It is also used extensively by researchers to explore weight trends, as well as associations between weight and a plethora of other factors (Seidell, Kahn, Williamson, Lissner, & Valdez, 2001; U.S. Preventive Services Task Force, 2003).

### **Prevalence of Overweight and Obesity**

Using the aforementioned measure of BMI to assess adiposity in adults, several weight trend studies have identified increases in both mean BMI and obesity prevalence among Americans over the past several decades (Flegal, Carroll, Kuczmarski, & Johnson, 1998; Flegal et al., 2010; Flegal et al., 2016; Ogden et al., 2014). Data from the 1960–1962 through the 2007–2008 cycles of NHANES indicate the age-adjusted prevalence rates of overweight, obesity, and extreme obesity rose during these time periods—from 31.5 to 33.6%, 13.4 to 33.6%, and 0.9 to 6.0% respectively (Ogden & Carroll, 2010). Further increases were observed in the 2009–2010 cycle, with the age-adjusted obesity rate climbing to 35.7% (Flegal, Carroll, Kit, &

Ogden, 2012). More recent analyses, which were run using the 2013–2014 cycle of NHANES, demonstrate a continuation of this upward trajectory in weight; the overall age-adjusted obesity rate reached an all-time high of 37.7% (Flegal et al., 2016). The latter stated obesity rate has now been surpassed; the most recent obesity data published by the CDC indicates 39.8% of adults are obese (CDC, 2018).

### **Burden of Overweight and Obesity**

The aforementioned statistics are of importance to health promotion practitioners given that obesity is consistently touted as a modifiable risk factor by prominent health organizations (CDC, 2017; WHO, 2017). Nonetheless, nationally representative data demonstrate that despite ongoing efforts in the field, obesity's incidence and prevalence have not experienced a marked decline. Consequently, reducing the number of adults who are obese was established as a national health objective in Healthy People 2020 (ODPHP, 2017). More attention must be given to addressing this epidemic due to the impact it has on Americans and the nation as a whole. The primary reason obesity is considered problematic are the negative health outcomes related to the condition (CDC, 2017). A secondary reason is the resulting economic burden (Voelker, 2012).

Prior research suggests that as BMI increases, so do the odds of morbidity from chronic diseases (Dietz, 1998). Obesity has even been associated with a greater increase in the number of chronic diseases than current or past smoking and problem drinking (Sturm, 2002). These adverse effects of excess body weight on health are well documented. Nguyen, Magno, Lane, Hinojosa, and Lane (2008) found that as weight increases, the likelihood for dyslipidemia and metabolic syndrome increases. Also, compared to normal weight adults, those who are overweight and obese are more likely to suffer from diabetes, high blood pressure and cholesterol, asthma, arthritis, and report fair or poor health (Mokdad et al., 2003). Similarly,

obesity has been linked to a higher risk of developing several types of cancer in women and in men—esophageal adenocarcinoma, endometrial, gallbladder, renal, colon, pancreatic, leukemia, and postmenopausal breast cancers in women and colon, renal, gallbladder, and malignant melanoma cancers in men (Dobbins, Decorby, & Choi, 2013). In fact, 52% of obese individuals were reportedly taking medications for many of these conditions, in comparison to only 36% of individuals who were not obese (Narbro et al., 2002).

In addition to the multitude of physical ailments that occur as a result of the condition, obesity can effect mental health as well. It is worth noting that the association between mental health and obesity is complex, and at times, it is bidirectional. Nonetheless, research suggests that obesity can precipitate certain mental illnesses. Scott, McGee, Wells, and Browne (2008) demonstrated this; their findings indicate associations exist between obesity and major depressive disorder, mood disorder, and anxiety disorder. Other researchers also found that obesity increases the odds of being diagnosed with panic disorder and bipolar disorder (Simon, Von Korff, & Saunders, 2006). However, there is variability among these associations based on gender. This is particularly true of depression and mood disorders (De Wit et al., 2010; Sanderson, Patton, McKercher, Dwyer, & Venn, 2011). For example, obese women are more likely to suffer from anxiety and suicide ideation than obese men (Carpenter, Hasin, Allison, & Faith, 2000; Scott et al., 2008; Stunkard, Faith, & Allison, 2003).

Another negative consequence of obesity is its effect on health-related quality of life (HRQL). HRQL is commonly measured using instruments that assess perceptions of health in the following domains: general health; physical, social, and emotional functioning; and vitality (Kushner & Foster, 2000). Specifically, as BMI increases, HRQL in these domains typically decreases (Hassan, Joshi, Madhavan, & Amonkar, 2003; Heo, Allison, Faith, Zhu, & Fontaine,

2003; Jia & Lubetkin, 2005). It has even been suggested that the effect of obesity on HRQL is comparable to aging 20 years (Strum, 2002).

In a study exploring the relationship between body fatness and HRQL, findings indicated that increases in BMI and waist circumference negatively impacted physical functioning, general health, and vitality (Han, Tijhuis, Lean, & Seidell, 1998); study participants with higher BMIs also had increased odds of reporting bodily pain. These findings are consistent with a similar study conducted among middle-aged and older women—Coakley et al. (2008) discovered those with a BMI in the range of 30–34.9 experienced decreased physical functioning, vitality, and freedom from pain in comparison to those whose BMI fell within the range of 22–23.9. Using the same comparison range, heavier women had a 66% increased risk of experiencing limitations in regard to their ability to work or perform other roles (Coakley et al., 2008). Similar effects were present among obese men (Yancy, Olsen, Westman, Bostworth, & Edelman, 2002).

Besides its effects on physical and mental health and quality of life, obesity has an impact on mortality (Flegal & Graubard, 2009; Masters et al., 2013). Increased BMI is associated with higher rates of death among patients suffering from endometrial, esophageal, colon and rectum, liver, gallbladder, pancreas, and kidney cancers, as well as non-Hodgkin's lymphoma and multiple myeloma (Calle, Rodriguez, Walker-Thurmond, & Thun, 2003; Fader, Arriba, Frasure, & von Gruenigen, 2009). Calle et al. (2003) also found, during a 25-year prospective cohort study, that obesity contributed to 14% of cancer deaths in men and 20% in women. Likewise, Borrell and Samuel (2014) reported obese individuals as having a 20% higher rate of death due to all causes and of cardiovascular disease-specific mortality.

Notably, the deleterious effects of obesity extend beyond the individual. It has a direct impact on the economy due to decreased productivity and costs associated with treating the

condition (Hammond & Levine, 2010). In fact, obesity-related issues generated \$99.2 billion dollars in direct and indirect costs in 1995, and \$51.6 billion of those costs were directly related to medical treatment (Wolfe & Colditz, 1998). As time has passed, and the prevalence of overweight and obesity has increased, so have the associated costs. In 2008, medical expenditures associated with treating obesity-related conditions rose to \$147 billion dollars (CDC, 2015). The cost for treating obese individuals was \$1,429 dollars more than normal weight individuals (CDC, 2015). And more recently, Kim and Basu (2016) reported that health issues due to obesity generated \$149.4 billion dollars in direct and indirect medical costs during 2014.

### **Weight-Related Disparities**

Much attention is given to obesity due to the condition's omnipresence in the United States and the resulting negative outcomes. There is, however, less discussion concerning the disparities that exist in regard to weight status. According to the Centers for Disease Control and Prevention (2017), no state has an obesity prevalence rate of less than 20%. Yet, there are still segments of the population that are disproportionately affected based on geographic location and demographic factors—particularly race and gender (Flegal et al., 2016; Myers, Slack, Martin, Broyles, & Heymsfield, 2015).

Specific regions and states in the United States are disproportionately burdened with higher obesity prevalence rates than others (Myers et al., 2015). In fact, four of the seven states with the highest obesity rates are located in the south (CDC, 2019). Those states are Alabama, Arkansas, Louisiana, and Mississippi. However, Mississippi is reportedly the second most obese state in the nation, with a prevalence rate of 37.3% (CDC, 2019).

In regard to race, the obesity prevalence rate among African Americans exceeds that of other residents within the state—45.9% versus 41.9% of American Indian/Alaska Native, 33% of Non-Hispanic White, and 29.2% of Latino residents (CDC, 2019). Furthermore, obesity disproportionately impacts women in comparison to men in the state, with prevalence rates of 38.8% and 35.7% respectively (CDC, 2019). It is also worth noting that obesity rates within the state increase as level of educational attainment decreases—31.5% of college graduates, 37.6% of high school graduates, and 42.8% of those with less than high school education are obese (CDC, 2019).

Though overweight and obesity are widespread throughout the African American community as a whole, a disparity exists—overweight and obesity rates among AA women exceed those of AA men. According to the CDC (2017), 56.9% of AA women age 20 years or older are obese compared to 37.6% of men. In fact, 4 out of 5 AA women are considered overweight or obese (Office of Minority Health, 2017). Prior studies suggest the high obesity rate among AA women is a direct contributor to their decreasing life expectancy and increasing incidence rates of chronic diseases, in comparison to African American men (Fontaine, Redden, Wang, Westfall, & Allison, 2003). In fact, Masters et al. (2013) found that between 1986 and 2006 the approximate percentage of deaths associated with overweight and obesity was 26.8% for AA women in comparison to 5% for African American men.

When examining weight-related issues among AA women, researchers most often compare them to White women. Per those studies, additional disparities exist; AA women are reportedly 60% more likely to be obese than White women (Office of Minority Health, 2017). They also consistently have poorer weight-related health outcomes (Zhang, H. & Rodriguez-Monguio). One example of this relates to endometrial cancer, which is presently one of the most

common gynecological cancers in the United States. This disease is on the rise among women of all ethnic groups, but more so for AA women (Cote, Ruterbusch, Olson, Lu, & Ali-Fehmi, 2015). Obesity has been identified as a modifiable risk factor for the disease. In fact, having a BMI  $\geq$  30 increases a woman's risk by approximately threefold (Cote, Alhajj, et al., 2015). Among obese women with endometrial cancer, AA women were more likely to have hypertension, experience longer hospital stays, and suffer from complications (Cote et al., 2014). Another female-specific example relates to pregnancy outcomes. Obese AA women are more likely to have low birth weight infants in comparison to normal weight and obese white women (Marshall, Guild, Chang, Caughey, & Halloran, 2014).

## **Weight Perception**

### **Defining Weight Perception**

Considering the negative impacts of excess weight and the fact that certain segments of our population are disproportionately affected by obesity, it is imperative we attempt to identify factors that contribute to this disparity. And while obesity reduction discourse has traditionally emphasized factors such as genetics, behavior modification, diet, and physical activity as means of addressing the issue, there are other factors worth considering (Thompson, Cook, Clark, Bardia, & Levine, 2007). One such factor is weight perception. Weight perception has been defined as how an individual perceives his or her body weight, and it is influenced by ideal and normative body images (Park, 2011). Weight perception is most commonly assessed based on individuals' BMI category in relation to whether they perceive themselves as being underweight, overweight, or about the right weight (Bhurtun & Jeewon, 2013).



## **Significance of Weight Perception**

Exploring weight perception as a means of understanding, and ultimately reducing, obesity prevalence is plausible given the negative correlation between documented upsurges in Americans' body weight and the shift in accuracy of their weight perception. Notably, as the weight of Americans has increased, the percentage of individuals who accurately perceive their weight has decreased (Johnson-Taylor, Fisher, Hubbard, Starke-Reed, & Eggers, 2008). Similar studies have demonstrated the prevalence of this issue among overweight and obese individuals, specifically in terms of underestimation of weight (Ver Ploeg, Chang, & Lin 2008). Kuchler and Variyam (2003) found that 61% of overweight and 16.5% of obese individuals perceived themselves as a healthy weight or underweight. Powell et al. (2010) also found that among a sample of 2,056 obese individuals, two-thirds felt they had a low lifetime risk of developing obesity despite already being considered obese.

Misperception of weight, in the form of underestimation among overweight and obese individuals, is problematic because it is a determinant of both weight loss and weight gain. For example, studies have demonstrated that attempts to lose weight are positively associated with accuracy of weight perception (Dorsey, Eberhardt, & Ogden, 2010; Yaemsiri et al., 2011). In a longitudinal study assessing the association between weight perception and weight gain, Lynch et al. (2009) found that obese individuals who perceived themselves as obese lost weight over time; however, obese individuals who perceived themselves as normal weight actually gained weight over time. This is of importance in terms of planning weight reduction programs and interventions since weight perception, versus actual BMI, is a stronger predictor of both intentions and actions to lose weight (Brug, Wammes, Kremers, Giskes, & Oenema, 2006; Yaemsiri et al., 2011). This notion aligns with prominent health promotion theories.

Primary constructs of two theories suggest that an individual's perception is critical to their desire to change behaviors that negatively impact health and/or engage in behaviors that are conducive to health. The Health Belief Model, which was originally developed to explain why individuals failed to participate in disease prevention/detection programming, cites perceived susceptibility as an important cue to action (Skinner, Tiro, & Champion, 2015). Likewise, the first stage in the Transtheoretical Model of Health (i.e., Stages of Change Model) posits individuals who are in the initial stage, precontemplation, do not intend to take action in the foreseeable future because they are often unaware of the problem or its negative consequences (Prochaska, Redding, & Evers, 2015). Therefore, it is logical to assume the efficacy of weight reduction and/or weight loss programming could largely depend on whether overweight and obese individuals possess an accurate perception of their weight.

Furthermore, weight perception can also influence self-perceived health status. Powell et al. (2010) found that obese individuals with an inaccurate weight perception were more likely to be satisfied with their overall health. They also reportedly felt they had a lower lifetime risk of myocardial infarction, hypertension, and diabetes. Additionally, those obese participants who had an inaccurate perception of weight engaged in less exercise. These findings are consistent with other studies regarding the relationship between weight perception and self-reported health, as well as weight perception and weight control practices (Coleman & Loprinzi, 2016; Dorsey et al., 2010; Duncan et al., 2011; Genkinger, Jehn, Sapun, Mabry, & Young, 2006; Williams-York, Montgomery, Emerson, McCall, & Spencer, 2013).

### **Racial and Gender Differences in Weight Perception Accuracy**

While many overweight and obese individuals misperceive their weight status, race and gender are two significant predictors of this misperception (Dorsey, Eberhardt, & Ogden, 2009).

Kuchler and Variyam (2003) conducted a study that included 7,758 males and 8,451 females; among this nationally representative sample, underestimation of weight was more common among African Americans than Whites in the United States. Their findings are consistent with other studies that demonstrate overweight and obese African Americans are more likely to misperceive their weight status in comparison to other races (Bennett & Wolin, 2006; Brug et al., 2006; Johnson-Taylor et al., 2008; Ver Ploeg et. al, 2008).

In terms of gender, women tend to underestimate their weight more so than men (Brug et al., 2006). A vast majority of the weight perception studies conducted among women have focused on African American versus White comparisons. Findings indicate AA women are typically more likely to underestimate their weight than their White counterparts (Bennett & Wolin, 2006; Chandler-Laney et al., 2009; Kuchler, & Variyam, 2003). For example, in one such study of racial differences in self-perception of weight, researchers found that AA women were twice as likely to be obese, and they were three times more likely to underestimate their weight than White women (Hendley et al., 2011).

As previously mentioned, while average weight in the United States is increasing, weight perception accuracy is decreasing—this trend has also been documented as affecting AA women more so than White women. Johnson-Taylor et al. (2008), used the 1988–1994 and 1999–2004 cycles of NHANES to examine changes in weight perception over time. During that period, there was a statistically significant decline in the percentage of overweight AA women who accurately perceived their weight (from 72.4% to 59.7%). Within the same time period, the percentage of White women who misperceived their weight declined as well (89.7% to 82.1%); however, the noted decrease was not found to be statistically significant. More recently, in a study which sought to examine accuracy of weight perception in AA women, researchers

discovered that 86% of overweight and 40% of obese AA women misperceived their weight status (Lynch & Kane, 2014).

### **Culture and Other Body Size Ideals**

Despite the higher prevalence rates of overweight and obesity among AA women, they are considered more likely to be satisfied with their body size and hold more positive feelings in regard to their bodies than White women (Anderson, Eyer, Galuska, Brown, & Brownson, 2002; Harris, 1994). They also purportedly prefer a curvy body versus the slim figure many White women desire (Overstreet, Quinn, & Agocha, 2010). Additionally, AA women are more likely to have a heavier ideal body weight (Becker, Yanek, Koffman, & Bronner, 1999; Dutton, Martin, & Brantley, 2004). These findings are consistent with a recent study that indicated AA women with BMIs within the obese range felt their bodies were normal, healthy, and attractive (Pickett & Peters, 2015).

When discussing such findings, it is commonly suggested that excess weight is more permissive among African Americans. Prior weight perception studies also cite AA women's body size ideals as being shaped by culture. There is, however, little empirical evidence supporting these notions. Furthermore, there are few studies aimed at identifying specific aspects of African American culture that affects women's perception of their weight.

Among those studies that have attempted to identify how culture shapes AA women's perceptions about weight, most researchers have employed a qualitative approach. For instance, Malpede et al. (2007) attempted to identify how race influences weight-related beliefs in AA women by facilitating focus groups. During the focus group AA women were asked, "How does being black affect your weight?" One of the primary themes that emerged involved food (e.g., poor and limited choices, preparation, nutritional knowledge, familial food habits, portion sizes,

wastefulness, significance of food, and lack of resources). This is consistent with other findings that suggest AA women identified food, family, family gatherings, and heritage as cultural factors that affect their weight-related beliefs (Gore, 1999).

In addition to factors related to eating and cooking, value of weight and body size were qualitatively identified as cultural influences on weight-related beliefs in AA women (Walcott-McQuigg, 2005). However, there was no mention of why AA women had this belief. One possible explanation lies within AA women's assumption that African American men do not tend to prefer thin, small figured women (Molloy & Herzberger, 1998). In fact, among a group of AA women who lost weight, several reported fear of being perceived as sick or too thin as a barrier to weight loss and maintenance (Barnes et al., 2007). They also felt positive support from others was important for maintenance (Barnes et al., 2007). However, obese AA women report mixed experiences and expectations regarding social support of weight loss (Befort, Thomas, Daley, Rhode, & Ahluwalia, 2007).

Gore (1999) also attempted to explore AA women perceptions of weight and found that when asked what normal weight means, some AA women believed that normal weight is the weight at which they are comfortable. Some study participants felt that individuals should not rely on standardized measures to dictate what is considered a healthy weight. For example, a participant was reported as making the following statement—"For some people there is a thing called normal weight. For me, my body size is a 15–16. I'm most comfortable at 15–16. That is my normal body weight." Inaccurate beliefs such as this may be one reason why Lynch and Kane (2014) found that 86% of overweight and 40% of obese AA women did not classify their body size as overweight, obese, or too fat. These findings are consistent with another study which indicated the medical threshold for defining overweight and obese differs from that of AA

women. Lynch and Kane (2014) found that although overweight is medically defined as a BMI of 25–29.9, AA women chose figures that represented a BMI within the range of 30–35 as overweight—when in fact, based on medical standards, BMIs within that range are considered obese.

## **Cognitive Mapping**

### **Description of Cognitive Mapping**

A particularly novel and relevant approach to identifying cultural factors that influence weight perception in AA women is cognitive mapping. This is plausible given the approach is a useful tool for elucidating implicit assumptions (Jetter & Kok, 2014). It also aligns with Axelrod's (1976) assertion that in comparison to survey research, cognitive mapping is more conducive to obtaining insight into concepts that are unique to each study participant. Furthermore, according to Ozemi and Ozemi (2004), it is an effective means of exploring complex issues such as those related to people's perceptions and those where scientific data is lacking.

Cognitive mapping is essentially a qualitative research method that is based on individuals' knowledge. The approach draws from several disciplines and is grounded in graph theory (Axelrod, 1976). The directed graphs, or maps, produced via this approach showcase participant-defined variables and illustrate causal relationships among the variables (Axelrod, 1976). This allows researchers to not only examine individuals' perceptions, but to also compare and contrast their perceptions with the perceptions of others.

Based on the explanation provided by Ozemi and Ozemi (2004), cognitive mapping is a multi-step process. The researcher relies on participants to identify variables relevant to the research question at hand; the variables can be either concrete or abstract and are typically

derived by the researcher asking participants an open-ended question. Participants are then tasked with identifying the direction of causal relationships that may exist between any of the variables by drawing arrows. However, variables that have no impact on other variables are not represented via these links (i.e., arrows). Additionally, the relative strength of each relationship is assessed by participants assigning a value to the variables they deem to be associated—this is typically accomplished by labeling the aforementioned arrows with a real number between 1 and 10.

### **History and Use of Cognitive Mapping**

Although the term was originally used by Tolman (1948), one of the first to introduce cognitive mapping as a viable research method was political scientist, Robert Axelrod (Axelrod, 1976; Ozemi & Ozemi, 2004). During the 1970s, he identified it as a means of understanding social scientific issues, such as the decision-making process among policymakers. Axelrod (1976) also suggested four considerations for researchers who employ the approach. First, he suggested the process be unobtrusive to negate the possibility of participants being unable or unwilling to construct cognitive maps. Second, he indicated there should not be any identification of variables in advance—the variables must come from participants versus a priori assumptions formed by the researcher. Third, he advised the maps be tied to a theory to ensure the data can be used to provide recommendations. Lastly, he specified that the methods for producing the maps should be valid (i.e., to produce an accurate representation of participants' viewpoints and the identified associations).

Since its initial use in the 70s, cognitive mapping has been modified to increase the rigor of the methodology. Researchers added an additional step to the process—listing quantitative weights to causal relationships—and incorporated the mathematical procedures by which the

maps are currently analyzed (Gupta, 1989; Kosko, 1986). This approach is presently being used to conduct a variety of studies, which allows participants to express their own viewpoints and helps researchers gain a richer understanding of specific issues (Papageorgiou & Salmeron, 2013). Examples of such studies are summarized below.

Mago et al. (2012) employed cognitive mapping as a means of assessing social factors that influence homelessness. Devadoss and Minnie (2013, 2014) also found it useful in their efforts to identify factors that lead to work/life imbalances and work-related stress. Other researchers have utilized cognitive mapping to explore ecological and environmental problems, including the examination of various stakeholder perceptions and decision making processes (Meliadou et al., 2012; Kontogianni, Papageorgiou, & Tourkolias, 2012; Ozemi & Ozemi, 2003, 2004; Papageorgiou, E. & Kontogianni, A., 2012). Furthermore, the approach has been used to assess physicians' knowledge in an effort to provide medical decision-making support, particularly for new physicians (Stylios, Georgopoulos, Malandraki, & Chouliara, 2008). Namely, cognitive mapping has been a useful tool in helping to improve diagnosis and decision-making regarding a variety of health conditions such as diabetes, pulmonary infections, meningitis, cervical cancer, Parkinson's disease, and obesity (Anninou & Groumpos, 2014; Bharathi, T., 2014; Giabbanelli, Torsney-Weir, & Mago, 2012; Mago, Mehta, Woolrych, & Papageorgiou, 2012; Papageorgiou & Froelich, 2012).

Though cognitive mapping is not widely used among health promotion researchers in the United States, there are documented instances of its utility in exploring health related issues. For instance, Giles et al. (2007) used cognitive mapping to assess the root causes of diabetes within Aboriginal communities in Canada. Bevilacqua, Ciarapica, & Mazzuto (2012) were also able to identify factors related to worksite injuries, as well as provide recommendations for improving



occupational safety in industrial plants based on their findings from a cognitive mapping exercise. Therefore, this proposed research will not only provide insight into weight perception among AA women, but it will also extend cognitive mapping's use in health-related decision making.

### **Summary**

Prior research has demonstrated the prevalence and impact of excess body weight on individuals and society. However, few studies have examined potential determinants of the obesity epidemic other than those traditionally mentioned in obesity reduction discourse. An important phenomena deserving of further exploration is perception of body size. These perceptions are potentially modifiable risk factors that likely contribute to the increasing rates of overweight and obesity.

Of specific concern is the fact that AA women are disproportionately burdened by excess weight and are more likely to possess a discrepant weight perception (i.e., underestimate their weight) than other sectors of the population. Nonetheless, there have been few attempts to understand why this disparity exists. Discussions often elude to culture being a key factor. Yet, there is a paucity of literature regarding what aspects of culture play a role in shaping AA women's weight perceptions. Adding to the body of knowledge on this topic will aid in improving AA women's body size awareness, thereby increasing the likelihood of adherence to various weight reduction recommendations.

## **CHAPTER III: METHODOLOGY**

### **Overview**

As demonstrated in the literature review, an important step in addressing the obesity epidemic among AA women requires examining potential influences on their body size ideals, particularly in regard to their weight-related perceptions and their acceptance of larger body sizes. However, prior research in this area of inquiry is primarily limited to adolescent populations or examining body size ideals among AA women in comparison to their White counterparts. In other instances, the primary aim of studies has been to understand the desire for thinness, disordered eating, and body dissatisfaction in White women. Consequently, there is little empirical evidence to explain the role body size ideals may have in the obesity epidemic that is plaguing AA women.

With obesity-related body image research among AA women appearing to be in its infancy, a mixed methods research design is a plausible approach to gaining a richer understanding of factors that contribute to the obesity disparity that exists. Tashakkori and Creswell (2007) define mixed method approaches as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry” (p.4). Utilizing both qualitative and quantitative data is a more comprehensive means of answering the research questions at hand. Consequently, a biphasic data collection approach was employed for the present study.

## **Research Design**

### **Site Selection**

Data was collected in two towns within the state of Mississippi: Charleston and Marks. Both towns are situated in the northwest region of the state, which is commonly referred to as the Mississippi Delta. According to population estimates from the United States Census Bureau (USCB, 2016), both Charleston and Marks are predominately AA and female. Charleston has an adult obesity rate of 39.6%, and Marks has an adult obesity rate of 41.5% (Haggard, Cafer, & Green, 2017). It is also estimated that 23.4% of residents in Charleston and 31.2% of residents in Marks presently live in poverty, most of which are African American (USCB, 2016).

### **Participants and Recruitment**

Due to the nature of this study, a purposive sample was warranted. Inclusion criteria included being an AA woman, at least 20 years of age. Participation was also limited to those who reside in the predefined geographic locations. Recruitment was conducted through flyers, attendance at community health centers and community events, as well as word of mouth. Prior to data collection, approval from the University of Mississippi's Institutional Review Board was obtained.

### **Data Collection**

**Phase I.** During the first phase of data collection, 25 AA women were recruited. Each woman participated in a one-on-one interview at locations throughout Marks, Mississippi. All participants were briefed on the overall purpose of the study, given an explanation of the steps required for completing the interview protocol, and signed an informed consent form. Next, participants completed a short questionnaire, that included demographic items, as well as self-reported anthropometric measures (i.e., weight and height). Then, they were guided through a

cognitive mapping exercise, and concluded with measurement of height and weight. All participants were given a \$10.00 Dollar General store gift card at the conclusion of their interview session. Interviews averaged approximately 30 minutes in length.

Cognitive maps are generally created by different participants until concept saturation has been reached. Most studies find between 5 and 15 participants are enough for concept saturation (Ozesmi & Ozesmi, 2004). However, as a means of testing for saturation in the present study, an accumulation graph was created. Figure X. demonstrates the number of new variables introduced by participants in relation to the number of maps collected.

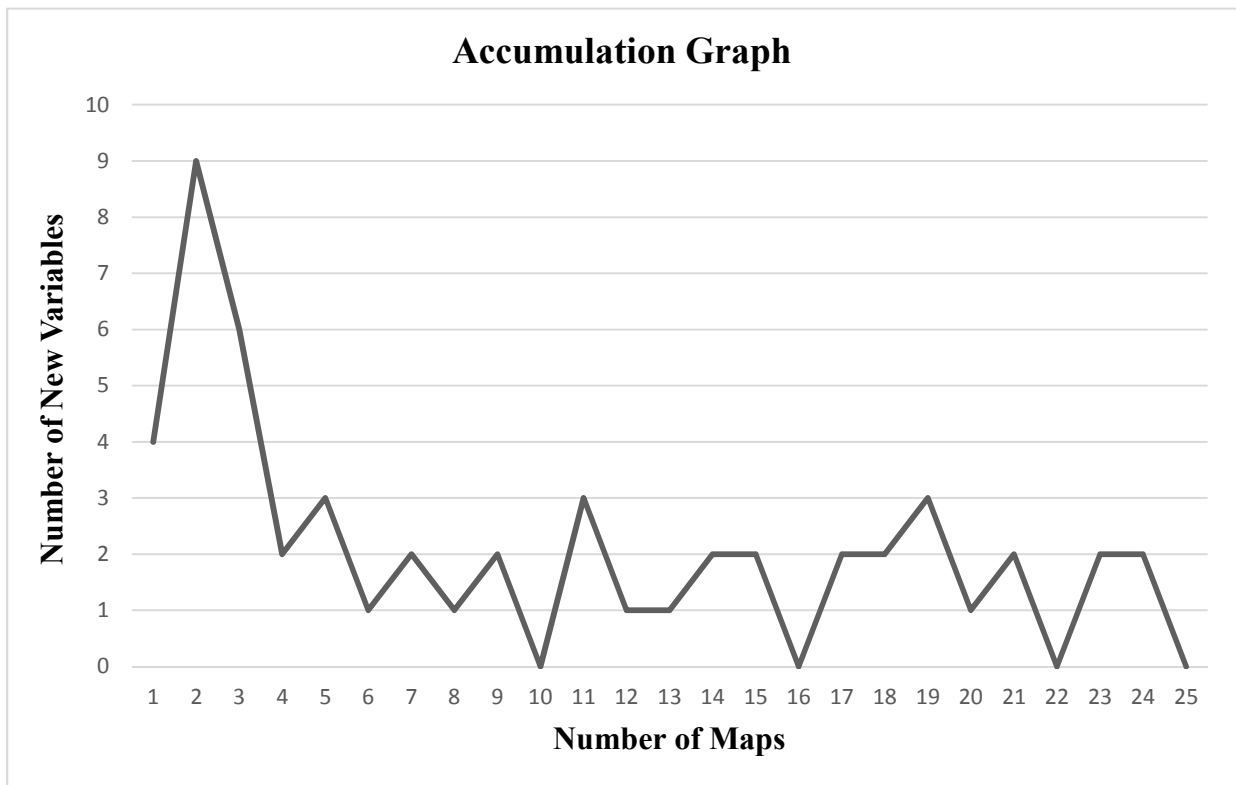


Figure 1. Accumulation Graph

**Phase II.** During the second phase of data collection, seven AA women were recruited to participate in a focus group meeting. The purpose of the follow-up focus group meeting was to present interview findings to an objective group of AA women who also reside in the Mississippi Delta. The meeting was held at a local community health center in Charleston, Mississippi. Prior to facilitating the meeting, participants were briefed on the overall purpose of the study and the focus group, and each participant signed an informed consent form. The meeting lasted approximately 1 hour and 15 minutes. At the conclusion of the meeting, all participants were given a \$10.00 Dollar General store gift card.

### **Measures**

In order to address the research questions previously mentioned, the following measures were utilized for data collection.

**Factors that influence AA women's body size ideals.** Interview participants were guided through a one-on-one cognitive mapping exercise. The exercise began by introducing an unrelated map, which is shown in Figure 2. This map was used to explain each of the steps required to create a cognitive map. Participants were then asked, "Think of all the things that influence how you or we (i.e., Black women) feel about body weight and body size—what are they?" As responses were given, key words or phrases were listed in the upper left corner of a blank, 8.5 x 11 sheet of paper.

Once participants indicated they had provided an exhaustive list, the factors were drawn on the center of the paper. Then, participants were asked to consider how the factors impact each other. Based on their perceptions, connections that exist between the variables were identified by drawing arrows. Each arrow was labeled positive or negative to denote the nature

of the relationship. Each arrow was also assigned a value between 1 and 10, to represent the extent of the impact of one variable on the other.

Name: Su Lake  
 Gender: F  
 Age: 40  
 Interview Date: 12/1/01  
 Interview Place: MyTown

Work: NGO worker  
 Stakeholder Group: NGO

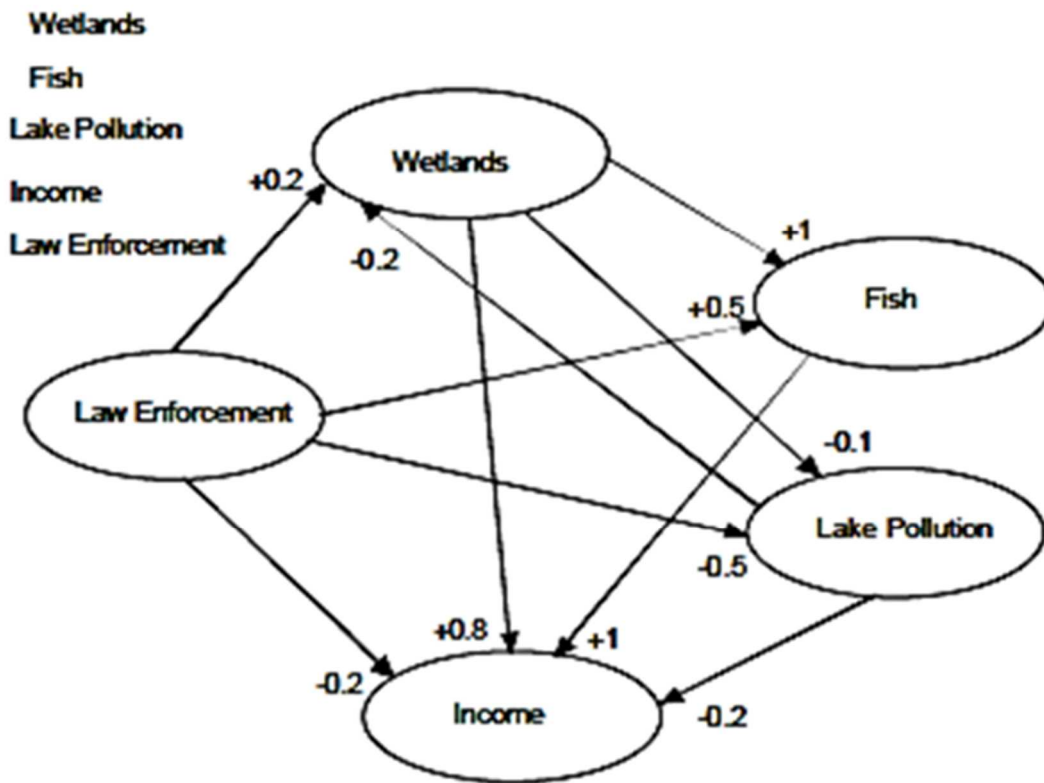


Figure 2. Sample Cognitive Map (Ozemi & Ozemi, 2004)

Data from the maps were analyzed by coding each cognitive map into an adjacency matrix. This was done using Microsoft Excel spreadsheets, as demonstrated in Figure 3. The initial matrices included the corresponding value and sign of each connection. The matrices allowed comparison of variables from each map across rows and columns.

	Our Color	Clothing Fit	Mindset	Male Preference	Looks Better
Our Color	0	10	-10	-8	-8
Clothing Fit	0	0	-2	10	10
Mindset	0	0	0	0	-10
Male Preference	0	10	-10	0	-10
Looks Better	0	0	0	0	0

Figure 3. Sample Adjacency Matrix

After participants' maps were coded into adjacency matrices, matrix addition was used to combine individual matrices into an augmented matrix. During this process, opposing signs (i.e., positive or negative) between the maps on similar variables impacted the strength of the association between those variables, whereas sign agreement reinforced the strength the relationship. Differences between signs suggest study participants possessed contrasting opinions regarding one variable's impact on the other. For example, some participants viewed male preference as having a positive impact on AA women's views on body size, while others perceived this as a negative relationship. Additionally, qualitative condensing and matrix addition was used to aggregate similar variables into categories, which were then labeled with an all-encompassing variable name (Table 2, Appendix).

The condensed variables were used to create a social cognitive map. As demonstrated in Figure 4, there are no numbers associated with social cognitive maps. This social map, as well as the interviewee data used to create it was presented to focus group participants in an effort to confirm accuracy of the interview outcomes. Additional variables or relationships identified by focus group participants were added and coded in the color red.

It is worth mentioning that there are several indices that can be calculated for cognitive maps, using matrix algebra. These indices allow examination of the structure of cognitive maps. A step that is particularly useful in comparing maps across different groups of participants.

However, due to the primary aim of this study, the central focus is the variables and the connections present among them.

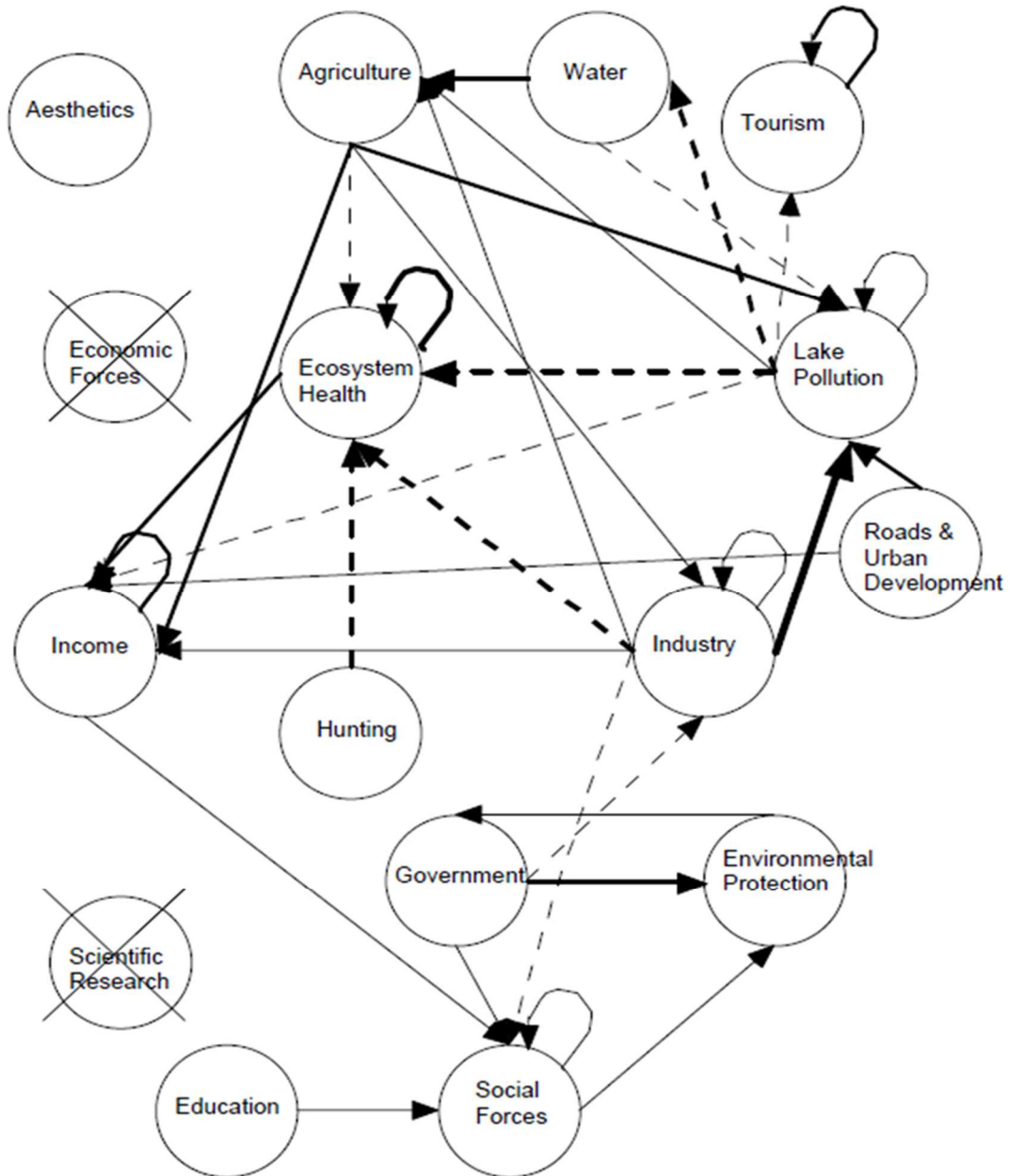


Figure 4. Sample Social Cognitive Map (Ozemi & Ozemi, 2004)



**Self-reported weight.** Participants responded to the question, “What is your current weight in pounds?”

**Self-reported height.** Participants responded to the question, “What is your current height in feet and inches?” This was later converted to inches for analysis.

**Self-reported BMI.** Participants’ self-reported weight and self-reported height were used to calculate a self-reported BMI variable. BMI was calculated as weight in kilograms divided by the square of height in meters. Participant were then categorized as underweight (BMI < 18.5), normal weight (BMI of 18.5–24.9), overweight (BMI of 25.0–29.9), or obese (BMI > 30).

**Measured weight.** Participants weight was measured barefoot, in light clothing using a SECA 813 high capacity digital flat scale.

**Measured height.** Participants’ height was measured in feet and inches while barefoot, using a SECA 213 portable stadiometer. This was later converted to inches for analysis.

**Measured BMI.** To determine BMI, and weight was measured using a Seca 813 high capacity digital flat scale. Measured height was also used. BMI was calculated as weight in kilograms divided by the square of height in meters. Participant were then categorized as underweight (BMI < 18.5), normal weight (BMI of 18.5–24.9), overweight (BMI of 25.0–29.9), or obese (BMI > 30).

**Self-rated health.** To assess self-rated health, a previously validated, single item question was used—“Would you say your overall health is poor, fair, good, very good, or excellent?” (Haddock et al., 2006).

**Weight satisfaction.** To assess body satisfaction, participants were asked, “Would you like to weigh more, less, or about the same.”

**Other body size perceptions.** Participants also selected responses to questions based on the Stunkard Figure Rating Scale (SFRS), a schematic of nine silhouettes that range from underweight to obese. The scale is illustrated in Figure 5. It has been previously validated (Thompson & Altabe, 1991). Participants were prompted to select figures based on the following instructions, “choose the figure that most accurately reflects your ideal figure,” and “choose the figure that most accurately reflects your current body size.” Consistent with other research, the figures were classified as follows: underweight (figures 1–2), normal weight (figures 3–4), overweight (figures 5–7) and obese (figures 8–9). Descriptive statistics were used to describe the data.



Figure 5. Stunkard Figure Rating Scale (Thompson & Altabe, 1991)

### **Data Analysis**

The aforementioned measures were analyzed using Statistical Package for Social Sciences (SPSS) Version 25 to answer the following research questions:

#### **1. What factors influence AA women’s body size ideals?**

Consistent with the exploratory nature of qualitative research, there are no hypotheses for this research question. To answer this research question, 25 cognitive maps were collected.

**2. Do AA women in the Mississippi Delta have an inaccurate perception of their body weight?**

H<sub>0</sub>: AA women in the Mississippi Delta have an inaccurate perception of their weight.

H<sub>1</sub>: AA women in the Mississippi Delta have an accurate weight perception.

To answer this research question, paired-sample t-tests were conducted using participants' self-reported body weight and measured body weight, as well as self-reported BMI and measured BMI.

**3. Do AA women in the Mississippi Delta underestimate their body weight?**

H<sub>0</sub>: AA women in the Mississippi Delta underestimate their body weight.

H<sub>1</sub>: AA women in the Mississippi Delta do not underestimate their body weight.

To answer this research question, a weight discrepancy score was created by computing the difference between participants' self-reported body weight and their measured body weight. Descriptive statistics were used to describe the data.

**4. Are AA women in the Mississippi Delta satisfied with their current weight status?**

H<sub>0</sub>: AAW are satisfied with their current weight status.

H<sub>1</sub>: AAW are not satisfied with their current weight status.

Participants' responses to the question, "Would you like to weigh more, less, or about the same" were used to assess body satisfaction. The percentage of those who desire to weigh more or less were categorized as dissatisfied, and those who desire to weigh about the same were categorized as satisfied. This was cross-tabulated with measured BMI category.

Consistent with other research, the SFRS was also used to assess the difference between participants' current and ideal body size (Grossbard, Neighbors, & Larimer, 2011). This was another approach to identify whether participants are satisfied with their body and if they would

like to weigh more, less, or about the same. Responses to the questions, “choose the figure that most accurately reflects your ideal figure,” and “choose the figure that most accurately reflects your current body size” were used to create a discrepancy score (i.e., the difference between current body and ideal body). Descriptive statistics were used to describe the data.

#### **5. Does AA women’s self-rated health status align with their weight status?**

H<sub>0</sub>: AA women’s self-rated health status will align with their weight status.

H<sub>1</sub>: AA women’s self-rated health status will not align with their weight status.

Pearson’s Chi-square was used to assess the association between participants’ self-reported health and weight status category.

## CHAPTER IV: RESULTS

### Overview

Quantitative data for the present study was collected during one-on-one interviews with AA women ( $n = 25$ ) residing in Marks, Mississippi. Qualitative data was also collected during the interviews. Additionally, a follow-up focus group meeting was held with AA women ( $n = 7$ ) residing in Charleston, MS to present interview findings. Quantitative analyses include interviewee data only. Unless otherwise stated, analyses including BMI category are based on interviewees' measured weight and measured height (i.e., measured BMI). Participants' BMIs were initially classified as underweight ( $< 18.5$ ), normal weight ( $18.5$  to  $< 25$ ), overweight ( $25$  to  $< 30$ ), or obese ( $> 30$ ) according to the CDC's cutoff ranges. However, due to no underweight study participants and the small number ( $n = 1$ ) of overweight participants, the following two BMI categories were created: normal weight and overweight/obese.

Characteristics of study participants are presented as unadjusted means  $\pm$  *SD* for normally distributed variables. The median is presented for variables with a skewed distribution, such as income. Findings from categorical variables include the number and percentage of individuals in relation to the entire sample. Sample characteristics are presented in Table 3.

Table 3

## Summary of Interviewee Characteristics

Characteristic	( <i>n</i> = 25)
Age, <i>M</i> ( <i>SD</i> )	47.36 ( $\pm$ 15.37)
Education, <i>n</i> (%)	
Less than 9 <sup>th</sup> grade	1 (4)
9 <sup>th</sup> -11 <sup>th</sup> grade	3 (12)
HS diploma/GED	3 (12)
Some college	5 (20)
Bachelor's degree	7 (28)
Master's degree	4 (16)
Doctoral degree	2 (8)
Employed, <i>n</i> (%)	
Yes	15 (60)
No	10 (40)
Income, <i>Mdn</i> (Min – Max)	\$26,400 (\$0 – \$124,000)
Marital Status, <i>n</i> (%)	
Married	10 (40)
Living with partner	1 (4)
Divorced	2 (8)
Single	9 (36)
Widowed	3 (12)
Children, <i>n</i> (%)	
Yes	18 (72)
No	7 (28)
Weight in pounds, <i>M</i> ( <i>SD</i> )	208 ( $\pm$ 50.38)
Height in inches, <i>M</i> ( <i>SD</i> )	64 ( $\pm$ 2.53)
BMI, <i>M</i> ( <i>SD</i> )	35.86 ( $\pm$ 8.38)
BMI Category, <i>n</i> (%)	
Normal weight	5 (20)
Overweight	1 (4)
Obese	19 (76)

## Results by Research Question

### 1. What factors influence AA women's body size ideals?

One-on-one interviews conducted in Marks, Mississippi yielded 25 cognitive maps. The maps contained a total of 169 concepts with 294 connections among them. The lowest number of variables identified on a participant's map was 4 and the highest was 11. The lowest number of connections made on a participant's map was 4 and the highest was 39. Through qualitative condensing and matrix addition, the 169 concepts were used to create 27 variables (Table 2, Appendix) with 134 connections. After conducting a follow-up focus group meeting in Charleston, MS, 3 additional variables and 9 connections were added. Of the variables identified, male preference was mentioned most frequently (21 times), appearance (16 times), clothing fit (14 times), African American (12 times), other women (12 times), and health behaviors (10 times) were also factors that were mentioned more frequently than other factors identified. As described in the preceding chapter, the variables identified were used to create a social cognitive map.

Due to the number of connections, the social cognitive map was broken down into eight individual maps to enhance the visibility of the concepts and connections. Maps are displayed as Figures 6-14. Although separated, the maps do not replicate any connections between the variables. These maps present the variables, connected by lines with arrowheads to reflect the nature of the relationships among them—solid lines denote a positive relationship, whereas dashed lines denote a negative relationship. The weight (i.e., boldness/thickness) of the line between variables represents whether the relationship is weak, moderate, or strong. Additionally, variables or relationships identified by focus group participants are represented using the same line formatting, but are the color red.

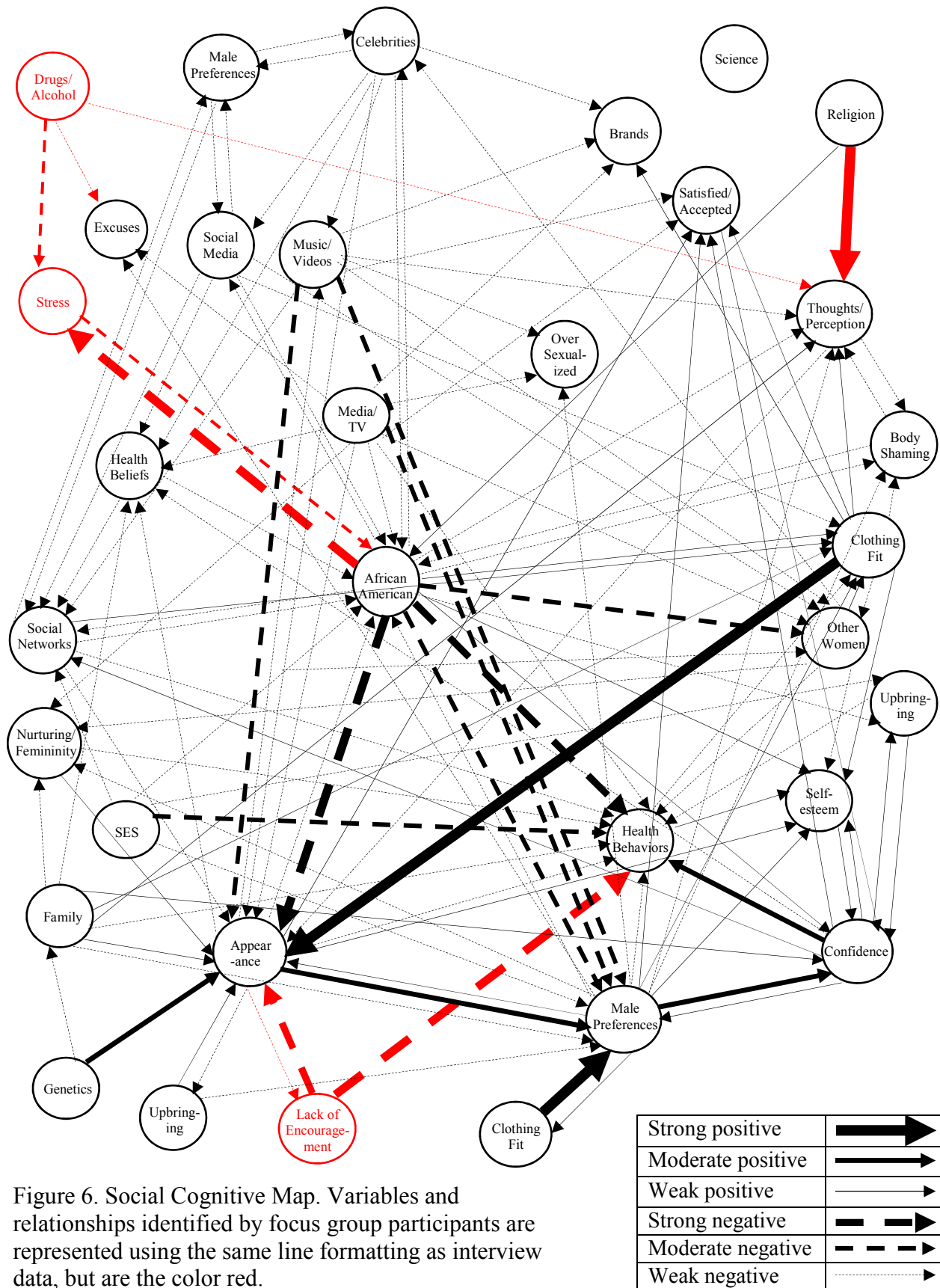


Figure 6. Social Cognitive Map. Variables and relationships identified by focus group participants are represented using the same line formatting as interview data, but are the color red.



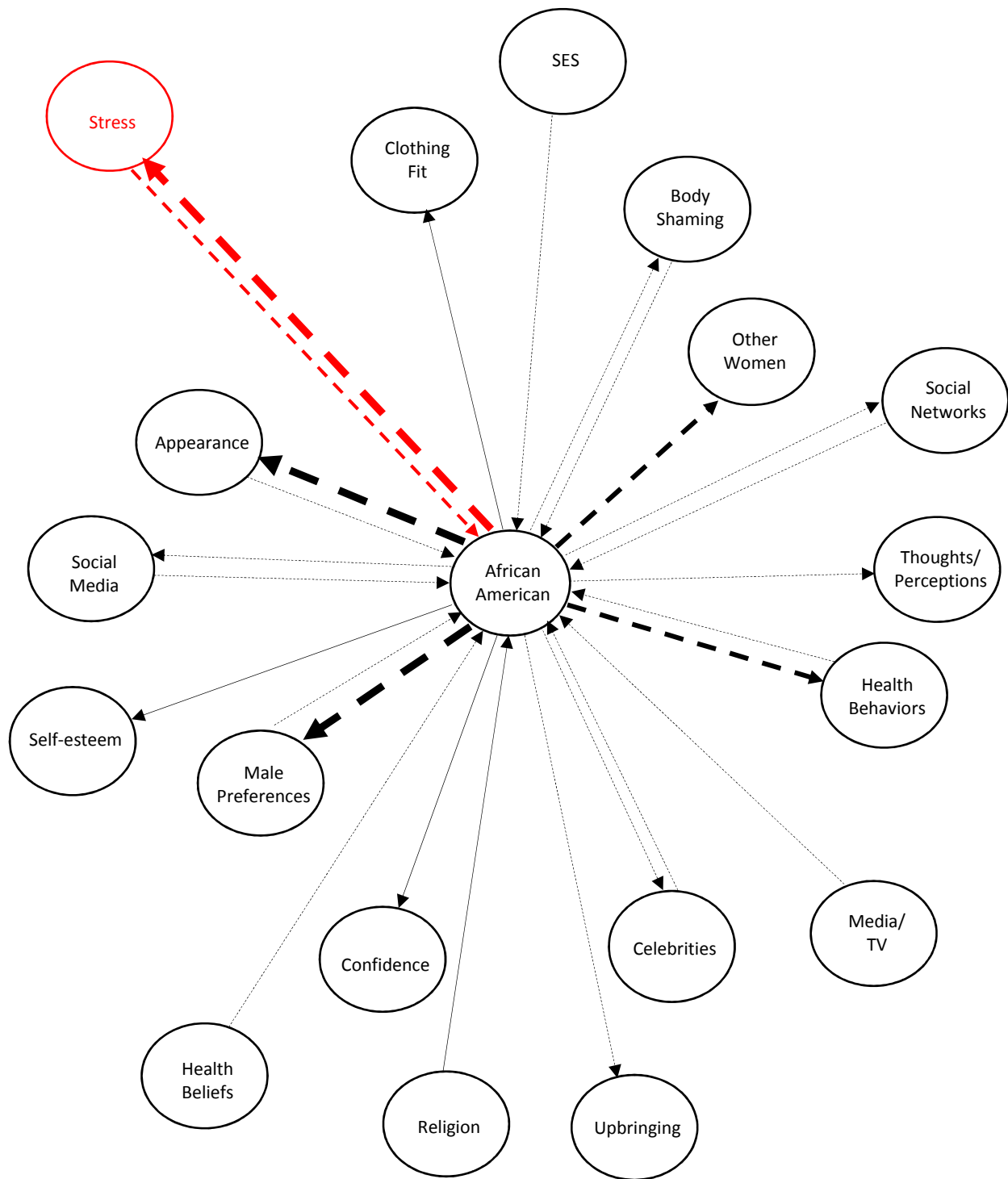


Figure 7. Social Cognitive Map for the Variable African American

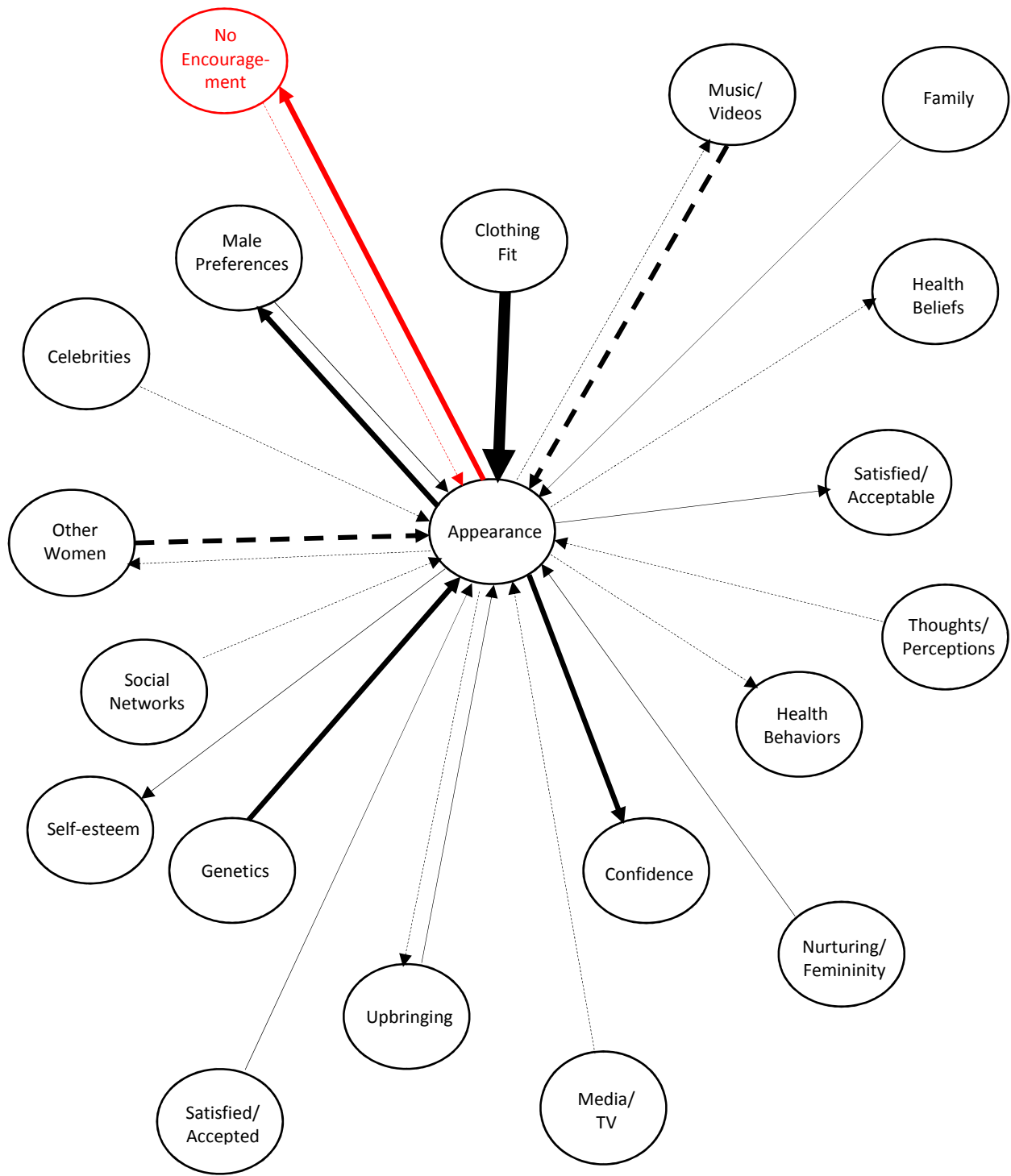


Figure 8. Social Cognitive Map for the Variable Appearance

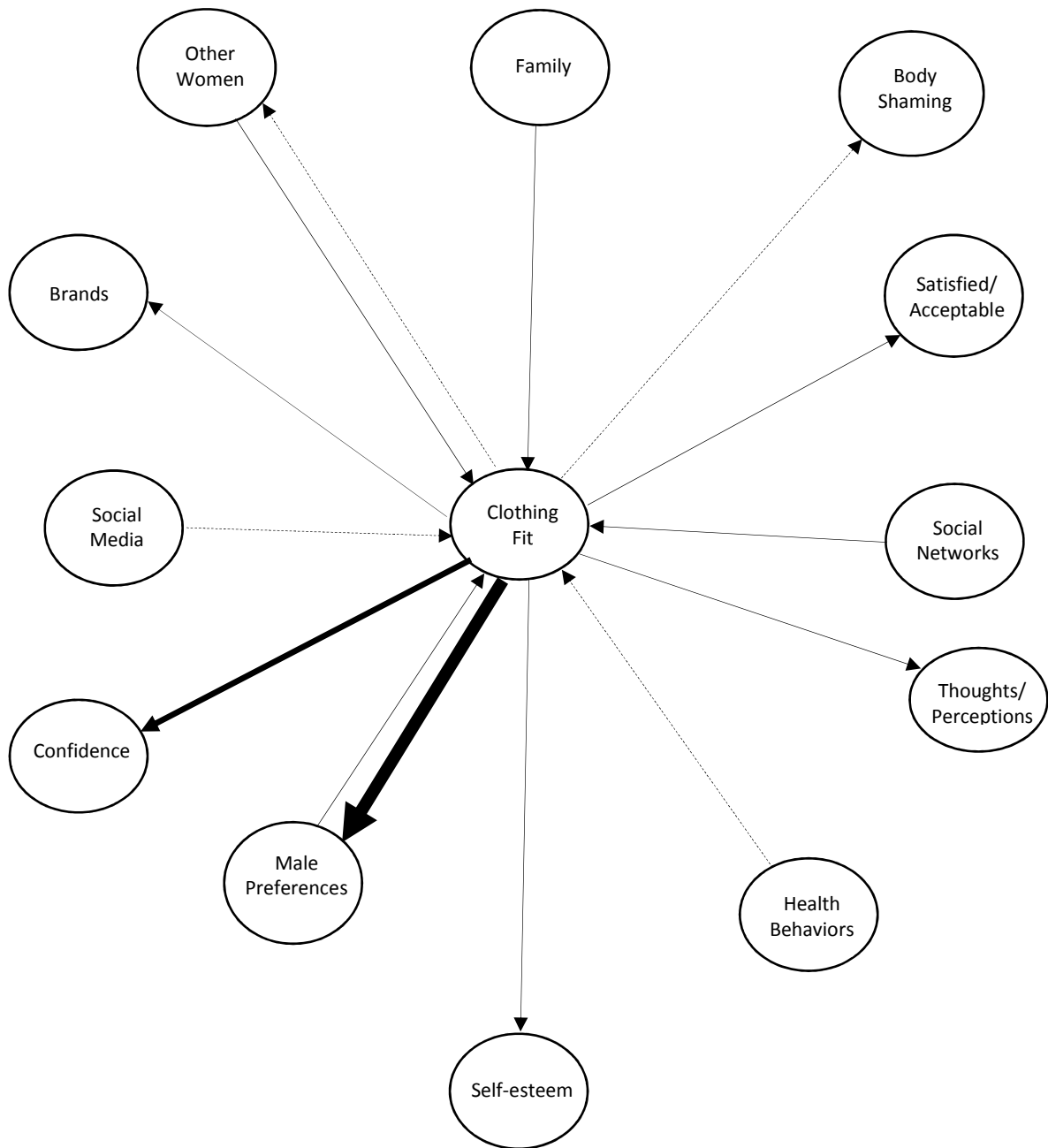


Figure 9. Social Cognitive Map for the Variable Clothing Fit



Figure 10. Social Cognitive Map for the Variable Confidence

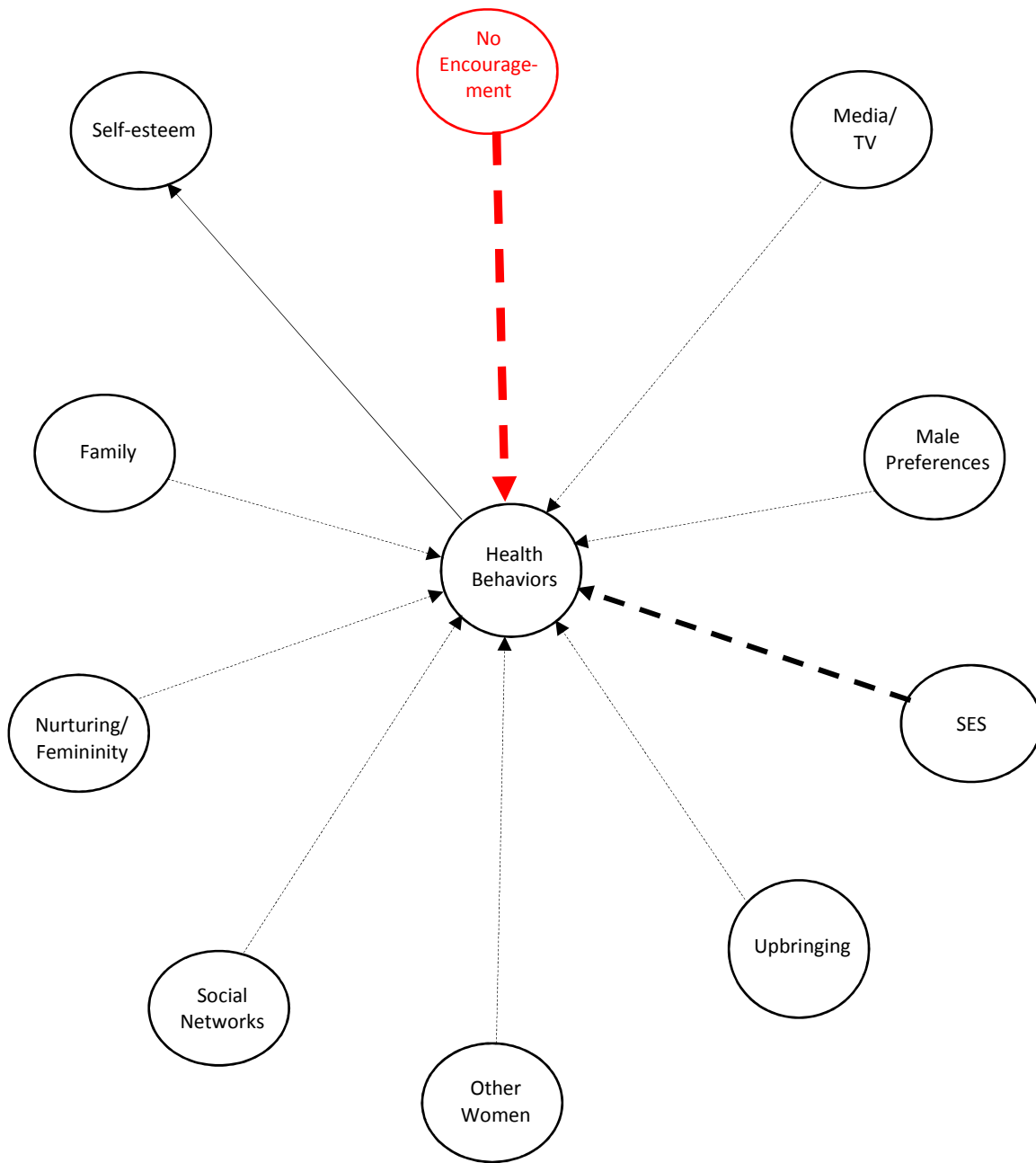


Figure 11. Social Cognitive Map for the Variable Health Behaviors

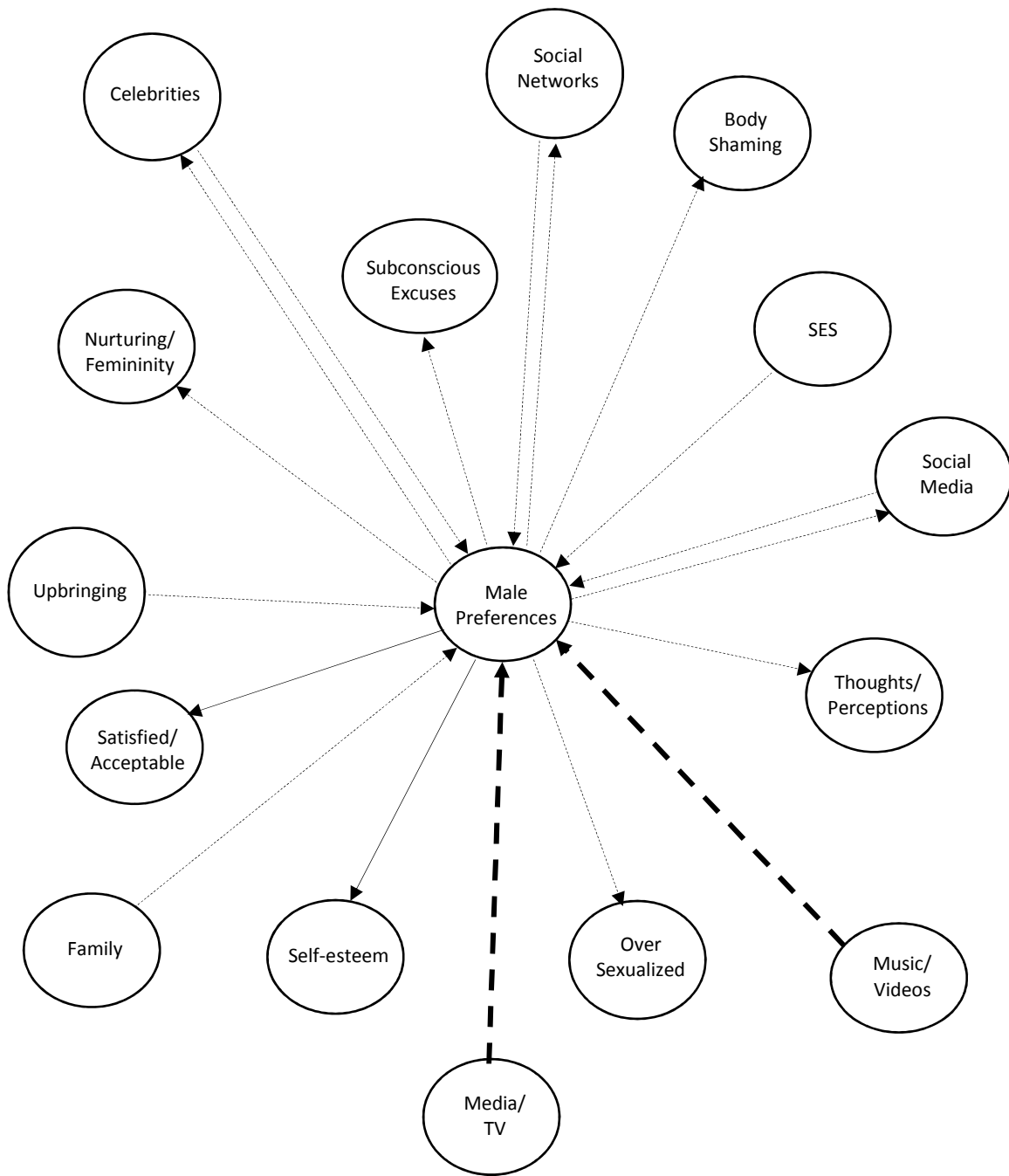


Figure 12. Social Cognitive Map for the Variable Male Preferences



Figure 13. Social Cognitive Map for the Variable Other Women

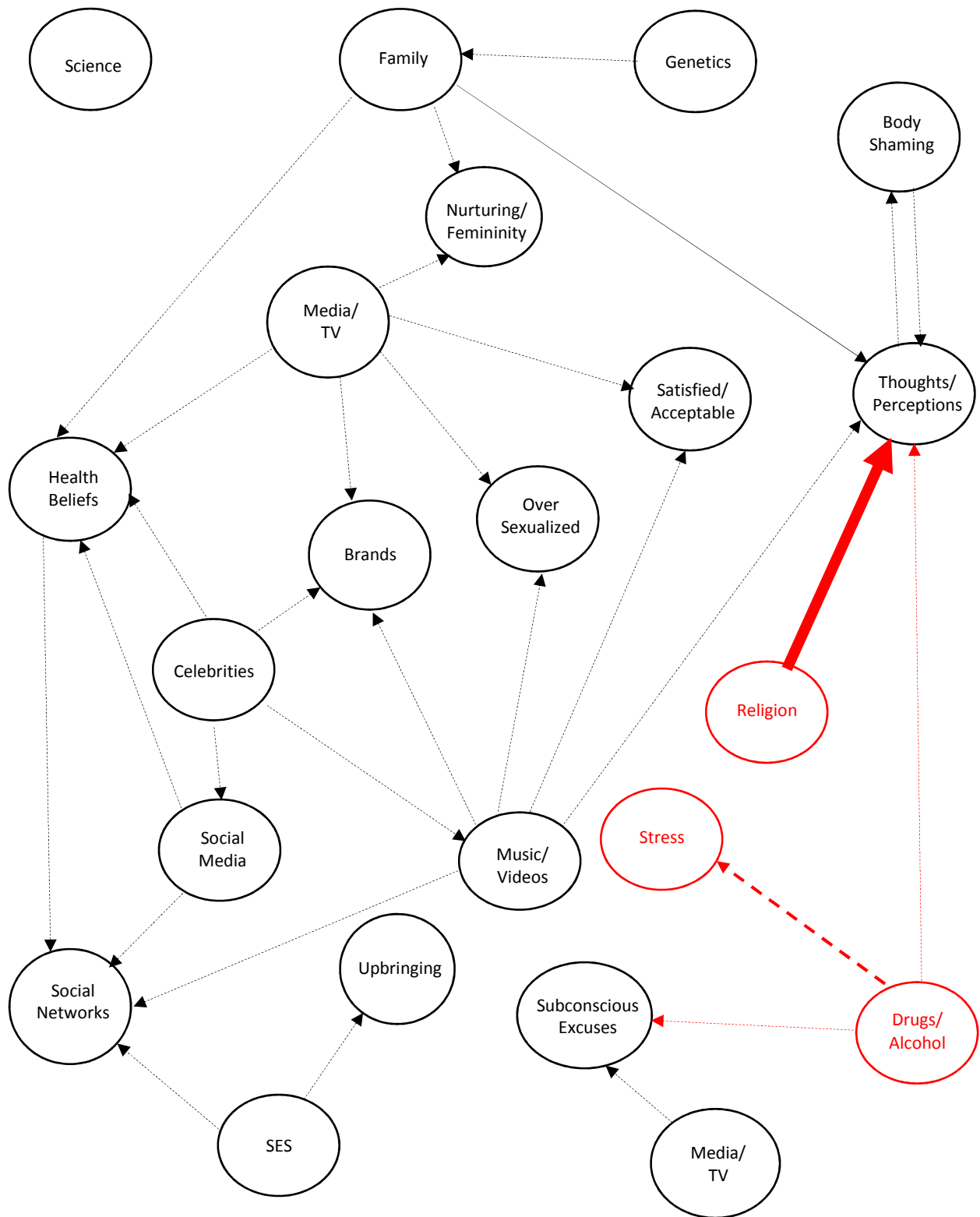


Figure 14. Social Cognitive Map for All Remaining Variables



## **2. Do AA women in the Mississippi Delta have an inaccurate perception of their body weight?**

It was hypothesized that AA women who reside in the Mississippi Delta have an inaccurate perception of their body weight. A paired-sample t-test was conducted to compare participants' mean self-reported weight in pounds to their mean measured weight in pounds. The mean self-reported weight was  $199.28 \pm 52.198$ , and the mean measured weight was  $208.04 \pm 50.381$ . A statistically significant difference between self-reported weight and measured weight was found ( $t_{(24)} = -2.175, p < .05$ ).

An additional paired-sample t-test was run to compare participants' self-reported BMI in comparison to their measured BMI. The mean self-reported BMI was  $34.05 \pm 8.76$  and the mean measured BMI was  $35.86 \pm 8.39$ . A statistically significant difference between self-reported and measured BMI was also found ( $t_{(24)} = -2.741, p < .05$ ). These results suggest AA women in the present study do in fact have an inaccurate perception of their body weight that is statistically significant. Therefore, I fail to reject the null hypothesis.

## **3. Do AA women in the Mississippi Delta underestimate their body weight?**

It was hypothesized that AA women in the Mississippi Delta underestimate their body weight. To determine the proportion of women who underestimate their body weight in this sample, a weight discrepancy score was created by computing the difference between participants' self-reported body weight and their measured body weight. A negative score indicated the participant underestimated their weight, while a positive score indicated the participant overestimated their weight. Frequencies indicate 72% ( $n = 18$ ) of the women underestimate their body weight versus 16% ( $n = 4$ ) who overestimate and 12% ( $n = 3$ ) who

accurately identified their body weight. Based on these findings, I fail to reject the null hypothesis.

Weight difference was also cross-tabulated with the measured BMI category to assess weight perception accuracy by measured BMI category. Findings are displayed in Table 4.

Table 4

AA Women's Body Weight Perception by Measured BMI Category. <i>n</i> (%)			
Perception	Normal Weight	Overweight/Obese	Total
Accurate	0	3 (12)	3 (12)
Underestimate	3 (12)	15 (60)	18 (72)
Overestimate	2 (8)	2 (8)	4 (16)

#### 4. Are AA women in the Mississippi Delta satisfied with their current weight status?

It was hypothesized that AA women are satisfied with their weight status. To assess whether AA women in the Mississippi Delta are satisfied with their current weight status, responses to the question, “Would you like to weigh more, less, or about the same” were used to categorize participants as dissatisfied or satisfied with their current weight status. Those who indicated they would like to weigh more or less were labeled as dissatisfied, and those who indicated they would like to weigh about the same were labeled as satisfied. Frequencies indicate, 76% ( $n = 19$ ) of the sample reported being dissatisfied with their current weight status. Based on these findings, I reject the null hypothesis.

Additionally, participants' responses to the aforementioned question were cross-tabulated with their measured BMI category. The results suggest a majority of overweight/obese participants desire to weigh less. Table 6 displays the proportion of the sample that would like to weigh more, less, or about the same according to measured BMI category.

Table 5

AA Women's Body Weight Preference by Measured BMI Category. <i>n</i> (%)			
Weight Preference	Normal Weight	Overweight/Obese	Total
More	1 (4)	0	1 (4)
Less	1 (4)	17 (68)	18 (72)
About the same	3 (12)	3 (12)	6 (24)

The SFRS was utilized as another means of assessing body satisfaction in the form of ideal body size. Participants' responses from the questions, "choose the figure that most accurately reflects your ideal figure," and "choose the figure that most accurately reflects your current body size" were used to create a discrepancy score (i.e., the difference between current body and ideal body). A negative score indicated the participant would like to possess a smaller body size, while a positive score indicated a participant would like to possess a larger body size. Findings were consistent with the previous analysis. A majority of the sample would prefer to have a smaller body size. These results are displayed in Table 7.

Table 6

AA Women's Ideal Body Size Compared to Measured Body Size. <i>n</i> (%)			
Ideal Body Size	Normal Weight	Overweight/Obese	Total
Smaller	0	14 (56)	14 (56)
Larger	2 (8)	1 (4)	3 (12)
About the same	3 (12)	5 (20)	8 (32)

Furthermore, based on the frequency of responses to the question, "choose the figure that most accurately reflects your ideal figure" 80% of the sample chose figure 3 ( $n = 10$ ) or figure 4 ( $n = 10$ ). These two figures represent normal weight bodies. Of those who chose the normal weight bodies, 75% were overweight/obese ( $n = 15$ ).

## 5. Does AA women's self-rated health status align with their weight status?

It was hypothesized that AA women's self-rated health would align with their weight status. A Pearson's Chi-Square test was performed using self-rated health (i.e., fair, good, very good, or excellent) and measured BMI. The results indicate that in this sample of AA women, there is no statistically significant relationship between self-rated health and measured BMI ( $\chi^2 = 3.646, p < .05$ ). However, a primary assumption of the Chi-square analysis was violated in that 75% of cells had an expected count less than 5. Therefore, I cannot, with certainty, reject or fail to reject the null hypothesis. Table 8 displays the results of cross tabulation of the self-rated health and measured BMI variables.

Table 7

Health Rating	Normal Weight	Overweight/Obese	Total
Fair	0	8 (32)	8 (32)
Good	4 (16)	8 (32)	12 (48)
Very Good	1 (4)	3 (12)	4 (16)
Excellent	0	1 (4)	1 (4)

## CHAPTER V: DISCUSSION

### Summary of Results

#### 1. What factors influence AA women's body size ideals?

Studies suggest differences in weight perceptions and body size ideals among AA women in comparison to other women are likely due to culture. This is plausible considering AA women are more obese than other women in the United States. Based on this assumption, we must gain a better understanding of the cultural factors that influence their body size ideals. Although there are varying definitions of culture, one commonality among them is the assertion that culture is a multidimensional concept that is shaped by a variety of influences. According to Cockerham (2013),

Cultures are ways of living that have been passed on from one generation to the next in the form of abstract ideas, norms, habits, customs, and in the creation of material objects such as food, dress, housing, music, automobiles, and other items. Culture thus refers to a body of common understandings that represent what groups of people and societies think, feel, and act upon. The knowledge beliefs, values, customs, and behaviors shared by people in a particular society reflect the culture of that society (p.128).

Due to the complexity of culture, there is a need to go beyond simply stating body size ideals are linked to culture. We must begin to identify specific aspects of culture that can be addressed if we are to see a paradigm shift in AA women's body size ideals, and ultimately a

decrease in obesity prevalence rates. The present study's primary aim was just that. Through one-on-one interviews and a follow-up focus group, 30 variables with 143 different connections were identified. These variables can be used to guide health promotion practitioners and influence research.

While cognitive mapping is a useful means of gaining a wide range of firsthand perspectives related to a particular topic, it is important to discuss interpreting and applying the findings, beyond viewing the variables on a map and connections among them. According to Giles et al., (2007) variables can be categorized according to their function within the cognitive map. Transmitter variables are those that only impact other variables, receiver variables are those that are only impacted by other variables, and ordinary variables are those that both transmit and receive input. Of the 30 variables identified by AA women in the Mississippi Delta, 22 are ordinary variables, 5 are transmitter variables, and 2 are receiver variables. One variable, science, did not align with these categories due to a lack of connections. Table 8 lists the variables identified by study participants grouped by type.

The variable type is an indication of how participants view the variable. According to Giles et al. (2007), when there is a greater proportion of transmitter variables in relation to receiver variables, informants likely feel there are many different factors that influence a few outcomes. Conversely, when there are many receiver variables in relation to transmitter variables, participants likely perceive there are a few factors that influence many outcomes. The presence of a higher proportion of ordinary or transmitter variables means there are many outcomes to be considered.

Table 8

Mapped Variables Categorized by Type

Ordinary	Transmitter	Receiver
African American	Family	Brands
Appearance	Genetics	Oversexualized
Body Shaming	Media/TV	
Celebrities	Religion	
Clothing Fit	Socioeconomic Status	
Confidence		
Drugs/Alcohol		
Health Behaviors		
Health Beliefs		
Lack of Encouragement		
Male Preferences		
Music/Music Videos		
Nurturing/Femininity		
Other Women		
Satisfied/Accepted		
Self-esteem		
Social Media		
Social Networks		
Stress		
Subconscious Excuses		
Thoughts/Perceptions		
Upbringing		

Note. The variable Science had no connections and is not included

In the present study, approximately 73% of the variables identified are ordinary variables. By definition, this implies AA women in the Mississippi Delta feel there are many interconnected influences on their body size ideals. Of the variables identified, brands and oversexualization of female body size are receiver variables; in other words, these variables have no influence on the other variables identified; however other variables impact both of these. Family, genetics, media/TV, religion, and socioeconomic status are transmitter variables, or factors AA women feel have influence on other factors identified, yet are not influenced by any of the other variables.

Although grouping variables according to type assists with understanding the variables' function in a map, with such an extensive list of variables generated, further consideration must be given to identifying a starting point for application. An initial reaction would likely be to identify the variables with the strongest positive or negative influences. However, there is a slight flaw with this approach, as it is not necessarily an indication of variables' importance level per se. The strength of the connections on a map depend on participants' views regarding the relationship between the variables. A strong positive or negative connection means there was consensus, or a lack thereof, among participants regarding the nature of the relationship between the variables (i.e., positive influence or negative influence). Lack of agreement should not diminish variables' importance in a study. Therefore, one suggested approach is to begin by exploring the ordinary or transmitter variable that is mentioned most frequently versus relying solely on the strength of agreement. Although, there may be instances where consensus is reached regarding the nature of relationships and the variables also happen to be those mentioned more frequently, though not the case for the present study.

In the present study, words or comments related to AA males were mentioned by 21 of the 25 women in the Mississippi Delta. Furthermore, of the ordinary variables listed, male preferences transmitted or received more influence than any other variable. This suggests male preferences may be one of the most important driving forces behind AA women's body size ideals in the Mississippi Delta. This finding raises two pertinent questions that must be addressed.

The first question is—do AA men actually prefer a larger body size? Similar to body image research among females, studies that include AA males often focus on comparing their preferences with those of White males. These studies typically find that AA males prefer a



larger body size than White males (Greenberg & Laporte, 1996; Jones, Fries, & Danish, 2007). Although AA men reportedly prefer a larger body size than their White counterparts, this does not necessarily indicate they perceive an overweight or obese body size as ideal. In fact, Friedman et al. (2004) found that although AA males chose a larger ideal body size than White males, they were more likely to choose a very low waist-to-hip ratio in comparison to White males. Similarly, Singh (1994) assessed the relationship between waist-to-hip ratio and perceived female desirable body size among AA males and females. Both male and female study participants rated normal weight figures with low waist-to-hip ratio as most attractive. Additionally, neither underweight or overweight figures received high ratings regardless of waist-to-hip ratio. These findings suggest AA's are not necessarily more accepting of larger body sizes. Some overweight and obese AA women could be striving to achieve a particular shape they feel is attractive to AA males.

It is also worth noting, a vast majority of studies that have sought to assess male body size preferences were conducted among adolescent and college-age males. While these findings do shed light on male preferences, more studies are needed among middle age and older men since obesity is most prevalent among adults aged 40–59 and adults aged 60 or older (CDC, 2017). Furthermore, studies should focus specifically on AA males instead of comparing them to White males. It is also important for researchers to consider female body shape or body fat distribution versus overall body size in order to accurately assess the preferences of AA men.

A second question to consider is—are AA men aware of the influence they have on AA women's body size ideals? To my knowledge there is no empirical data related to this question. Considering the impact AA men apparently have on the body size ideals of women, attention must be given to identifying AA men's perceptions on this topic. Doing so would allow health

promotion practitioners to raise awareness of the issue among AA males. If men understood the impact their perceived preferences have on the health and well-being of women, maybe there would be less body shaming of women who are a healthy weight and more encouragement for overweight and obese women to achieve a healthy body weight.

The second most frequently mentioned variable is appearance. Of the women interviewed, 16 of 25 made comments related to a full figure being more attractive than a small body size. This finding aligns with prior studies which suggest AA women are considered more likely to be satisfied with their body size and hold more body positive feelings (Anderson, Eyer, Galuska, Brown, & Brownson, 2002; Harris, 1994). Fewer studies have examined why some overweight or obese AA are satisfied with their body or why they feel larger body sizes are more attractive.

Among existing studies, two commonly discussed themes are AA culture and perceived male preferences. Women in the present study also identified being AA, in addition to male preferences as contributors to their positive feelings regarding body size. In fact, 12 of the 25 participants identified being AA as an influence on their body size ideals. This not only aligns with other researchers' theories, but also reinforces the need to conduct studies similar to the present study to gain a better understanding of exactly how AA culture influences body size ideals.

Clothing fit was another commonly mentioned factor. Actually, it was identified as the strongest positive influence on AA women's perception that full figures are more attractive. Clothing fit also improves this sample's confidence. However, this notion may be specific to women in the Mississippi Delta. To my knowledge, there are no present studies that examine the association between clothing fit and appearance of overweight or obese AA women. Additional

studies, in other geographic locations and settings, are needed to provide insight on the relationship between clothing fit and perceived appearance among AA women.

Besides factors identified by interviewees, focus group participants contributed meaningful discussion that broadened the scope of this study. For example, focus group participants also feel that stress negatively impacts the AA community more than any other race/ethnicity. In fact, one participant stated, “Black people have more stress than anybody. We go through so much. We’ve gone through so much. That stress affects our health. We’re still in a modern day slavery.” Focus group participants think the level of stress experienced in the black community impacts women’s weight more than the desire to maintain a certain body size. This assertion aligns with a prior study that found a positive correlation between stress and body weight—in the study, women who were overweight experienced more perceived stress (Walcott-McQuigg, 1995).

AA women in the Mississippi Delta also believe the level of stress they experience negatively impacts health behaviors such as diet and exercise. For example, another focus group participant stated, “When Black people get stressed, they eat more...and if you’re stressed or depressed then you don’t really want to be active either.” Consequently, efforts must be made to equip AA women with the knowledge and skills needed to cope with common stressors they experience in day-to-day life. Moreover, it is important to help them understand that consuming nutritious foods and engaging in regular physical activity may decrease their perceived stress levels.

Another factor not frequently mentioned by interviewees, but of importance to focus group participants is religion. Religion was identified as a strong positive influence on the thoughts and perceptions AA women have regarding their body size (e.g., confidence, self-

esteem, appearance). Discussion of religion stemmed from a statement made by one participant, “Whatever is gonna happen, is gonna happen. I’m not leaving here until God says so, man don’t have no say. I am who I am. It don’t have nothing to do with my weight. I fine with me.” This perspective is consistent with prior research that suggests AA women in rural communities face more pressure from family and the AA community, based on religious beliefs, to be self-accepting of their body shape and to “be happy with what God gave you” (Baturka, Hornsby & Schorling, 2000). Similarly, a participant in the present study stated, “We are taught to take pride in our appearance.” These findings suggest social and religious influences have a considerable impact on AA women’s body positive feelings, such as confidence and increased attractiveness at larger body sizes. Besides perceptions regarding appearance, this is a probable reason why AA women in the Mississippi Delta feel they lack social support or encouragement to lose weight. Both social support and encouragement have the ability to improve perceived control and self-efficacy among AA women who desire to lose weight (Wolfe, 2004). Therefore, we must consider ways to improve social support and encouragement for overweight and obese AA women.

Since religion is omnipresent in the AA community, a plausible approach to engaging AA women in non-threatening discussions regarding their weight related beliefs and to raising awareness of the risk factors associated with excess weight is faith-based intervention. This strategy has proven successful in influencing health behaviors, such as increasing engagement in physical activity within the AA community (Bopp et al., 2006). Planning and implementing faith-based interventions may also be a viable means of educating AA males and significant others about the importance of providing women with encouragement and support to lose weight.

**2. Do AA women in the Mississippi Delta have an inaccurate perception of their body weight? and 3. Do AA women in the Mississippi Delta underestimate their body weight?**

Paired-sample t-tests were run to assess whether AA women in the Mississippi Delta have an inaccurate perception of their body weight. The first analysis compared the participants' self-reported body weight to their measured body weight. The second analysis compared self-reported BMI to measured BMI. The results indicate there is a statistically significant difference between women's self-reported and measured body weight, as well as their self-reported and measured BMI. Based on mean comparisons, AA women in the Mississippi Delta have an inaccurate perception of their body weight in the form of underestimation.

After the paired-sample t-tests indicated there was a statistically significant percentage of women who have an inaccurate perception of their body weight, the difference between participants self-reported and measured weight was computed and frequencies were run. Notably, 72% of the sample underestimated their weight, including 60% of the overweight/obese participants. These findings are consistent with other studies that suggest AA women have an inaccurate perception of their body weight.

Accuracy of weight perception is linked to health behaviors and consistently touted as a determinant of weight loss and weight gain. For example, the results of a 13-year longitudinal study found that obese AA women who had an accurate perception of their weight status lost weight, while those who had an inaccurate perception gained weight over the study period (Lynch et al., 2009). This is logical given that primary constructs of two theories suggest that an individual's perception is critical to their desire to change behaviors that negatively impact health and/or engage in behaviors that are conducive to health. The Health Belief Model, cites perceived susceptibility as an important cue to action. Similarly, the Transtheoretical Model of

Health suggest those in precontemplation stage, are often unaware of the problem or its negative consequences. Therefore, it is logical to assume the efficacy of weight reduction and/or weight loss programming could largely depend on whether overweight and obese individuals possess an accurate perception of their weight.

#### **4. Are AA women in the Mississippi Delta satisfied with their current weight status?**

The null hypothesis for this research question aligns with a common theme in the literature—AA women are more likely to be satisfied with their body weight. Findings from this study indicate the opposite may be true for AA women residing in the Mississippi Delta. Not only did 76% of study participants indicate they were dissatisfied with their current weight status, 72% would like to weigh less. Of those who are considered overweight/obese, 85% desire to weigh less.

Participants were also presented with nine figure silhouettes of bodies ranging from very thin to obese and asked to choose their current and ideal body sizes. Discrepancy scores suggest 56% of the sample would rather have a body size smaller than their current body size. Of those defined as overweight/obese, 70% would rather have a smaller body size. Also, 80% of the sample chose a normal weight figure as their ideal body size.

Prior body image studies involving AA women have largely focused on black and white comparisons. The primary aim of many was understanding differences in perceptions related to actual body weight versus considering body size and/or shape. This could be one explanation for the common assumption that AA women are satisfied with their weight and more accepting of larger body sizes, which might not be the case. In fact, Poran (2006) found that AA women were more likely to exhibit dissatisfaction with their body when certain parts, such as the abdomen, increase in size. Similarly, Befort et al. (2008) reported AA women were both satisfied and

dissatisfied with particular areas of their body. Again, study participants were most dissatisfied with the abdominal area. Nonetheless, few studies have examined the influence of body fat distribution on body weight perceptions and ideal body size in AA women. This area of inquiry is plausible considering many AA women commonly describe weight status categories in terms of appearance.

### **5. Does AA women's self-rated health status align with their weight status?**

Many AA women believe weight is a personal issue and that standardized weight status categories are not an effective means of assessing whether someone is normal weight. In fact, a focus group participant in the present study stated, "Most of us don't know what it means to be a healthy size." Gore (1999) conducted a qualitative body image study among AA women, and found interview feedback aligned with the notion that AA women do not understand what it means to be a normal/healthy weight. Participants in Gore's study made the following comments: "My grandma says if you're a size 5 or 6, you don't eat enough to be healthy;" "The media tries to make you think there is an ideal weight, but I don't think there is;" and "Normal weight is whatever you're happy with." However, 82% of AA women in the study described overweight/obesity in terms of health problems.

Based on the outcomes of studies such as Gore's, the present study sought to determine whether self-rated health aligns with measured BMI category among AA women in the Mississippi Delta. While the sample size was not sufficient enough to conduct the planned confirmatory data analysis, cross-tabulation of the two variables did provide insight on perceived health in relation to measured BMI category. Among the entire sample, 32% of participants viewed their health as fair and 48% viewed it as good. Of those who were categorized as overweight/obese, 40% reported fair health, 40% reported good health, 15% reported very good

health, and 5% reported excellent health. While weight status does not always align with health status—a message that is important to convey—it is critical to ensure overweight/obese individuals are aware that their weight is a potential risk factor for numerous health complications.

### **Limitations**

Despite following specific protocols to ensure accurate data collection and analysis, as is the case with most research, there are some limitations.

As previously stated, the purpose of this study was to identify cultural factors that influence AA women's body size ideals. Therefore, a homogenous sample was warranted. However, the findings herein are not generalizable due to the inclusion criteria set forth. All participants were AA women who reside in a geographically defined location in the state of Mississippi. It is likely the experiences and worldviews of these women differ from AA women in other areas of the state and the country. Consequently, the findings presented only represent the perceptions of one small subgroup of AA women.

Despite meeting the standard for the primary methodology utilized, the sample for this study was smaller than a vast majority of mixed methods and some qualitative studies that have been conducted to assess body size ideals among AA women. This impacted the data analysis plan—as mentioned in the preceding chapter, the small number of cases violated a key assumption of Pearson's Chi-square. Depending on the researcher's data analytic plan, small samples are not as conducive to robust statistical analyses. Additionally, the small sample size limits the generalizability of the findings presented herein.

Next, participants' age could have significantly impacted this study's findings, as 64% of respondents were over the age of 40. Consequently, these women's perspectives about body



weight and body size likely differ from adolescent girls or college-age women. In fact, focus group participants indicated several variables that were identified by interviewees (e.g., social media and brands) likely have a more significant impact on younger women than women their age. Therefore, it is unclear which of the variables are applicable across or limited to specific generational groups (e.g., Millennials versus Baby Boomers).

A final limitation results from the focus group being held in a different town, with another sample of participants. It is worth noting that feedback received during the focus group was congruent with that from the interviews, and in a sense, it broadened the scope of this study. However, focus group participants' views could have been biased by presenting other women's feedback versus discussing their perspectives first. Furthermore, despite being an acceptable standard in qualitative research, the small homogenous sample of focus group participants further impacts the generalizability of this study.

While there are limitations, it is also important to acknowledge this study's strengths. To my knowledge, the present study is the first to utilize cognitive mapping to identify factors that influence AA women's body size ideals. This is significant given that the methodology allows participants, not the researcher, to identify variables. This firsthand knowledge is invaluable to the field in terms of developing culturally appropriate materials and programs. It also enables participants to feel that their voice is being heard, which in turn aids with gaining community buy-in if the research is then used to design targeted health programs or interventions aimed at improving the health and well-being of the community.

### **Future Implications**

Few studies examine body image (e.g., body weight perception, ideal body size) in relation to its potential impact on the obesity epidemic, particularly among AA women. Similar

studies are needed to aid in understanding why such a large percentage of AA women across the United States have an inaccurate perception of their body weight. Consequently, the present study should be replicated in other geographic locations and in a variety of settings, using larger samples. A larger sample would not only improve the generalizability of the findings, but would also be conducive to mixed methods approaches involving more robust quantitative analyses. While it is important to gain women's perspectives through storytelling, quantitative data is a more effective means of demonstrating that findings are statistically significant and not due to chance.

One major barrier to examining culture's impact on AA women's body size ideals quantitatively has been a lack of empirical data. The variables identified through this study help lay the foundation for future quantitative studies. They provide a richer understanding of what is meant when researchers suggest differences in body size ideals are "likely due to culture." Researchers should begin to focus how male preferences, perceptions of clothing fit, beliefs about health, and many of the other variables identified through this study influence AA women's perceptions of body weight.

A vast majority of body image studies focus on White women or comparing AA women to their White counterparts. The focus of these studies has related to a societal norm among many women in the United States, desired thinness. This may be one reason why findings generally suggest AA women exhibit greater levels of body satisfaction. More body image studies specific to AA women are needed. Instead of focusing solely on body weight or BMI, researchers should consider exploring body fat distribution as a means of understanding why some AA women are dissatisfied with their body and/or underestimate their weight.

Furthermore, few studies include Hispanic or Native American women, although they are disproportionately affected by the obesity epidemic as well. In fact, it appears they are underrepresented in this area of research more so than any other population of women. Body image studies among minority men are also sparse. It is imperative that multi- and cross-cultural studies among minority women and men are conducted. Findings from these studies would aid in understanding factors specific to the respective populations, as well as those applicable across race/ethnic groups—thereby enabling health promotion practitioners to develop and implement effective programs and design culturally appropriate educational materials.

It would be remiss not to acknowledge the viability of cognitive mapping in future body image research. The methodology is conducive to understanding how various aspects of a culture can influence formulation of thought processes, such as weight perceptions, and ultimately human behavior. Through this approach, we have the ability to explore how individual experiences, significant relationships, social norms, values, and environments interact. Furthermore, it lends itself to identifying leverage points for interventions, program planning, and even policy change.

### **Conclusion**

The literature has clearly established that overweight and obesity are prevalent in the United States and that a large proportion of those individuals do not accurately assess their body weight. This is particularly true among AA women. A major gap is present in terms of why such a large percentage of AA women are obese and why they have a tendency to underestimate their weight more than other women. Many researchers suggest it is due to culture, but there is a paucity of research supporting that claim. Furthermore, few studies indicate what aspects of culture are influential in the formation of body size ideals. More specific data is needed to aid

practitioners in understanding the relationship between specific cultural variables and body size ideals. Therefore, the primary purpose of this study was to gather AA women's firsthand perspectives regarding factors that influence their weight perceptions. Other aims included assessing participants' perceptions of their body weight.

The present study is a contribution to both health promotion practice and research. The variables identified by study participants will enable practitioners to incorporate aspects of AA culture into their programs and educational materials. Findings will also help guide research since it provides specific variables that could be of interest in future body image studies. Additionally, these findings demonstrate that AA women in the Mississippi Delta are not satisfied with being overweight/obese and do desire to possess a smaller body size. Though not a primary aim of this particular study, research such as this will also raise awareness of the need to focus on factors beyond traditional weight reduction strategies (e.g., nutrition and physical activity). It also reinforces the fact that clinicians and health promotion practitioners should consider approaches for converging individuals' perceived and actual weight statuses, before initiating any weight management or behavior change interventions.

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## **APPENDIX**



Table 2

AA Women's Comments Regarding Influences on Body Size Ideals.

Category Descriptors	Discussion Topics and Corresponding Words/Statements
<b>African American</b>	<p>Women described factors associated being African American:</p> <ul style="list-style-type: none"> <li>• For us, basically the society we live in.</li> <li>• Our color</li> <li>• Our color</li> <li>• Society</li> <li>• Our culture</li> <li>• It's our culture.</li> <li>• That's traditional for us.</li> <li>• The black community</li> <li>• We believe in what our society wants us to believe, so we want to be a certain size.</li> <li>• The societal norm</li> <li>• Black society</li> <li>• The community</li> </ul>
<b>Appearance</b>	<p>Women described factors associated with the appearance of a fuller figure:</p> <ul style="list-style-type: none"> <li>• We like the look of a curvy figure.</li> <li>• It looks better than being too little.</li> <li>• It's sexy and glamorous.</li> <li>• Looks good on them</li> <li>• You look better</li> <li>• It improves your appearance. Appearance makes a difference. When you're made up better you get more attention.</li> <li>• It's a better look</li> <li>• It's attractive</li> <li>• It looks good</li> <li>• We just prefer a curvier body cause it looks more attractive.</li> <li>• We think it look good. We want some curves, but we want a slim waistline too.</li> <li>• We want to be attractive.</li> <li>• More attractive</li> <li>• We think it is attractive, attractive to the opposite sex.</li> <li>• Sexy and desirable</li> <li>• Generally looks better</li> </ul>

<b>Body Shaming</b>	<p>Women described being body shamed if the person is “too small.”</p> <ul style="list-style-type: none"> <li>• Because people body shame you if you don’t look that way.</li> </ul>
<b>Brands</b>	<p>Women described how business/companies market to the AA population with curvier models/people:</p> <ul style="list-style-type: none"> <li>• Most of the brands that market to us have bigger women. Women with curves, not thin women. You know most of the Black-owned companies.</li> </ul>
<b>Celebrities</b>	<p>Women described how celebrities influence AA women’s body size ideals through tv, movies, music and other women, particular women aspire to look like them and lead that kind of lifestyle:</p> <ul style="list-style-type: none"> <li>• The stars on TV</li> <li>• Women like Beyonce make us want that.</li> <li>• Prosperity and fame</li> <li>• It’s the rappers and some of the other celebrities. Either they like that or they want to look like that. You know a lot of people get plastic surgery to have a better shape.</li> </ul>
<b>Clothing Fit</b>	<p>Women described how they believe clothing fit better when you have a curvier figure. Some women believed clothes are specifically designed to fit better when you have curves/a full figure versus being thin and curveless:</p> <ul style="list-style-type: none"> <li>• You fill your clothes out better.</li> <li>• It looks good in clothes.</li> <li>• It makes your clothes fit better.</li> <li>• I think our clothes fit better.</li> <li>• Cause the clothes fit better</li> <li>• So I can wear certain clothes.</li> <li>• Clothes fit better</li> <li>• Clothes look better on you when you have a fuller figure.</li> <li>• Most of the clothes are made for curvy women.</li> <li>• For clothes to look good</li> <li>• Makes clothes fit better</li> <li>• We want our clothing to fit well.</li> <li>• We look better in clothes.</li> <li>• The way clothes fit</li> </ul>
<b>Confidence</b>	<p>Women described feeling more confident when their body is a certain size/ has “a good shape:”</p> <ul style="list-style-type: none"> <li>• Improves confidence</li> <li>• You just feel more confident.</li> <li>• It empowers you. The attention you get makes you feel good.</li> <li>• We are just confident women. We have pride in ourselves. We was raised to be that way.</li> <li>• Having confidence</li> </ul>
<b>Drugs/Alcohol</b>	<p>Women described how people might use drugs or alcohol to cope with stress, this in return influences how they feel about themselves including their body:</p>

	<ul style="list-style-type: none"> <li>• Drugs and alcohol</li> </ul>
<b>Family</b>	<p>Women described how people in the family make them feel better about their body size. The family reinforces that having a larger body is “healthy” and what they are supposed to look like:</p> <ul style="list-style-type: none"> <li>• Kinfolks</li> <li>• Family</li> <li>• Parents</li> <li>• Family</li> <li>• Family/children</li> <li>• Family</li> </ul>
<b>Religion</b>	<p>Women described how God influences all things, including how they feel about their body. Women think God made us unique, we are who we are supposed to be and should accept it and be happy:</p> <ul style="list-style-type: none"> <li>• God made me the way I am, so I’m satisfied.</li> <li>• Religion</li> <li>• Religion/rituals</li> </ul>
<b>Health</b>	<p>Women described how AA women/the community has been conditioned to think a fuller figure is healthy. Women feel this has impacted our definition of what it means to be a healthy weight:</p> <ul style="list-style-type: none"> <li>• It’s healthier</li> <li>• Your health is better</li> <li>• The level of health</li> <li>• Definition of health</li> </ul>
<b>Genetics</b>	<p>Women described how genetics dictate body shape and size:</p> <ul style="list-style-type: none"> <li>• It’s the way we are born, and we grow up and get this shape</li> <li>• It’s hereditary.</li> <li>• Hereditary</li> <li>• That’s just how we were born.</li> <li>• Genetics</li> <li>• Heredity</li> <li>• Hereditary</li> <li>• Genetics</li> <li>• Genes</li> </ul>
<b>Lack of Encouragement</b>	<p>Women described how they do not receive encouragement to lose weight, exercise, or lose weight from others. Women felt that the lack of encouragement likely stems from the fact that others are satisfied with a fuller figure. Women also described how many of the local programs “aren’t made around us”—they discussed not having access to certain food items promoted and receiving information about meal planning that was not practical for their circumstances (e.g., weekly meal prep):</p> <ul style="list-style-type: none"> <li>• We don’t really get that encouragement about it. About losing weight. Because it is what we think we’re supposed to be like.</li> </ul>
<b>Media/TV</b>	<p>Women described how what they watch can impact perceptions about body size. Older women also discussed how young people</p>

	<p>watch more tv than young people of past generations (“TV is raising them”) because parents in the community don’t have time to monitor—many are working multiple job:</p> <ul style="list-style-type: none"> <li>• Movies/TV</li> <li>• TV</li> <li>• The media</li> <li>• Media</li> </ul>
<b>Male Preferences</b>	<p>Women described how men prefer a fuller figure. Women discussed how AA women are held to a different standard because AA men are attracted to thin White women. They also discussed how male preferences do vary by overall body shape. “If there was two fat women and one had a big butt and one didn’t, men would be more attracted to the one with the big butt.”</p> <ul style="list-style-type: none"> <li>• Men like it now more than they used to.</li> <li>• My boyfriend likes it.</li> <li>• Men</li> <li>• Men go for that</li> <li>• Men</li> <li>• Black men preferences</li> <li>• Men want it</li> <li>• Men</li> <li>• Cause that’s the men’s preference. They like curves.</li> <li>• Attraction from the opposite sex</li> <li>• Men’s views</li> <li>• Men prefer it</li> <li>• We believe men are more attracted to it. They make it seem that way, so us women are pressured to look a certain way. They don’t hold white women to that.</li> <li>• Men like more meat.</li> <li>• Men</li> <li>• Because men like curves</li> <li>• We want to be sexy. The way men like. That’s what we think though.</li> <li>• Men</li> <li>• Men</li> <li>• Men and their preferences</li> <li>• Spouse/partner</li> </ul>
<b>Music/Music Videos</b>	<p>Women described how rap and hip/hop music and videos glorify being “thick” or having a fuller figure:</p> <ul style="list-style-type: none"> <li>• Music</li> <li>• Videos</li> <li>• Music videos</li> <li>• Rappers and their videos</li> <li>• Music</li> </ul>

	<ul style="list-style-type: none"> <li>• Songs</li> <li>• Music</li> <li>• Music</li> </ul>
<b>Nurturing/Femininity</b>	<p>Women described how fuller figured women are viewed as more feminine and nurturing. Some explained this in terms of their thoughts related to their mother and grandmothers.</p> <ul style="list-style-type: none"> <li>• Role of nurturing (nurturing women in our lives are typically soft and curvier, think about grandma)</li> <li>• That’s what makes you more feminine, a good shape.</li> </ul>
<b>Health Behaviors</b>	<p>Women described how the AA community does not promote exercise. Women also discussed how many AA women do not desire to exercise due to fear of being too thin or “losing their shape.” Women also described how AA women have traditionally eaten foods that “stick to us.” Women explained that some women eat unhealthy foods specifically for that reason.</p> <ul style="list-style-type: none"> <li>• Diet</li> <li>• We like to eat foods that stick to us. We even feed the babies cereal in their bottles to help thicken them up.</li> <li>• The way we cook.</li> <li>• We used to think it was hereditary, but it’s the lifestyle that causes it. But we still want to eat certain foods. When you do, your body will change.</li> <li>• Lifestyle (eating habits/exercise)</li> <li>• We don’t promote exercise</li> <li>• Food we eat</li> <li>• Food options</li> <li>• Diet</li> <li>• Lack of exercise. Some are just lazy, some don’t have motivation, but some just don’t know better. Some don’t want to because they don’t want to lose weight.</li> </ul>
<b>Other Women</b>	<p>Women described how they look at other women: women in their family, women around them, and white women to assess their own body. Women discussed how looking at family, and other AA friends/women around them reinforced the idea that AA women are supposed to have a full figure. However, looking at white women lead women to believe they do not want to be “too small” or “flat”—</p> <p>in return, this reinforced the desire the have a fuller figure.</p> <ul style="list-style-type: none"> <li>• We see it looks good on other women.</li> <li>• Women</li> <li>• Women in our family have curves.</li> <li>• I think seeing other women, and we would like to be like them.</li> <li>• Looking at other women around us</li> <li>• Comparing ourselves to other women – like women in our family look a certain way, so then you don’t want to be shaped</li> </ul>

	<p>like the white women. You want to look like mama or grandmamma.</p> <ul style="list-style-type: none"> <li>• We sometimes compare ourselves to other women. Like white women, most are flat and we don't want to be.</li> <li>• Because of other women, like our mom, and we see how they are made up.</li> <li>• Women</li> <li>• Comparing ourselves to other women</li> <li>• Majority of successful black women have curves.</li> <li>• Other women</li> </ul>
<b>Oversexualized</b>	<p>Women described how the body is objectified and oversexualized by men. Women want to appear attractive to men.</p> <ul style="list-style-type: none"> <li>• Oversexualized</li> </ul>
<b>Research/Meds</b>	<p>One AA women described how research and medications are not designed with AA people in mind.</p> <ul style="list-style-type: none"> <li>• Research and medications don't work for us. They don't make it for us. We still have weight problems and all these other health problems.</li> </ul>
<b>Satisfied/More Acceptable</b>	<p>Women described how it is not outside of the norm within the community to be a larger size. Women discussed how this leads to women being more comfortable and satisfied with their body despite being overweight.</p> <ul style="list-style-type: none"> <li>• We are just comfortable with our body. Most of us don't want to be too thin. We like to have breasts, hips, and a butt.</li> <li>• We don't want to change.</li> <li>• More acceptable</li> <li>• We are known for our full lips and thick hips.</li> <li>• Glorified in the black community</li> </ul>
<b>Self-esteem</b>	<p>Women described how they feel because of their body size (expressed feeling better about themselves):</p> <ul style="list-style-type: none"> <li>• You feel good.</li> <li>• Well for me, I feel better.</li> <li>• Self-esteem. It improves.</li> <li>• It makes you feel good.</li> </ul>
<b>Social Media</b>	<p>Women described how social media (e.g., Instagram models) impacts how they/other women feel about body size. Women explained that social media can impact one's self-esteem. Older women discussed how younger women spend more time on social media than older women.</p> <ul style="list-style-type: none"> <li>• Social media</li> <li>• Social media</li> <li>• Social media</li> <li>• Social media</li> </ul>
<b>Social Networks</b>	<p>Women described how their friends and "people around us" impact how they feel about body size:</p>

	<ul style="list-style-type: none"> <li>• Other people’s opinion. They like it.</li> <li>• Friends/our social network. A lot of want to fit in and be able to identify.</li> <li>• Peer pressure</li> <li>• A lot of times, your friends say you need to be like this or be like that.</li> <li>• Peer pressure</li> <li>• Our friends and what everybody else looks like does play a part.</li> </ul>
<b>Socioeconomic Status</b>	<p>Women described how education level impacts thoughts and also how knowledge of health and health behaviors impacts this study. Women describe how lack of money and resources also impact other influences:</p> <ul style="list-style-type: none"> <li>• Lack of education</li> <li>• Economic status</li> <li>• Access to resources</li> </ul>
<b>Stress</b>	<p>Women described how stress impacts the AA community:</p> <ul style="list-style-type: none"> <li>• Black people have more stress than anybody. We have gone through so much, we are going through so much. That stress affects our health. We’re still in a modern day slavery.</li> <li>• When we get stressed we eat more. We want to sleep too, so that means we won’t exercise.</li> <li>• It stressful when people are always pointing the finger. Stop pointing the finger and start helping.</li> <li>• We are so stressed a lot of times that leads to drugs and drinking. People like to judge, but you don’t know what somebody is going through.</li> <li>• That stress impacts us.</li> </ul>
<b>Subconscious Excuses</b>	<p>Women described how we AA women convince themselves that sizes and certain health behaviors are acceptable. Women explained that a lot of people are not satisfied with their weight:</p> <ul style="list-style-type: none"> <li>• Subconscious excuses</li> <li>• Most are not comfortable with their size, so we want to bring attention to other parts and say we are okay with it. We don’t think about it, but that’s part of it.</li> </ul>
<b>Thoughts/Perceptions</b>	<p>Women described how positive thoughts and perceptions about body size have an impact on how AA women feel about their body size (e.g., clothing fits better, men like it):</p> <ul style="list-style-type: none"> <li>• Perception</li> <li>• Mental state. Just how we think and feel.</li> <li>• It’s our mindset. That’s how we think we supposed to look.</li> <li>• Women’s views about how it looks, or what they think other people think.</li> <li>• Perceptions. About it being attractive.</li> </ul>

<b>Upbringing</b>	<p>Women described how experiences during the early years of life impact AA women's body size ideals:</p> <ul style="list-style-type: none"><li>• It is because of how we are raised. It is instilled in us that you are posed to look a certain way.</li><li>• Rearing. How we are brought up has a big impact on what we think and what we do.</li><li>• Growing up. It is basically the way we are raised.</li><li>• It's the way we were brought up. We were taught to eat everything on our plate. My grandmother used to say feed them. So, that's part of why we are bigger, and we accept it.</li></ul>
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## VITA

**Lois M. Coleman, MS, MCHES**

### EDUCATION

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- Graduate Certificate in Program Evaluation** December 2018  
*University of Mississippi - Oxford, MS*
- M.S. in Health Promotion** May 2010  
*Mississippi State University - Starkville, MS*
- B.S. in Human and Community Services** May 2009  
Minors: Community Health and Sociology  
*New Mexico State University - Las Cruces, NM*

### PROFESSIONAL EXPERIENCE

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**Education and Training Specialist** March 2012 – present  
*Institute of Child Nutrition, University of Mississippi - Oxford, MS*

- Manage multiple federally-funded grant projects
- Develop face-to-face and online courses, as well as a variety of educational materials
- Review and revise courses and materials
- Coordinate and facilitate task force and work group meetings
- Collaborate with ICN's Applied Research Division on federally-funded research projects
- Contract with and oversee consultants' work on ICN projects
- Establish relationships and collaborate with local and national organizations
- Complete quarterly and semi-annual reports
- Develop concepts and proposals for new projects/funding opportunities
- Serve on search committees for hiring departmental staff
- Instrumental in securing/managed budget for a \$500,000 federal cooperative agreement to support a White House health initiative
- Planned and oversaw implementation and marketing of all programs, as well as developed educational resources for former First Lady Michelle Obama's childhood obesity reduction initiative– Let's Move! Chefs Move to Schools
- Instrumental in securing \$1.5 million in grant funding to develop, implement, and evaluate programs for a rebranded school-based initiative

- Instrumental in securing \$125,000 in cooperative agreement funding to develop and provide training for Native American populations nationally, including the formation and oversight of a Native American Advisory Committee

**Prevention Specialist**

July 2011 – March 2012

*Region III Chemical Dependency Service - Tupelo, MS*

- Managed multiple projects for a state-funded grant
- Taught evidence-based curricula in county middle schools
- Developed new courses for use in county middle schools
- Developed and administered evaluation instruments to monitor program outcomes
- Analyzed data for reporting purposes
- Conducted needs assessments to inform stakeholders and guide health education programming
- Planned and provided community education events to increase knowledge of underage drinking, drug abuse, mental health, and related issues
- Coordinated all health education marketing efforts, including management of social media pages
- Developed a variety of health education materials for distribution in clinics and the community
- Participated in community health fairs
- Assisted with the development and management of prevention grant budget
- Researched and recommended additional funding sources to expand and sustain services

**Health Educator**

July 2010 – July 2011

*Alvin A. Dubin Alzheimer's Resource Center - Fort Myers, FL*

- Developed, reviewed, and revised courses using current research and best practices in Alzheimer's care and caregiving related issues
- Scheduled and taught state mandated trainings for long-term care staff of assisted living facilities, nursing homes, and adult daycares
- Planned and taught continuing education courses for various professional groups including attorneys, law enforcement officers, first responders, physicians, financial planners, and trust officers
- Provided educational instruction for caregivers at programs held by the center or in partnership with community agencies
- Assisted in providing training for volunteers on topics such as disease processes, communication, cultural competence, caregiver stress and burnout, and other relevant topics
- Collaborated with churches, civic organizations, schools, and support groups to provide classes and educational resources on a wide range of topics related to Alzheimer's, dementia, and healthy aging
- Developed and administered evaluation instruments to monitor program outcomes
- Conducted needs assessments to inform stakeholders and guide programming

- Analyzed data for use in grant writing, informing board members/stakeholders, and reporting to funding agencies
- Assisted with public speaking engagements as requested by the Executive Director
- Assisted in planning and executing numerous large-scale fundraising events to expand and sustain services
- Developed marketing materials for promotion of health education programs and trainings
- Exhibited in a variety of settings to raise awareness of Alzheimer's, dementia, and healthy aging

**Instructor**

*Southwestern Vocational Training - Cape Coral, FL*

August 2010 – July 2011

20 hours/month

- Taught assigned courses for certified home health, nutrition aide, and nursing assistant students
- Developed new courses for certified home health, nutrition aide, and nursing assistant students
- Maintained student records

**SCHOLARLY ACTIVITY**

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**Published Manuscripts:**

**Coleman, L.** & Loprinzi, P.D. (2017). The influence of weight status duration on weight perception accuracy. *American Journal of Health Promotion*, 32(8), 816-820.

**Coleman, L.** & Loprinzi, P.D. (2016). The association between discrepant weight perceptions and objectively measured physical activity. *Preventive Medicine*, 87, 47-50.

**Manuscripts Under Review:**

Valliant, M., Bass, M.A., Bomba, A. K., **Coleman, L** & Chenevert, C.R. (2019). Comparison of ADP and DXA: Estimation of body fat in NCAA athletes. *Medicine & Science in Sports & Exercise*

**Conference Sessions:**

**Coleman, L.** (July 2019). Navigating Diversity in the Workplace. Education Session at the *National School Nutrition Association* annual conference. Saint Louis, MO.

**Coleman, L.** & Dixon L. (July 9, 2018). Food Safety in Schools. Education Session at the *National School Nutrition Association* annual conference. Las Vegas, NV.

**Coleman, L.** (July 9, 2018). Fundamentals of Adult Learning. Education Session at the *National School Nutrition Association* annual conference. Las Vegas, NV.

Dixon, L. & **Coleman, L.** (April 21, 2018). Be a Role Model for Health. Education Session at the *National Child Nutrition Association* annual conference. San Antonio, TX.

**Coleman, L.** (October 23, 2014). Stress 101. Education Session at the *Indiana School Nutrition Association* annual conference. Indianapolis, IN.

**Coleman, L.** (July 15, 2013). Principles of Stress Management. Education Session at the *National School Nutrition Association* annual conference. Kansas City, MO.

**Coleman, L.** (2012). Building an Effective Team. Education Session at the *Louisiana School Nutrition Association* annual conference. Monroe, LA.

#### **Invited Lectures:**

**Coleman, L.** (September 25, 2014). Personal Health and Wellness. Education Session at the *Mississippi Association for Nutrition and Foodservice Professionals* annual conference. Oxford, MS.

#### **Poster Presentations:**

Bass, M., Valliant, M., Ford-Wade, A., & **Coleman, L.** (2016). Osteoporosis Knowledge and Beliefs among College Students in the U.S. Poster at the *American College of Sports Medicine* annual meeting. Boston, MA.

#### **CERTIFICATIONS**

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**Master Certified Health Education Specialist (MCHES) #28720** April 2017 – present  
*National Commission for Health Education Credentialing, Inc.*

**Certified Health Education Specialist (CHES) #19634** April 2012 – April 2017  
*National Commission for Health Education Credentialing, Inc.*

**Alzheimer's Disease/Related Disorders Training Provider Certification #ALF 854**  
*State of Florida Department of Elder Affairs* November 2009 – November 2011

#### **MEMBERSHIPS**

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Gamma Beta Phi Honor Society (University of Mississippi Chapter) March 2017 – present  
Mississippi Public Health Association September 2014 – present  
American Public Health Association August 2014 – present  
Society for Public Health Education August 2014 – present

## COMMUNITY AND PROFESSIONAL SERVICE

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Native American Advisory Committee	December 2018 – present
Society for Public Health Education, Abstract Reviewer	2015 – present
Chefs Move to Schools, National Advisory Committee	January 2015 – June 2017
Junior Auxiliary, Leap Frog Program	January 2013 – December 2013
Mississippi Tobacco Free Coalition, Member	July 2011 – June 2012
Mississippi Prevention Partnership, Member	July 2011 – March 2012
Southwest Florida Palliative Care Coalition, Member	August 2010 – July 2011
Dunbar 21st Century Collaboration, Health Services Committee	January 2011 – July 2011