Strong Black Woman Ideology, Stress and Obesity Among African American Women Attending Church: Towards a Framework for the Healthy Strong Black Woman

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Strong Black Woman Ideology, Stress and Obesity Among African American Women Attending Church: Towards a Framework for the Healthy Strong Black Woman

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African American (AA) women have the highest rates of obesity in the nation. The purpose of this study was to examine the relationship between the Strong Black Woman (SBW) ideology, stress, and obesity among AA women attending church. The Social Ecological Perspective (Brofenbenner, 2009) and Intersectionality theory (Crenshaw, 1989) were used as the theoretical frameworks to explain how the intersection of race and gender placed AA women in conditions that influenced the development of the Strong Black Woman. A quantitative research design was used for this study. Participants reported their demographic background and self-reported weight and height to calculate body mass index (BMI); Strong Black Woman Cultural Construct Scale (SBWCCS) was used to measure the internalization of SBW ideology; and Perceived Stress Scale – 10 (PSS-10) was used to measure perceived stress. Eighty-four AA women were recruited from three churches located in the Pittsburgh area. Descriptive statistics were performed on demographic items, BMI categories, SBWCCS, total PSS-10 scores. Pearson r product-moment correlation was conducted to assess the relationship between variables. Analyses were conducted using SPSS software and statistical significance was set at $p<0.05$. The results of the analyses revealed that there were strong, positive correlations between SBW Ideology and BMI, SBW Ideology and perceived stress, and perceived stress and BMI. The findings from this study implicate that stress management techniques, like mindfulness, might be beneficial when implemented in weight loss interventions targeting AA women; and that

motivational interviewing should be used by health professionals to help identify and assist SBWs in changing unhealthy behaviors.

Table of Contents

List of Tables

List of Figures

Acknowledgements

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1.0 Introduction

Obesity is the second leading cause of preventable death in the United States and is responsible for much of the morbidity and disability seen in the overall population (Hales et al., 2017). If current trends continue, obesity will soon surpass smoking in the U.S. as the largest contributing factor to early death, reduced quality of life, and added health care costs (Centers of Disease and Prevention Control (CDC), 2017). Obesity carries an annual cost of 190 billion dollars (Institute of Medicine, 2012), with an individual medical cost $1,429 higher than those of normal weight (CDC, 2017). Approximately, 38.9% of the United States adult population is considered obese (Hales et al, 2017). While obesity rates have soared over the last five decades across most demographic groups in America, AA women are disproportionately affected by obesity. Fifty-six percent of AA women are considered obese; while 37% of Caucasian males, 38% of AA males, and 37.9% of Caucasian females are considered obese. While it is true that women with low-income appear to have the greatest likelihood of being overweight or obese, AA women at all socioeconomic levels experience high rates of obesity (Office of Minority Health, 2017). Murry et al., (2013) suggested that there is a need for more consideration of how contextual factors (race/ethnicity, social class, sex, and social, family, and personal stressors) affect the health functioning of AA women. This observation, in addition to the alarming rate of obesity among AA women, underscores the need for research on what may be driving the disproportionate obesity rates within this population.

In the past, researchers have focused primarily on a diet and exercise approach to weight loss. Such an approach expects that if individuals control what they eat and how much they exercise, they will be successful in managing their weight (Barnes & Kimbro, 2012). Although a

calorie-in-calorie-out approach is an evidence-based approach for weight loss, other factors such as cultural beliefs and norms may at times hinder people from following diet and exercise plans (Conn et al., 2012). A cultural factor that might be contributing to the high rates of obesity in AA women is the Strong Black Woman (SBW) ideology. SBW is a term that is commonly utilized within the AA community. SBW is the self-protective, independent nature of AA women, derived from AA women's need to be self-sufficient during slavery (Beaubouef-Lafontant, 2009). Researchers believe this nature has been passed down through generations (Romero, 2000), allowing AA women to cope and survive the social injustice bestowed up on them due to their gender and race; and their need to be self-sufficient. Women of other racial and ethnic groups have experiences that would lead them to self-identify as strong; however, the basic difference for AA women is rooted in the historical context and social construction of their images as they developed through slavery and beyond (Romero 2000).

Studies show that stress is more prevalent in AA women than any other racial or gender group (Turner & Allison, 2003). It has been theorized that AA women who adhere to the SBW ideology experience more chronic stress than women who do not (Woods-Giscombe, 2010). In addition, research has found that there is a positive association between stress and obesity (Fabricatore & Wadden, 2004; Chambers et al., 2004; Dallman, et al., 2003). Based on the above findings, the high rates of obesity among AA women might be related to how they experience and cope with stress (Giscombe, 2011). Some researchers have theorized that a woman's body weight can be viewed as a direct response to societal pressures and an outward manifestation of an internal psychological disequilibrium (Beaubouef-Lafontant, 2009). The societal pressures AA women face, due to racism and sexism; and the impact of stress on obesity suggests that there is a need to better understand the relationship between SBW ideology and obesity within this population. The

current study investigates the relationship between the SBW ideology, stress, and obesity in AA women attending church.

1.1 Background

Although it has been hypothesized that culture plays a role in obesity for oppressed groups, researchers have given minimal attention to specific cultural constructs that may be contributing to the disparities in obesity between racial/ethnic (Ard et al., 2013). Ard et al. (2013) theorized that the most effective way to combat the health issues within the AA population is to conduct research that is derived from an AA perspective, rather than a multicultural perspective, because a multicultural perspective addresses different forms of oppression as separate categories (Rivers, 2015). Many oppressed cultures belong to more than one marginalized social group, and thus, viewing the effects of racism and sexism in isolation is unrealistic (Rivers, 2015).

The SBW has been theorized to be derived from AA women's lived experiences as both AA and women, and the need to be self-sufficient during slavery (Beaubouef-Lafontant, 2009; Woods-Giscombe, 2010). Michele Wallace (1978), explains that the:

> "…the intricate web of mythology that surrounds the black woman, a fundamental image emerges. It is of a woman of inordinate strength, with an ability for tolerating an unusual amount of misery and heavy distasteful work. This woman does not have the same fears, weaknesses, and insecurities as other women, but believes herself to be and is, in fact, stronger emotionally than most men. Less of a woman in that she is less "feminine" and helpless, she is really more of a woman in that she is the embodiment of Mother Earth, the quintessential mother with infinite sexual, life-giving, and nurturing reserves. In other words she is superwoman.

Embraced as a cultural coping behavior, being strong has been passed down through generations to allow AA women to overcome adversity, slavery, racism (Edge and Rogers 2005) and sexism.

AA women learn from their mothers and other female kin the SBW image; which develops a self-concept that can withstand the all too common experiences of male rejection, poverty, multiple roles, and countless forms of discrimination (Woods-Giscombe, 2008).

> On August 15, 1999, at 11:55pm, while struggling with the reality of being human instead of a myth, the strong black woman passed away, without the slightest bit of hoopla. Medical sources say that she died of natural causes, but those who knew and used her know she died from: being silent when she should have been screaming, milling when she should have been raging, being sick and not wanting anyone to know because her pain might inconvenience them; an overdose of other people clinging on to her when she didn't even have energy for herself. …
>
> Sometimes, she was stomped to death by racism and sexism, executed by hi-tech ignorance while she carried her family in her belly, the community on her head, and the race on her back.
>
> - Mataka, 2000 "The Strong Black Woman is Dead"

The above excerpt is from a poem titled "The Strong Black Woman is Dead." It should be said that the image of the SBW is not necessarily negative; because being a strong, black woman has allowed AA women to succeed despite the limited resources and their place within society, producing the Sojourner Truth, Rosa Parks, Oprah Winfrey, Michele Obama and so many others who have lead the way for other AA women. It is when the SBW image becomes iconic that it becomes a health concern; because, as AA women conceive of themselves as lone warriors charged with maintaining families and communities, the prescription to be strong necessitates the defensive denial of pain, vulnerability, and suffering (Beaubouef-Lafontant, 2009). They feel responsible for everyone, believing they can never let their guard down, therefore leading them to experience and normalize a level of exhaustion that usually leads to negative unhealthy behaviors. Feeling the pressure to do it all, and when she cannot, her self-esteem suffers. She wrongly concludes that the failure to do everything somehow speaks to her value as a black woman (Harris-Perry, 2011). Further, this perceived failure can lead to increased stress.

Stress has been found to be associated with obesity (Fabricatore & Wadden, 2004). Given the intersection of race and gender it is reasonable to expect that AA women would have higher

rates of stress than AA men or Caucasian women (Greer, 2011). Unfortunately, SBW have been taught to keep their emotions under control and carry on despite the psychological stress that they may be experiencing (Woods-Giscombe, 2010). It has been found that individuals with chronic psychological stress have higher rates of perceived stress, higher BMI, and higher rates of self-reported emotional eating (Manzoni et al., 2009). Physical activity and exercise have been demonstrated to promote positive changes in one's ability to cope with stressful encounters (Salmon, 2001) and promote weight loss and maintenance. However, national data indicates that only 34% of AA women achieve recommended physical activity levels, representing the lowest prevalence of any race/ethnicity and or gender group (CDC, 2014).

Religion and spirituality are characteristics found in SBW (Woods-Giscombe, 2009. AA women have the highest church attendance rates of all other racial and gender groups (U.S. Religious Landscape Survey, 2013). Researchers theorize that the reliance on religion and spirituality was a means of psychological support to survive the harsh realities of slavery (Thomas, 2016). When human strength was not enough, slaves relied on their spirituality to help them survive and overcome the treachery of enslavement. Although believing in a higher being and a life beyond this world helps one to cope with adversity and stress (Lee, 2010). Within the black church, the common gendered knowledge is "no cross, no crown." which extols self-sacrifice as a natural virtuous even glorious standard of redemption reserved solely for the women (Weems, 2004); leaving AA women to conclude that their purpose is to take care of everyone else but themselves, because God will provide. Therefore, relying on spirituality to help cope with stress might lead SBW to suppress the feelings of pain and suffering; and developing negative coping behaviors to deal with the stress in their life. Studies have found that AA women are more likely to register stress, trauma, powerlessness, and gender ambivalence through overeating (Thompson,

1994); and overeating is a contributing factor to obesity.

1.2 Statement of the Problem

AA women have been found to be the least physically active, with a dietary intake higher in calories, sugar, fat, and sodium than any other gender or race groups in America. Lack of physical activity and increased intake of high caloric and sugary foods have been found to be correlated to obesity and chronic stress (Manzoni, 2009). Given the culmination of these negative health factors, it is of no surprise that AA women have the highest rates of obesity in the nation (Tallyrand, 2012). Though there has been increased attention to physical activity and nutrition programs, standard weight management programs have not worked well with this population (Cowart et al., 2010). In Healthy People 2020 (CDC, 2011) the primary focus for obesity prevention is providing education on nutrition and weight control; but before programs that target AA women can be developed, investigation is needed to understand the cultural factors that might be contributing to AA women outpacing other cultural groups in rates of obesity.

Without a clear understanding of the specific cultural issues affecting AA women, health care providers will not be able to deliver effective, culturally-based interventions (Tallyrand, 2012). Understanding the relationship between the cultural construct, SBW, in combination with stress and obesity could provide a new way to conceptualize cultural issues and obesity that have thus far gone unrecognized. Further, this new understanding could empower AA women, especially those who have not been successful with diet and exercise changes alone. The purpose of this study was to examine the relationship between SBW ideology, stress, and obesity levels in AA women in Pittsburgh, PA who attend church.

2.0 Literature Review

This chapter provides a review of the literature relevant to the current study. The chapter begins with an overview of the conceptual frameworks that guided this study, Social Ecological and Intersectionality theory, in the context of AA women's health. The chapter continues with a historical view of the development and the characteristics of the Strong Black Woman; and discusses obesity and stress in the context of AA women's lives. The chapter ends with a summary of previous research related to the impact of SBW on AA women's health.

2.1 Theoretical Framework

2.1.1 Social Ecological Perspective

This study was framed using a social ecological perspective (Bronfenbrenner, 2009), as this perspective allows for the examination of how multiple levels of influence interact and affect the high obesity rates amongst AA women. Social ecological perspectives emphasize that behavior is influenced by multiple levels of influence and that the interaction between, and interdependence of, factors within and across various levels of influence affects behavior. McElroy et al. (1988) viewed the health status and behavior outcomes as being determined by: Public policy, Community, Institutional, Interpersonal, and Intrapersonal. For the purposes of this study, the focus will be on three levels of influence: societal, interpersonal, and intrapersonal, to conceptualize the issues that may be contributing to the higher rates of obesity in AA women

(Institute of Medicine, 2001).

Societal refers to the societal context, which in this study pertains to the history of slavery, racism and sexism; and how they have led to the development of the SBW. *Interpersonal* refers to the universal continuity of the SBW as the cultural coping behavior of AA women; and how AA women are perceived by others in their social network as strong, independent, preserving caretakers of the family and the communities they live in. *Intrapersonal* refers to individual unhealthy behaviors of AA women that are associated with obesity.

2.1.2 Intersectionality Theory

Intersectionality theory is a sociological theory describing multiple threats of discrimination when an individual's identities overlap with a number of marginalized social classes – such as race, gender, age, and ethnicity, health and other characteristics (Smith, 2015). The theory of intersectionality is based on the concept that oppressive institutions within a society, such as racism, ageism, sexism, and homophobia, do not act independently, but are instead interrelated and continuously shaped by one another (Crenshaw, 1989). The theory of intersectionality describes AA women's culture by the multiple oppressions AA women experience (Smith, 2015). AA women are discriminated against in many ways that often do not fit neatly within the legal categories of either "racism" or "sexism", but as a combination of both racism and sexism (Smith, 2015). Intersectionality theory therefore postulates that AA women should be looked at as their own (intersecting) culture, not as either female or AA, recognizing that their lived experiences places them in highly stressed situations that might be impacting decisions and behaviors.

2.2 The Making of the Strong Black Woman

Figure 1 explains the social ecological SBW framework. This framework postulates that the historical legacy of oppression and discrimination, particularly slavery, racial and gender stereotyping, and occupational-related inequities, are significant factors that have contributed to the SBW ideology (Woods-Giscombe, 2010). Traits of the SBW are: a) obligation to manifest strength; b) obligation to suppress emotions; c) obligation to help others; d) determination to succeed, despite limited resources; and e) resistance to being vulnerable or dependent (Wood-Giscombe's, 2010). This framework also postulates that AA women who meet the criteria of SBW and play multiple roles within their family and community, might experience higher rates stress; higher rates of stress leads to: increased food consumption, decreased physical activity and increase in fat adiposity, which can lead to obesity. The subsequent sections detail the development of and contributors to the SBW ideology across levels of social ecological theory.

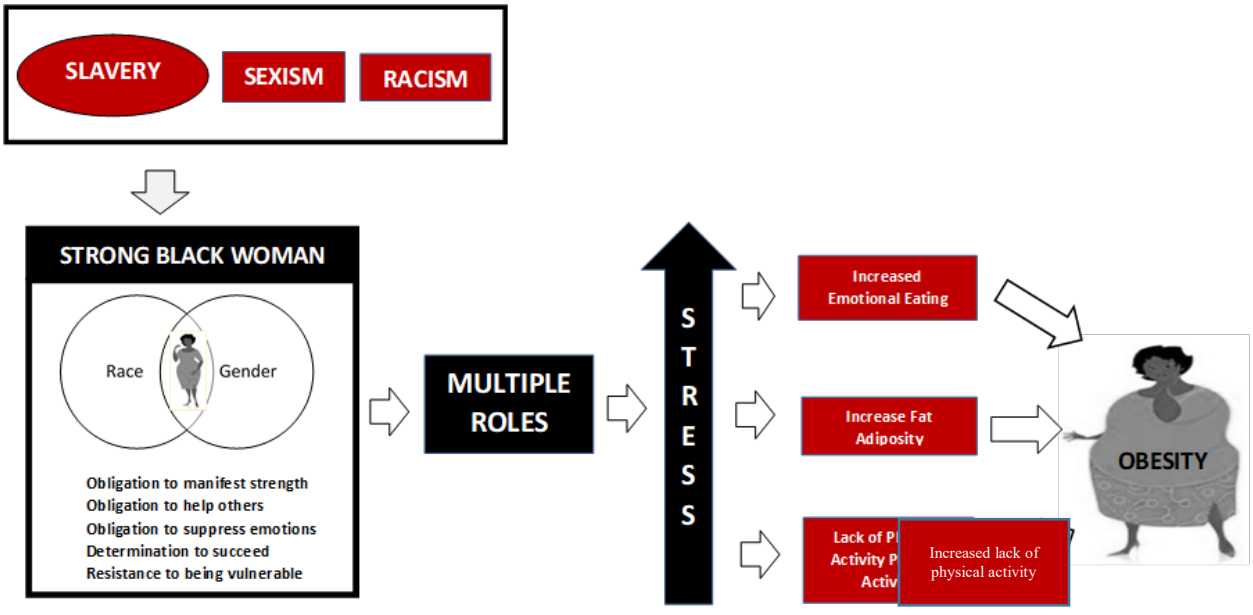

Figure 1 The Strong Black Woman Social Ecological Obesity Framework

2.2.1 Societal

As an ethnic and gender minority, slave women were subject to dual brutality (Harris-Perry, 2011). Female slaves were spared no mercy because of their gender. In fact, female slaves were held to the same rigorous labor standards as their male counterparts, but with an additional responsibility of caring for their families and children (Beauboeuf-Lafontant, 2009). Female slaves were powerless over their own bodies, existing for the sexual pleasure of their slave master; often becoming victims of sexual violence and having to bare the child of their slave master. With no parental rights to their children (Beaubouef-Lafontant, 2009), infants were wrenched from their arms shortly after birth, and sold to another plantation, never to be returned. Since male slaves were often powerless to protect their wives and children, female slaves were largely responsible for their own survival (Harris-Perry, 2011). Due to the threat of their lives the only way to cope with these conditions was to become a strong, black woman.

2.2.2 Interpersonal

AA women in the 19th and 20th century post-slavery era continued to be ostracized and subject to oppressive conditions which warranted the need for strategic coping strategies for survival, as AAs were largely powerless over their own wellbeing (Beaubouef-Lafontant, 2009). As a result, AA women continued to rely on the SBW characteristics employed during slavery as means for coping with discriminatory and oppressive societal practices such as: racial segregation, the prevalence of unpunished hate crimes, inequitable opportunities for employment and education, and subjection to discriminatory religious doctrine (Beaubouef-Lafontant, 2009). These

treacherous circumstances created an impetus for the continuation of AA women's adoption of the SBW into contemporary times.

Characteristics of the SBW have been passed down through generations by daughters observing their mothers behave in ways consistent with the SBW ideology (Woods-Giscombe, 2010). SBW characteristics of strength, independence, invulnerability, perseverance, and caring for others have been illustrated throughout generations of AA matriarchs and role models who have become nostalgic cultural images for many contemporary AA (Harris-Perry, 2011). Unfortunately, it has been found that the notion of strength only *appears* to promote AA women's independence and protect them against a life of adversity (Harris-Perry, 2011). Assuming their place on the glorified pedestal of strength silences much of AA women's ambivalence towards being unappreciated and devalued as mothers, caretakers, and problem solvers (White, 1999). Enduring ongoing shifts of paid work, childbearing, and extended family support, such women have not been protected from relational and sexual exploitation. Furthermore, AA women's strength has been called upon to compensate for the lack of men's accountability to the women and children in their lives (Hill-Collins, 2000). As a result, many AA women have had to endure the mistreatment within families and community institutions as a measure of their strength.

Some researchers suggest that, although the SBW is an adaptive response that validates and affirms the integrity of the AA female experience, it is also potentially dangerous in that it convinces AA women that they must endure any hardship life delivers on their own (Harris-Perry, 2011). In general, women who ascribe to the SBW role possess a degree of defensiveness. According to Woods-Giscombe (2010) this defensiveness derives from a history of disappointment, an obligation to be strong, and a resistance to emotional expression (Woods-Giscombe, 2010). Over time, these cultural traditions, attitudes, and behaviors have forged the

cultural identity of the SBW.

2.3 Stress and Obesity

Stress is defined as a state of threatened homeostasis, which is counteracted by adaptive processes involving affective, physiological, biochemical, and cognitive-behavioral responses in attempt to regain homeostasis (Fabricator & Wadden, 2004). Studies have demonstrated a link between stress and higher rates of obesity (Fabricatore & Wadden, 2004; Chambers et al., 2004; Dallman, et al., 2003).

The stress response is critical to survival, as it functions to help the organism adapt to challenges and maintain homeostasis (McEwen, 2010). When one experiences stress, the sympathetic branch of the autonomic nervous system (ANS) is activated rapidly, followed by the hypothalamic-pituitary-adrenal (HPA) axis. The ANS governs visceral functions such as respiration, heart rate, maintenance of blood pressure, hormone release, and digestions. The activation of the sympathetic nervous system (SNS) following stress exposure is known as the "fight or flight" response. The SNS increases respiration, blood pressure, heart rate, and activates catabolic pathways. SNS activation inhibits the effects of insulin, and suppress functions necessary for immediate survival (digestion, growth, and reproduction) are suppressed during this period. Stress activation of the HPA axis also releases glucocorticoid which binds to corticosteroid receptors. Glucocorticoid increases lipolysis, glucogenesis, and antagonizes the anabolic actions of insulin by inhibiting both its release from pancreatic cells, as well as its signaling abilities (McEwen, et a., 2010). This process leads to glucose, fatty acids, and amino acids to be shunted to the tissues that need them most.

In healthy individuals the stress response is a short process because activation of the SNS is rapidly counterbalanced by a parasympathetic "rest and digest" branch of the ANS, which terminates the HPA response. However, with prolonged stress exposure, negative pathologies can be produced. In vulnerable individuals, exposure to chronic stress can adversely affect numerous aspects of health (McEwen, 2010) and lead to weight gain. Stress has been found to promote obesity in three ways: increase in visceral fat, excess food consumption and consumption of certain unhealthy types of food, and fatigue which can lead to a lack of physical activity (McEwen, 2010).

2.3.1 Stress and Improper Nutrition

Stress and negative emotions are critical factors in inducing overeating as a form of maladaptive coping in some obese patients (Manzoni & Pagnini, 2009). Some researchers have found that overeating is related to trauma (Adam & Epel, 2007). As a response to trauma, compulsive overeating or binge eating may be a way for individuals to attempt to regulate their emotions. The act of eating is emotionally-numbing and provides a brief escape from the myriad of overwhelming concerns (Harrington et al., 2010). Harrington et al. (2010) suggested that self-silencing, a way of prioritizing others' needs above one's own and adopting external standards of self-evaluation, may also play a key role in overeating (Harrington et al., p. 470). Many people who increase food intake in response to stress, report craving foods that are high in fats and sugar. This "comfort food" effect is thought of as non-homeostatic feeding and is proposed to activate brain reward systems and dampen stress responses.

2.3.2 Stress and Physical Activity

Physical activity has been demonstrated to promote positive changes in one's mental health and ability to cope with stressful encounters (Salmon, 2001). Exercise, a form of moderate-to-vigorous physical activity, has been observed to lower stress in numerous populations from athletes to older adults to veterans with post-traumatic stress disorder (Stults-Klehmainen & Sinha, 2014). Randomized clinical trials have determined that exercise is an effective method for improving perceived stress, stress symptoms, and quality of life (Stults-Klehmainen & Sinha, 2014).

2.3.3 Perceived Stress

Stress can be defined as real or perceived threat to homeostasis (Goldstein, 2007). For the purposes of this study we will be focusing on perceived stress. Perceived stress is the feelings or thoughts that an individual has about how much stress they are under at a given point in time or in a given time period (Cohen, 1983). Perceived stress incorporates: feelings about the uncontrollability and unpredictability of one's life; how often one has to deal with irritating hassles; how much change is occurring in one's life; and confidence in one's ability to deal with problems or difficulties (Cohen, 1983).

High perceived stress has been associated with poor diet quality (Lui, 2014), greater intake of snack foods and lower intake of fruit (Liu, 2014), and binge eating (Wang, 2006). Richardson et al. (2015) found that women's perceived stress was positively associated with uncontrolled eating, emotional eating, and severe obesity. Barrington et al. (2007) found that employees who had a high perception of stress at their job were the least active than those who had a low perception

of stress.

2.4 African American Women and Stress

2.4.1 Societal factors

Racism and sexism are distinct stressors that contribute to high levels of psychosocial health risk among AA women (Clark, Anderson, Clark, &Williams, 1999) and is a prevalent source of chronic strain and psychological distress for AAs (Brown, Keith, Jackson, & Gary, 2003). Consequently, without adequate coping resources and strategies, the cumulative, persistent stress produced from racism triggers physiological responses that can "weather" the body (Geronimus et al., 2010) and lead to poor chronic mental health and physical health outcomes (Jackson, Knight, & Rafferty, 2010).

Perceived racial discrimination has been associated with overweight and obesity (Gee et al., 2008). The Black Women's Health Study reported experiences of racism were associated with higher mean 8-year weight gain and with greater increase in waist circumference over time (Cozier et al., 2009). For AA women, racism related stress may be compounded by experiences of sexism (Perry et al., 2013). Thomas et al. (2008) examined the effects of racism and sexism on stress and argued that AA women experience a unique form of oppression that is specific to this race-gender subgroup. AA women who reported discrimination attributed to both racism and sexism reported elevated stress levels and psychological distress, while reports of discrimination attributed to sexism alone, did not (Thomas et al. 2008).

2.4.2 Interpersonal factors

Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful events (Taylor, 1998). Two general coping strategies have been identified that include problem-solving strategies and emotion-focused strategies. Problem-solving strategies are efforts to do something active to alleviate stressful circumstances. Emotion-focused strategies involve efforts to regulate the emotional consequences of stressful or potentially stressful events (Taylor, 1998).

An additional distinction in coping strategies that is often made in the literature is between active and avoidant coping strategies (Taylor, 1998). Active coping strategies are either behavioral or psychological responses designed to change the nature of the stressor itself or how one thinks about it, whereas avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events. Active coping strategies, whether behavioral or emotional, are thought to be better ways to deal with stressful events (Taylor, 1998)

As previously mentioned, as an ethnic and gender minority, slave women were powerless over their situation and only had themselves to depend on. Due to the ongoing threat of their lives, the only coping mechanism available were avoidant coping strategies. Studies have found that AA women often utilize avoidant coping strategies like overeating and increased alcohol consumption (Stevens-Watkins et al, 2013). Woods-Giscombe (2010) found that SBW had the tendency to engage in *stress–related negative health behaviors* like postponing self-care, engaging in emotional eating, and having poor eating habits. SBW were likely to have an *embodiment of stress*, internalizing their stress and using unhealthy coping strategies in response to stress (Woods-Giscombe, 2010). Like other eating disorders overeating is a "transference process" through which

women use their bodies to symbolically absorb and manage injustice in their lives (Thompson, 1994). The intake of large quantities of food in a short time period can serve to numb, soothe, and literally shield some women from the physical and emotional trauma (Hesse-Bebber, 1997).

For AA women being strong while immersed in social conditions where their minds, bodies, and spirits, binging allows them a temporary respite without disturbing their responsibilities to others (Beauboeuf-Lafontant, 2009). Perceived as strong, AA women are unable to recognize and therefore act on the hurts, disappointments, and fears more easily associated with other race-gender groups. Therefore, losing direct recourse to what they know, want, and need, resulting in overeating and weight gain.

2.5 African American Women and Obesity

Obesity is defined as an abnormal or excessive fat accumulation that presents a risk to health (WHO, 2010). One measure of obesity is body mass index (BMI), which takes an individuals' weight in kilograms and divides it by the square of the individuals' height in meters. A BMI of 30 or more is considered 'obese.' Improper nutrition and physical inactivity have been found to be major factors contributing to obesity in the larger population (WHO, 2010). AA women have the highest rates of obesity of any other racial/ethnic group, as well as have the poorest nutrition (Scott, 2010), and the lowest physical activity rates (CDC, 2014). Figure 1, shows the Strong Black Woman Obesity Framework.

2.5.1 Societal Factors

Improper nutrition can include overeating, or a high intake of calories and diets high in simple carbohydrates (Balentine & Stoppler, 2007). Overeating leads to weight gain, especially if the diet is high in fat. Foods high in fat have high energy density, which translates to a lot of calories (Balentine & Stoppler, 2007). Diets that are high in simple carbohydrates promote the growth of fat tissues leading to weight gain.

Research has found that the average diet of AA adults is high in carbohydrates and fat (Scott et al., 2010). To understand the palate of AA adults, it is important to understand the culture and history of the AA diet '*soul food.'* The eating habits of AA women are significantly influenced by cultural celebrations and rituals, which often include eating foods prepared by frying, seasoning with animal fat, or adding refined sugar (Boggs et al. 2013). The association of these specific foods during social interactions, like the SBW ideology, are imbedded into their culture and the history of slavery.

Under the institution of slavery, the diets of enslaved blacks in the United States were subject to the material limitations placed upon them by their slaveholders (Mitchell, 2009). Wholesome meat, usually the intestines, stomach, feet, head and fat of the dressed pig, 5 pounds of meal for cornbread and molasses were provided every Sunday (Mitchell, 2009). Slaves were rarely if ever provided with seasonings, therefore slaves began using pork products and fat to season their foods. To this day, the most famous dish in the AA community are collard greens cooked with ham hocks or fatback (Mitchell, 2009).

The diets of the slaves were also marked by the constant threat of shortages stemming from dependence upon slave masters for staple food rations. The most popular method of food preservation was salting, which added a large amount of sodium to foods, but allowed the food to

last for months without any refrigeration (Mitchell, 2009). Frying, a technique that slaves brought with them from Africa, involves cooking foods over high heat in heavily saturated fats such as palm oil and coconut oil. Frying was a common food preparation method because it was fast and added extra calories to fuel their days of forced agricultural labor (Whit, 2007).

In the context of slavery, salting, frying, and seasoning food with pig body parts were adaptive techniques. They helped enslaved blacks deal with the material scarcity and time demands that defined daily existence (Mitchell, 2009). To this day, these dishes are commonly seen at AA family and social events. The most well-known *soul foods* are fried chicken, barbecued ribs, pork chops, fried fish, chicken fried steak, oxtails, collard greens cooked with ham hocks, cornbread with bacon fat, and buttered grits (Mitchell, 2009). These traditional soul food dishes are high in fat, sodium, sugar, and calories, which as previously mentioned, are associated with higher rates of obesity.

Physical activity can be defined as any bodily movement produced by skeletal muscles that use energy (WHO, 2017). Physical inactivity has been recognized as the fourth leading risk factor for mortality around the world, contributing to an estimated 3.2 million deaths (WHO, 2015). Current guidelines recommend that adults engage in at least 150 minutes of moderate-intensity aerobic physical activity (Ferguson, 2014). Only 35% of AA women meet this daily recommendation (CDC, 2010), making AA women the least active demographic group in the U.S. Physical activity is useful to the prevention and treatment of many adverse conditions that AA women disproportionally suffer from, including heart disease, type 2 diabetes, some cancers, and obesity (CDC, 2017).

Researchers have used a cultural approach to gain an understanding of reasons for the lack of physical activity amongst AA women. Joseph, R. et al., (2015) conducted a systematic

integrative literature review to identify barriers to physical activity among AA women. He found that role of family and gender, and lack of social support were frequently reported as barriers to physical activity for AA women (Joseph et al., 2015); juggling multiple roles as wife, mother, caregiver, and breadwinner. AA women are expected to be the backbone of families and communities. They are taught to combine caretaking responsibilities of women with the emotional fortitude and self-reliance associated with men (Beaubouef-Lafontant, 2009). SBW are usually encouraged within their families and communities to think of themselves primarily as the emotional and financial caretakers of the men in their lives, and to associate self-care and concern with weakness and selfishness; therefore, making time for physical activity is the last thing on their mind or last on their priority list.

2.5.2 Intrapersonal factors

Joseph et al. (2015) found that lack of time and motivation, and tiredness/fatigue were frequently identified as barriers of physical activity for AA women among studies. Lack of time, motivation, and tiredness/fatigue was found to be due to participants efforts to balance both work and household/caregiving responsibilities (Joseph et al., 2015); which should be of no surprise given the multiple roles that AA women usually play within their families and community. The next most frequently identified barrier found was hair care maintenance (Im et al., 2012). Hair for AA is considered important body projects reflecting good grooming, self-pride, and individuality (Beaubouef-Lafontant) Participants reported that they did not engage in physical activity because they did not want to "sweat out" their hairstyle or because they perceived sweat as an irritant to their head/scalp. The cost and time associated with maintaining many AA hairstyles when being physically active appeared to compound this issue as study participants reported not having the

time or monetary resources to have their hair professionally maintained on a more frequent basis (Im et al., 2012).

Cultural perception of an appropriate body type is another barrier found that contributes to the lack of physical activity amongst AA women (Powell and Kahn, 1995). Researchers have found that AA women and the AA culture are more accepting of a larger frame, which would be considered overweight (Im et al., 2012). AA men prefer a heavier female body weight than Caucasian men, and the ideal body weight reported by AA women is higher, on average, than the ideal reported by Caucasian women (Chithambo & Huey, 2013). After accounting for demographic variables such as socioeconomic status, occupation, living environment, and food process, Burke and Heiland (2008) reported that ideas of body image and weight acceptance might be having an impact on AA women's weight status. They observed that AA women and Caucasian women appear to be internalizing different messages about weight and desirability. They referenced that magazines targeting Caucasian women prioritize messages of fitness and weight loss with an overall projection of a thin or slender body. Alternatively, images and messages in AA women's magazines have markedly fewer articles on exercise and weight loss and tend to focus on strength and health.

2.6 African American Women and the Black Church

AA women have a long and intricate history with the church. AA women make up 70 -90 percent of black congregations and are regarded as the backbone of the black church (Lowen, 2019). Unfortunately, like within the U.S. society AA women play multiple roles within the black church as: the mother of the church, Sunday School teachers, leaders of the children's programs,

organizing fundraisers, cleaning the sanctuary, leading choirs, and ushering. The difference between the U.S. society and the black church is that AA women get refuge and solace within the black church.

The AA church was chosen as the setting for this study with the assumption that AA women who attend church would also have the characteristics of SBW. Sahgal and Smith (2009) found that AAs were more likely to belong to a church and attend church regularly compared to other demographics. The presence of spiritual values, such as faith, religion, and spirituality, is also a characteristic of the SBW (Woods-Giscombe, 2010). According to Woods-Giscombe, through AA women's reliance on their faith, they were able to manifest strength during difficult circumstances without the help of other people. Reliance on religion and spirituality as a means of psychological support is a cultural practice that developed during the difficult times of slavery where survival of the harsh realities of slavery required slaves to fend for themselves and become self-reliant (Beauboeuf-Lafontant, 2009). When human strength was not enough, slaves relied on their spirituality to help them survive and overcome the treachery of enslavement. As a result, reliance on spirituality for survival and success became a culturally accepted form of coping (Harris-Perry, 2011).

Religious beliefs about how faith is manifested may contribute to AA women's tendency to suppress emotions. Many people contend that fear or vulnerability equates to a lack of faith in God, and lack of faith constitutes sinful behavior (Lincoln & Mamiya, 2003). As a result, AA women are sometimes left with few places to exercise the full extent of their humanity when facing stress and pressure that can lead to psychological distress (Harris-Perry, 2011). For traditionally-oriented AA women who want to honor cultural values, pushing through and ignoring feelings of uncertainty and doubt and relying on faith are ways to deal with the stressors of life. (Woods-

Giscombe, 2010). Women who acknowledge symptoms of psychological distress and seek professional counseling place themselves at risk of being perceived (by themselves and others) as weak, lacking a strong racial identity, or lacking faith in God (Beauboeuf-Lafontant, 2009).

2.7 Strong Black Woman in Other Studies

Only a few studies have investigated the impact of the SBW ideology on mental and physical health of AA women, with the majority of these studies focusing on SBW ideology and mental health. These studies have found that women who adopt SBW ideology had higher depression, anxiety, and perception of stress, as well as emotional eating, higher BMI and hypertension (Woods-Giscombe, 2009; Romero, 2000: Beaubouef-Lafontant, 2009; Offuit, 2013; Donovan and West, 2015, Graham, 2013; Rivers 2015). Fulton (2018) found that women who adhered to the SBW ideology were less likely to seek treatment for mental health. This confirms results of other studies which demonstrated that women who conceptualized the SBW ideology were more likely to cope with emotional eating (avoidant coping strategy).

Offutt (2013) investigated whether there was a relationship between the SBW ideology, depression, and emotional eating that might be contributing to the high obesity rates amongst AA women. Like the current study, Offutt's study was conducted in predominately AA churches located in St. Petersburg, Florida. Sixty-six women completed the Strong Black Woman Cultural Construct Scale (SBWCCS), Emotional Eating Scale (EES) and the Center for Epidemiological Study-Depression Scale (CES-DS). This study found a significant relationship between depression and emotional eating, but not between SBW and depression or emotional eating. Offut (2013) noted that her findings pertaining to the relationship between SBW and depression, and SBW and

emotional eating might be due to some degree of social desirability bias because her findings were not consistent with other studies. She noted that there are several questions on the scale that the women could possibly have perceived as a threat to a self-perception of strength.

Donovan & West (2015) using the Strong Black Woman Cultural Construct Scale (SBWCCS) and the Depression Anxiety Stress Scale found that amongst 92 AA college females, both moderate and high levels of SBW ideology increased the relationship between stress and depressive symptoms, while low levels of SBW endorsement did not. Drakeford et al. (2017), also found that amongst 289 AA women, the women who conceptualized the SBW persona were more likely to suppress their stressful issues and this suppression was positively correlated to high depression and anxiety. In this study, there was no correlation found between women who conceptualized the SBW persona and stress.

Graham (2013) examined the influence of the SBW attitudes on how AA women perceived and coped with stress. The study included 100 African American female faculty, staff and students from five universities in the eastern region of the United States. Using the SBWCCS, PSS-10, and the Africultural Coping Systems Inventory surveys. This study found that SBW attitudes of Caretaking, and Affect Regulation, as well as Cognitive-Emotional Debriefing from culture-specific coping were associated with higher levels of stress. However, SBW attitudes did not have a mediating effect on participants' level of perceived stress. This is interesting because presumably these are educated women and this in itself sets them apart from other women.

Rivers (2015) investigated the acceptance of the SBW persona and BMI, high blood pressure, stroke, and diabetes in 127 AA women. SBWCCS was used to measure mental and emotional strength, EES was used to measure eating behaviors in response to anger, frustration, depression, and depressed moods, and Perceived Stress Scale – 10 Item (PSS-10) measured

perceived stress. Results revealed that SBW was significantly related to BMI and high blood pressure. There was no significant relationship between SBW and stroke or diabetes.

3.0 Methods

This study investigated the relationships between Strong Black Woman (SBW) ideology, stress, and obesity among AA women. The following research questions guided this study:

Research Question 1: What is the level of perceived stress, BMI, and SBW ideology among AA women who attend church?

Research Question 2: Is there a relationship between SBW ideology and perceived stress among AA women who attend church?

Research Question 3: Is there a relationship between SBW ideology and BMI among AA Women who attend church?

Research Question 4: Is there a relationship between perceived stress and BMI among AA women who attend church?

3.1 Settings

The setting for this study is the AA church also known as the Black church. The Black Church is the term used in popular culture and scholarly literature to refer to the overall institution that encompasses individual, predominantly AA Christian congregations (Pinn, 2002). The Black church is a central institution in the AA community (Hendricks, L., Bore, S., & Rsty-Waller, L., 2012) and the first institution created by AA people (Lincoln & Mamiya, 1990). The primary purpose of the early churches was to serve as a place of religious worship, but later churches became the place of refuge and life-direction for escaped slaves. Throughout history the Black

Church found itself in the middle of social issues, serving stations on the Underground Railroad; after slavery, a place to educate former slaves using the Bible to help AAs learn to read; during the depression years, fed and clothed those who needed assistance; and served as a place where community leaders promoted social, economic, and political change (Lincoln & Mamiya, 1990).

From the church, secular organizations such as the National Association for the Advancement of Colored People (NAACP) and the National Urban League evolved (Lincoln & Mamiya, 1990). Institutions of higher learning such as Morehouse and Spelman Colleges started in the basements of AA churches and produced church leaders such as the Reverend Dr. Martin Luther King, Jr., who attended Morehouse College (Lincoln & Mamiya, 1990). In the 1980s, the church enhanced its involvement in community economics, politics, education, housing, recreation, employment, and health and medical care (Lincoln & Mamiya, 1990).

Some experts will say that the Black church today has lost its social and political strength, but nationwide 87% of AAs report belonging to a formal religious institution with 59% of AA women attending church more than once per week, the highest for any demographic in the U.S. (Religious Landscape and Survey 2009). In general, faith is a strong guiding force in the lives of AA women and the presence of spiritual values is one factor in the SBW ideology (Woods-Giscombe, 2010).

For this study, data was collected from three AA Baptist churches located in Allegheny County. Thirteen percent of the population in Allegheny County are Black or AA (U.S. Census Bureau, 2017). Twenty-three percent of AA women in Allegheny county are married (U.S. Census Bureau, 2017); and 22.5% have attained a bachelors or higher (U.S. Census Bureau, 2017). Church 1 was founded in the late 1884's and has a congregation roll of over 2000 members; Church 2,

was founded in 1912 and has a membership of more than 200 members; and Church 3, was founded in 1881 and just under 100 members.

3.2 Participants

Participants were women who self-identified as AA or black and were members or long-time attenders of one of the three churches described above. To be included in this study, participants had to be at least 30 years of age, with no upper limit on age for inclusion. Members who were blind, vision impaired, unable to write or had other limitations that would have prevented them from completing the survey were excluded from the study.

3.3 Instrumentation

3.3.1 Demographic Characteristics

The demographic survey items consisted of questions adapted from the Behavioral Risk Factor Surveillance Survey (CDC, 2013) to describe the sample as well as collect information to calculate BMI. Demographic questions included participant age, weight, height, relationship status (i.e., single, have a partner, married, divorced, separated or widowed), highest level of education (i.e., none, high school diploma, associate degree, vocational degree, bachelor's degree, master's degree, Ph.D.), and chronic conditions (i.e., high blood pressure, diabetes, high cholesterol). The BMI of participants was calculated with self-reported height and weight by using the National

Heart Lung and Blood Institute Standard BMI Calculator (National Heart, Lung and Blood Institute (NHLBI, 2014). BMI was then categorized using the CDC's standard weight status categories: underweight (below 18.5), normal weight (18.5 – 24.9), overweight (25.0-29.9), and obese (30.0 and above). Appendix C contains the complete demographic questionnaire.

3.3.2 Strong Black Woman Construct Cultural Scale

SBW ideology was measured using the Strong Black Woman Cultural Construct Scale (SBWCCS) (Hamin, 2008). SBWCCS is a revision of the Strong Black Woman Attitude Scale (Thompson, 2003). The revised scale consisted of 22 items. The SBWCCS was found to have adequate internal consistency (.76) in a sample of 152 African American women (Hamin, 2008).

The 22 items were rated on a 5-point Likert scale (1 = never to 5 = almost always). Some questions asked included, "I believe that it is best not to rely on others" and "I should be able to handle all that life gives me." The SBWCCS was scored totaling all items on the scale, with a range of total score between 22-110 points. Higher scores indicated a greater identification with SBW ideology. Appendix D contains the complete SBWCCS survey.

3.3.3 Perceived Stress Scale

Perceived stress was measured using the PSS-10 (Cohen, 1988). PSS-10 is a popular, well-known global indicator instrument used to measure perceived stress. PSS-10 consists of 10 items and rated on a 4-point Likert scale (0 = never to 4 = very often). An example question from the PSS-10 was "In the last month, how often have you been upset because of something that happened expectantly?" Scores on four items (numbers 4,5,7 and 8) were reverse coded. An overall score

was computed by calculating the sum of all 10 items, with a score range of 0-40 points. Perceived stress levels were placed into three categories based on overall score: high stress (>27 points), medium stress (13 to 27 points), and low stress (<13 points). This scale has been shown to have adequate reliability (.75) and validity with African American samples (Cohen & Williamson, 1988). Appendix E contains the complete PSS-10 instrument.

3.4 Data Collection

Church pastors were contacted via telephone by the researcher to request permission to introduce the study to their AA female members/attenders and distribute the survey to those willing to participate.

On the day of data collection, the pastor introduced the researcher to potential participants after a Sunday service or during a Women's Ministry meeting. The researcher explained the purpose of the study and invited eligible participants to complete the survey at that time. The recruitment script is available in Appendix B. At one of the churches visited, participants were asked to remain in the sanctuary and to sit on either end of the pews/rows. At the other churches, participants were asked to accompany the researcher into a separate room with tables and chairs.

The researcher distributed envelopes that included copies of the consent form, the survey, and a pencil. The researcher read through the informed consent as the participants followed along. During this time, participants were given another opportunity to decide not to participate; however, none of the participants declined to participate. Participants were then asked to complete the survey and once completed to insert survey in the envelope, seal it, and hand it back to the researcher. All survey items were combined into one booklet for ease of administration. All surveys were labeled

with an ID number for identification purposes where the first two letters identified the church, while the last two numbers corresponded to the participant ID (e.g. RB 01). No names were collected on any of the surveys.

3.5 Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) statistical software version 25 (IBM, Armonk, NY) was used to analyze the data. Data from the surveys were inputted in Microsoft Excel and uploaded into the SPSS system. Frequencies were generated on demographic items including age, education, relationship status, and reported health conditions. Statistical significance was set at $p < 0.05$.

To address research question one, "What is the level of stress, obesity and SBW ideology among AA women who attend church?" descriptive statistics for BMI categories, total PSS-10 scores, and SBWCCS scores, were calculated, with means and standard deviations. Frequencies were calculated for participants with low, medium, and high perceived stress as well as frequencies for obesity categories (e.g., underweight, normal, overweight, obese).

To address research questions 2, 3, and 4, Pearson product-moment correlations were performed to measure the relationship between perceived stress and SBW ideology, SBW ideology and BMI, and perceived stress and BMI. Relationships were summarized in correlation coefficient matrix tables while reporting scatterplots and effect sizes. Effect size cut-points of .1 (small), .3 (medium), and .5 (large), were used (Cohen, 1988)

4.0 Result

4.1 Sample Characteristics

Participants included 84 AA women attending three Black churches in Pittsburgh, Pennsylvania. Eight surveys were excluded from data analysis due to participants not answering questions the demographic questionnaire, resulting in a final analytic sample of n=76. The demographic profile of the sample is reported in **Table 1.** On average, participants were 55.29 ± 13.69 years old. Majority of the women sampled were married (34.2%), followed by single (23.8%), divorced (17.1%), widowed (13.2%), having a partner (6.5%), and separated (5.2%). A quarter of the women had completed high school or less (25%), while 75% had more than a high school education. Almost half the women reported having diagnosed high blood pressure (42.1%), while 14.5% had diabetes, and 21.1% had high cholesterol. Nearly one-third (28.9%) of the women reported other chronic conditions, arthritis and fibromyalgia being the highest (3.9%) followed by asthma and cancer (2.6%).

Table 1 Sample characteristics of n=76 African American women regularly attending Black churches in Pittsburgh

	N	%	M	SD
Age, years			55.29	13.694
Weight, lbs			177.54	41.31
Height, inches			64.2	3.59
Marital Status				
Single	18	23.8%		
Partner	5	6.5%		
Married	26	34.2%		
Separated	4	5.2%		
Divorced	13	17.1%		
Widowed	10	13.2%		
Highest Education				
High School	19	25%		
Vocational	10	13.2%		
Associates	18	23.7%		
Bachelors	13	17.1%		
Masters	14	18.4%		
PhD, MD, EdD	2	2.6%		
Chronic Conditions				
HBP	32	42.1%		
Diabetes	11	14.5%		
HCL	16	21.1%		
Other Conditions	20	26.3%		

NOTE: HBP, high blood pressure; HCL, high cholesterol

4.2 Levels of Stress, Obesity, and Strong Black Woman Ideology

Table 2 includes the levels of stress, obesity, and SBW ideology in the sample of 76 AA women. One fourth of the women were categorized as normal weight, while 28.9% were overweight and 46.1% obese, 0% of the women were underweight. BMI ranged from low of 19.97 to a high of 48.8, with a mean of 30.25 ± 6.21; therefore, on average, this sample was obese. Perceived stress scores ranged from a low of 0 to high of 35, with a mean of 22.26 ± 7.62. Approximately 12% of the women were categorized as low stress, while 42.1% were moderate and 47.4% high. Participants' scores of SBW ideology ranged from a low of 51 to a high of 103, with a mean score of 82.75 ± 11.15.

Table 2 Levels of Obesity, Stress, and Strong Black Woman Ideology of n = 76 African American Women Regularly Attending Black Churches in Pittsburgh, PA

	N	%	Min	Max	M	SD
BMI			19.97	48.81	30.25	6.21
Normal	19	25.0%				
Obese	35	46.1%				
Overweight	22	28.9%				
Perceived Stress			0	35	22.60	7.62
High	36	47.4%				
Medium	32	42.1%				
Low	9	11.5%				
SBW Ideology			51	103	82.75	11.15

NOTE: BMI, Body Mass Index; SBW, Strong Black Woman. BMI was calculated using participant self-reported height and the standard BMI calculation, weight in kilograms divided by the square of height in meters. BMI categories were based on CDC recommendations. Perceived Stress was assessed by total score on the PSS-10 survey. SBW ideology was assessed with total scores the Strong Black Woman Cultural Construct Scale.

4.3 Relationship Among BMI, Stress and SBW Ideology

Table 3 presents the correlation matrix table to answer **Research Questions 2, 3, and 4:** What is the relationship among BMI, Perceived Stress, and SBW ideology?

Table 3 Relationship Among BMI, Stress, SBW Ideology of n = 76 African American wWomen Attending Black Churches in Pittsburgh, PA

	BMI	Perceived Stress	SBW Ideology
BMI	1		
Perceived Stress	.682**	1	
SBW Ideology	.507**	0.642**	1

*NOTE: BMI, Body Mass Index; SBW, Strong Black Woman; ** Correlation significant at the p < 0.01 level (2-tailed)*

SBW ideology and BMI. A Pearson product-moment correlation was computed to assess the relationship between SBW ideology (M = 82.75, SD = 11.15) and BMI (M=30.25, SD = 6.21). Overall, there was a strong, positive correlation between SBW Ideology and BMI (r = 0.507, R^2 = .257, n = 76, p < 0.01). A scatterplot summarizes the results (Figure 2). Increases in SBW ideology scores were correlated with increases in BMI.

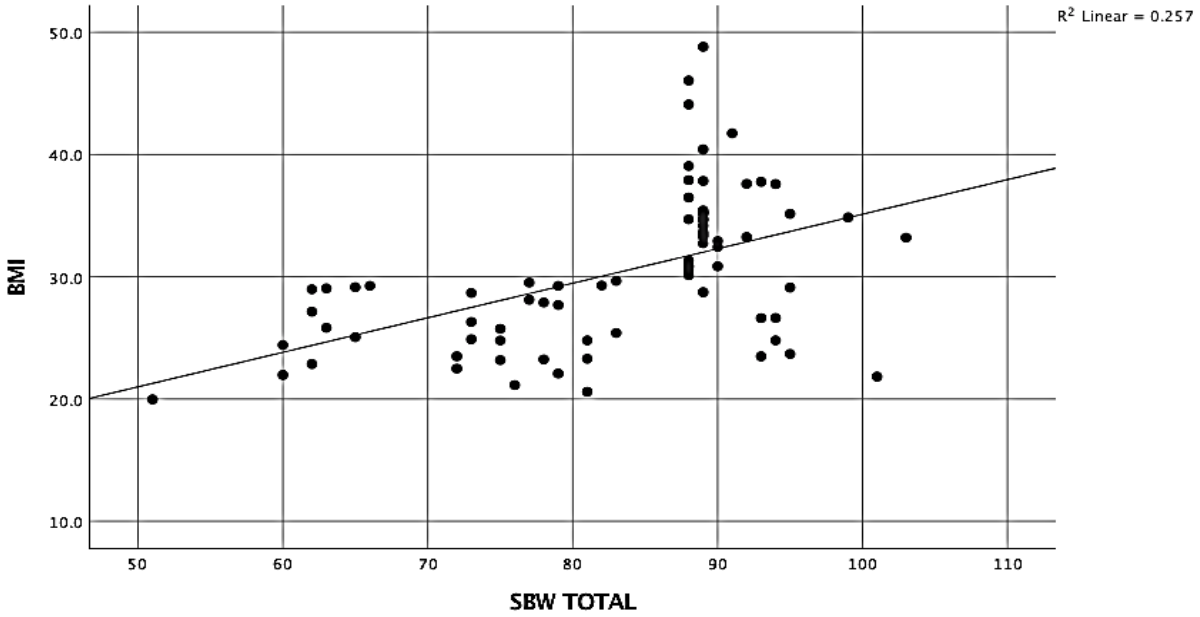

Figure 2. Scatterplot of relationship between BMI and SBW Ideology

SBW ideology and perceived stress. A Pearson product-moment correlation was computed to assess the relationship between SBW ideology (M = 82.75, SD = 11.15) and perceived stress (M = 22.60, SD = 7.62). Overall, there was a strong, positive correlation between SBW Ideology and perceived stress (r = 0.64, R^2 = 41, n = 76, p = 0.01). A scatterplot summarizes the results (Figure 3). Increases in SBW Ideology scores were correlated with increases in perceived stress.

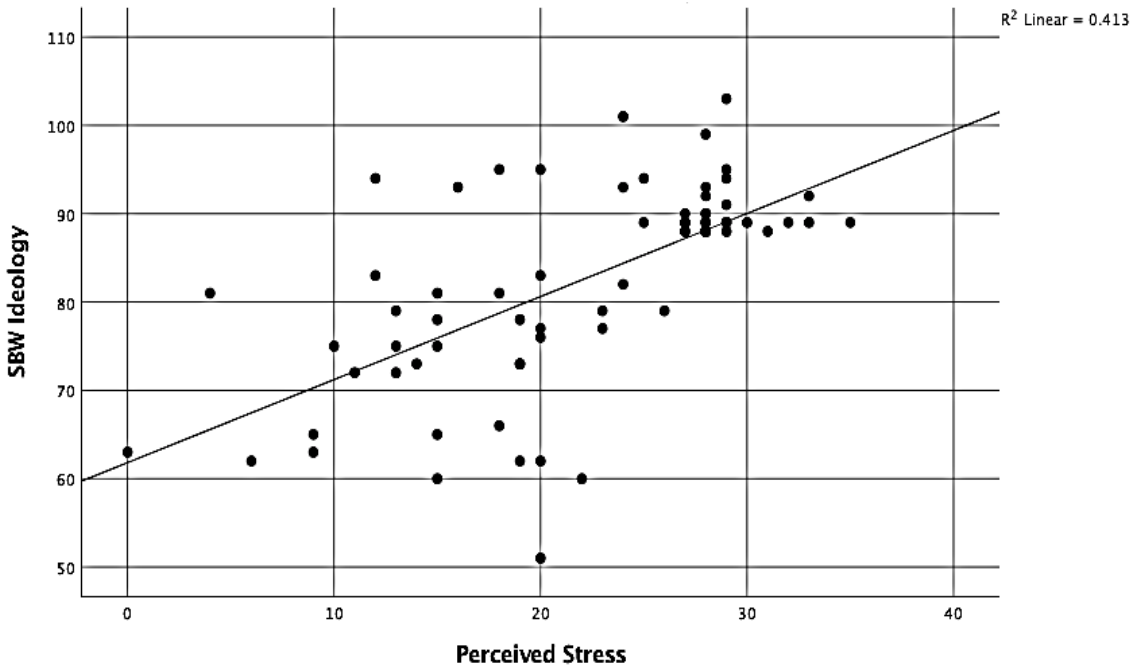

Figure 3 Scatterplot between SBW Ideology and Perceived Stress

Perceived stress and BMI. A Pearson product-moment correlation was computed to assess the relationship between perceived stress (M = 22.6, SD = 7.62) and BMI (M = 30.25, SD = 6.21). Overall, there was a strong, positive correlation between perceived stress and BMI (r = 0.682, R^2 = .46, n = 76, p = 0.01). A scatterplot summarizes the results (Figure 4). Increases in perceived stress was correlated with increases in BMI.

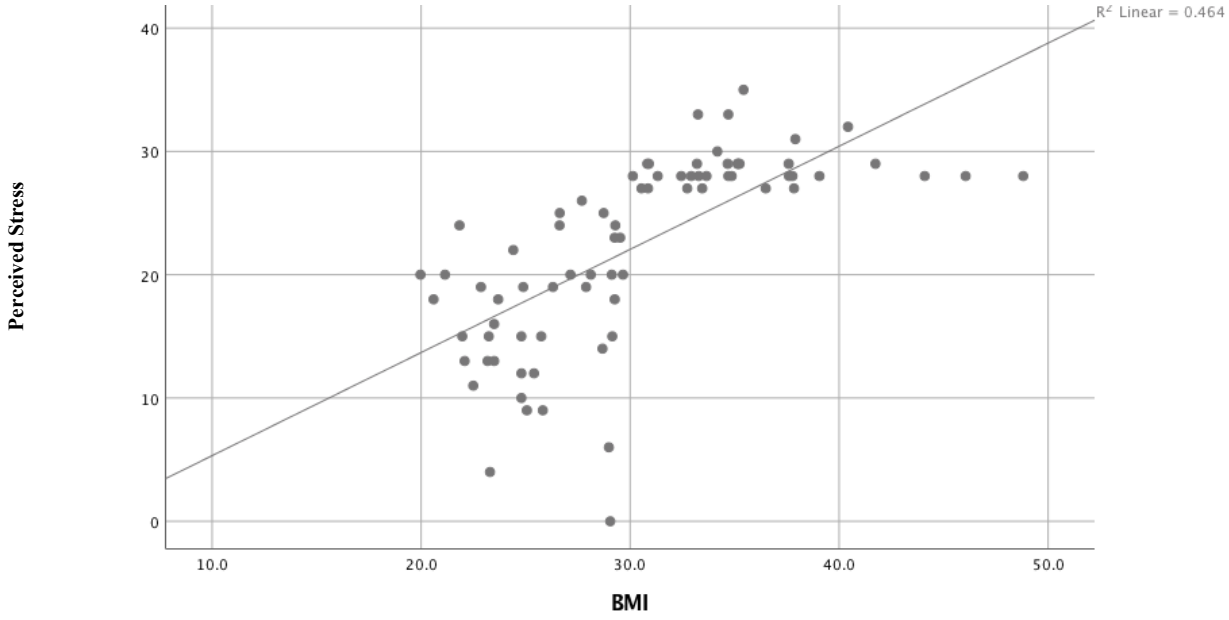

Figure 4 Scatterplot of relationship between BMI and Perceived Stress

5.0 Discussion

The purpose of this study was to examine the relationship between the SBW ideology, stress, and obesity in AA women who attend church. The research questions that guided this study were: 1) What is the level of perceived stress, BMI, and SBW ideology among AA women who attend church? 2) Is there a relationship between SBW ideology and perceived stress among AA women who attend church? 3) Is there a relationship between SBW ideology and BMI among AA Women who attend church? 4) Is there a relationship between perceived stress and BMI among AA women who attend church? In this study, 75% of the participants were overweight or obese. Mean levels of perceived stress and SBW were high. Results of the analyses revealed that there were strong, positive correlations between SBW Ideology and BMI, SBW Ideology and perceived stress, and perceived stress and BMI.

5.1 Summary of Key Findings

5.1.1 Sample Characteristics

Approximately 34% of the women in this study were married, higher than the 26.2% national average and the 22.8% Allegheny county average for AA women (U.S. Census Bureau, 2017); but in line with the national average for AA women who attend church (Religious Landscape Survey Research, 2015). The high rates of marriage might be due to the setting of the

study. Christianity looks down on fornication, therefore increasing the likelihood of participants being married.

Sixty-two percent of participants completed at least a bachelor's degree, more than double the national average of 23.8% and Allegheny county average of 22.5% (U.S. Census Bureau, 2017). The higher percentage of women attaining more than a high school education within this sample might be attributable to the higher percentage of women being married. Research has found that women who have more than a high school education are more likely to be married (U.S. Religious Landscape Survey Research, 2015). Rates of diagnosed diabetes and high blood pressure within this sample were similar to the national average for AA women; while rates of high cholesterol were lower than the national average (CDC, 2017)

5.1.2 SBW Ideology

The average scores from the SBWCCS were consistent with other studies conducted in the AA church (Offuit, 2013); but higher than studies conducted in other settings (Graham, 2013; Rivers 2015; Donovan and West, 2015). One of the characteristics of SBW is faith and spiritual values (Woods-Giscombe, 2008), which might explain the high level of SBW ideology found within this sample. The level of SBW ideology, despite sample being more likely to be married and educated, may indicate the continuing universality of SBW ideology within the culture (Beaubouef-Lafontant, 2007; Romero, 2000), at least for this sample.

5.1.3 Perceived Stress

PSS-10 scores from this current study were higher than those reported in the original validation study of the instrument with an AA sample (Cohen et al., 1983), but consistent with Hamin's (2008) findings that women who adopt the SBW ideology have higher perceived stress. The high perception of stress might be because, AA women who internalize the SBW ideology are usually hesitant to openly acknowledge or seek help pertaining to their life stressors (Woods-Giscombe, 2010). These findings are of great concern because stress has been positively associated with the same chronic diseases that AA women are disproportionately affected by, including some cancers, diabetes, hypertension, stroke, heart disease and obesity (Office of Minority Health, 2017).

5.2 Relationships Among Variables

5.2.1 SBW Ideology and Stress

The current findings support a relationship between SBW ideology and stress. In this study, higher levels of SBW ideology were associated with higher stress, which is consistent with previous research (Donovan & West, 2015; Graham, 2013). Graham (2013) examined the influence of SBW attitudes on how AA women perceive and cope with stress. The study included 100 AA female faculty, staff, and students from five universities in the eastern United States. Results from the study found that stress was a significant predictor of SBW ideology. Donovan and West (2015) also sampled AA female college students; and examined the relationships among

SBW ideology, stress, and anxious and depressive symptoms. The sample included 92 AA female students from a diverse, urban commuter university. Results revealed that AA female college students who had moderate or high levels of SBW ideology also had higher levels of stress in comparison to those who had lower levels of SBW ideology. The positive association between SBW ideology and perceived stress might be because SBW are likely to have an embodiment of stress; internalizing their stress and using unhealthy coping strategies in response to stress (Woods-Giscombe, 2010).

5.2.2 SBW Ideology and BMI

The results from this study supported a relationship between SBW ideology and BMI. A strong positive relationship was found between SBW ideology and BMI, which indicated that higher levels of SBW ideology were associated with higher BMI. These findings are consistent with Rivers (2015), who found a significant weak but positive relationship between SBWCCS and BMI. Difference in strength of correlation between this study and Rivers (2015) might be the setting of the study. Rivers (2015) recruited participants from the BDO website, an AA organization that focuses on addressing health issues as they relate to AA individuals. The 127 participants who completed the survey that was posted on BDO website and Facebook page might already practice healthy lifestyles, in comparison to this study's sample of AA women who attend church, who might not be practicing healthy lifestyles.

5.2.3 Stress and BMI

The current findings support a relationship between stress and BMI. A strong positive relationship was found between stress and BMI indicating that higher levels of perceived stress was associated with a higher BMI. These findings are consistent with other studies (Barrington et al., 2012; Richardson et al., 2015;). Barrington et al. (2012) examined associations between perceived stress, dietary behavior, physical activity, eating awareness, self-efficacy, and body mass index in 621 participants. Majority of the participants were non-Hispanic whites (82.7%) and almost half were college graduates. Results revealed that higher levels of perceived stress were associated with lower levels of eating awareness, physical activity, and walking, and higher levels of BMI. Richardson et al. (2015) performed a study with low-income women (45.5% AA), and found that perceived stress was directly and positively associated with severe obesity.

5.3 Strengths and Limitations

One strength of this quantitative, correlational research study is that it provides initial evidence for a relationship between the internalization of the SBW ideology, perceived stress, and obesity in AA women who attend Black churches in Pittsburgh, PA. Conversely, this study also had several limitations. The first limitation pertains to the sample. The small sample included a regionally-specific, church-based sample of AA women, making the results not generalizable to all AA women who attend church. Also, although the rate of AA women earning baccalaureate and graduate degrees has increased over the last several decades, the educational profile of the current sample was higher than the average for AA women in the United States; as a result, the

findings from the current study might not capture the unique experiences of less educated AA women who attend church.

The study design could also be considered a limitation. The use of quantitative surveys limits the results to the specific questions asked on the surveys, possibly omitting important nuances within these relationships. The use of self-reported measures for SBW ideology and perceived stress, while considered reliable and valid, was also a limitation because these measures require participants to have a certain level of awareness of their internal experiences, which might not be otherwise present. A final limitation is the correlational design. The correlational design does not allow for causality to be inferred from the results. As such, it is possible that SBW ideology might not be a direct contributor to AA women's high obesity rates, but perhaps some other important factors not assessed in the current study.

5.4 Researcher's Positionality

I have made it my life career to motivate, inspire and guide others to live healthier lives. Stress: mental, physical, spiritual and emotional, and how they affect each other are the foundations of my personal training business; which allows me to develop individualized programs to help assist my clients in attaining their health and fitness goals. Recently, I founded T.H.A.W Inc, which stands for Transforming the Health of African American Women. T.H.A.W Inc's mission is to improve the health of African American women, by thawing through negative mindsets and beliefs that might be leading to unhealthy behaviors; and providing education, resources and social support to help AA women transform their health.

Why the Strong Black Woman? Because, *I am* the SBW that I have researched and studied. I am a cancer survivor, emotional eater, and once weighed 235lbs. I am defensive and willing to make it despite limited resources. I am a business owner with 16 clients who rely on me to coordinate their health; full time employee at UPMC; Founder and Executive Director of non-profit organization; wife; and the First Lady, Praise Minister, Wellness Director, and Facilitator of the Women's Book Club at Destiny International Ministries. I list all these not to brag, but to point out the many roles I play in my life. No matter how I try to lessen my load it somehow fills back up, because of this need to take care of others. Frequently, I am overwhelmed and occasionally stressed.

I didn't choose to be a SBW the experiences of my life led me to become the strong, black woman. Like trauma to a muscle, the trauma in my life caused pain. Like other SBW instead of letting my injury heal by dealing with the issues at hand, I used food to cope with my pain, hence getting to 235lbs. Like trauma to a muscle, I started to develop scar tissues, basically negative attitudes and behaviors, that would trigger when things in my life triggered that muscle to react. Though this new scar tissue, behavior, was developed to protect me from the pain, I was truly just compensating; causing more harm to myself. It was not until later in my life that I realized the self-destructive nature of this new behavior. I cannot change that I have become the SBW, but I can change the unhealthy behaviors that place me at risk. It's not easy, but as a SBW, nothing that I have accomplished has been easy.

Like other SBW, I learned some of my traits from mother and foremothers. The first SBW I can remember is my grandmother. She left Jamaica to come to America with no family and no education. Before leaving Jamaica, she was physically abused by my grandfather; therefore, moving to America allowed her to escape the abuse. She grew up as an orphan and stayed in her

marriage until all four of her daughters left home. She was obese, she loved God and was very involved in her church. When she came to America the only job she could get was one of a care-giver. She had diabetes and later lost her life after a bad surgery led to amputation of her foot.

The next SBW in my life was my mother. We left Jamaica when I was seven, running away from my alcoholic abusive father. A young immigrant mother, with some college education, and a seven-year old daughter. We moved in with my grandmother in a one-bedroom basement apartment. My mother was going to make it no matter what. I watched as she sacrificed to give me the best life and education she could afford. I watched as she went from a Data Entry Clerk to Supervising Manager. I saw her struggle to pay tuition to assure I had the best education. She was stressed, frustrated, angry, and unfulfilled; using food as her coping mechanism.

I have met other strong women, not just AA women. Most of which use food and busyness to escape the heartache and stressors in their lives. What I started to realize are those who were considered "healthy" strong women seemed to find balance by implementing physical activity and some form or meditation in their life; either yoga, breathing exercises, journaling, and/or prayer. So, I am not here to change the Strong Woman or Strong Black Woman. I am working to move the unhealthy Strong Black Woman towards being the Healthy Strong Black Woman.

5.5 Implications for Research and Practice

5.5.1 Implications for Weight Loss Programs/Interventions

It is common for SBW to hold multiple roles in which they assume a caregiving function for people or entities outside of their immediate family, often resulting in role strain (Walker-

Barnes, 2014). These multiple and frequently competing life demands can prevent SBW from establishing and maintaining healthy lifestyle habits for nutrition, exercise, sleep and stress reduction. In lieu of these, SBW may overutilize unhealthy compensatory strategies that provide an immediate sense of relief, such as binge eating (Beaubouef-Lafontant, 2009). Given the high obesity and obesity related health rates amongst AA women there might be a need for programs that focuses on educating AA women about the impact of the SBW ideology and stress, and its effects on health; as well as healthy coping mechanisms to address stress.

Research has found that stress management interventions are effective in reducing emotional eating and BMI in women of other racial/ethnic groups (Manzoni, 2009; Christak et al., 2013). Mindfulness technique is one such stress management technique that might be beneficial for AA women who adhere to the SBW ideology. Mindfulness is a stress management technique that has been effective in reducing symptoms of stress (Manoj & Rush, 2014) and changing behaviors. Mindfulness is the psychological process of bringing one's attention to experiences occurring in the present moment, which can develop through the practice of meditation (Kabat-Zinn, 2013).

Mindfulness can occur in many forms: yoga, prayer, or breathing techniques. A study conducted at Northwestern Medicine found that mindfulness was effective in lowering depression and stress scores among 31 low-income AA women (Burnett-Ziegler, 2016). Other studies have shown that mindfulness can help treat eating disorders and promote health with weight loss (Harvard Health, 2013). Geraldine et al. (2013) found that women with higher mindfulness scores were less likely to be obese. If mindfulness can lower stress scores and studies have shown that AA women use binge eating to deal with stress, then mindfulness might be an effective technique

to include in weight loss programs targeting AA women, especially AA women who adhere to the SBW ideology.

5.5.2 Implications for Personal Trainers and Health Coaches

Personal trainers and health coaches being aware and understanding the SBW ideology and its impact on adherence, might help them formulate effective programs for their AA female clients. If they notice that their AA female clients are struggling with adhering to their program and they have the characteristics of a SBW, personal trainers/health coaches can use motivational interviewing to help support behavior change. Motivational interviewing is a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve conflicting beliefs (Miller, 1991). This approach is more focused and goal-directed, in which therapists attempt to influence clients to consider making changes. Engaging with the clients is important in this form of interviewing. Trust and respect are needed, and clients do most of the talking. The client and the counselor come to an agreement on treatment goals, therefore giving SBW all the decision making in their treatment, with the motivational support. This technique gives this SBW total control of the process; allowing them to explore their true intentions along with inner conflicts involved in achieving the desired outcome. Personal trainers and/or health coaches might also recommend boxing to help deal with stress, anger or frustration (Kumahara, 2014), which is a fun way to increase physical activity over the standard weight training or aerobic routine. Personal trainers/coaches can also educate their clients about mindfulness, possibly in the form of yoga.

5.5.3 Implications for Health Care Providers

Given that stress has been associated with obesity and other obesity related health issues, which disproportionately affect AA women, it is of great importance that health care providers that work with AA women are knowledgeable about the SBW ideology. In recent years, health care providers have included mental health questionnaires at care visits, to help identify depression in patients. Health care providers might consider a screener to assess patients' perceived stress levels at regular visits. With the awareness that AA women might adhere to the SBW ideology, and the behaviors of SBW that might be impacting their health; health care providers might be more equipped to coordinate care in their AA female clients and possibly use motivational interviewing, giving their patients the decision-making in coordinating their health.

5.5.4 Implications for Faith-Based Institutions

Based on the high rates of AA women who adhere to the SBW ideology found in the AA church within this sample, it is important that Pastors and clergy understand the negative health impact of the SBW ideology. Pastors and clergy can place a focus on connecting religious text with engaging in healthy behaviors. Spiritual health is the focus of churches; but more attention could be given to connecting spiritual health to emotional and physical health. Most AA churches have Women or Ladies Ministry. These ministries, if knowledgeable about SBW ideology, can educate and support these women through self-awareness; possibly implementing the Christian mindfulness technique, developed by Symington and Symington (2012). Symington and Symington's Christian mindfulness technique incorporates the Christian belief. This model has

been used to treat compulsive behaviors, anxiety, depression, and stress, and could potentially be applied within this local setting.

5.5.5 Towards the Framework for Healthy Strong Black Woman

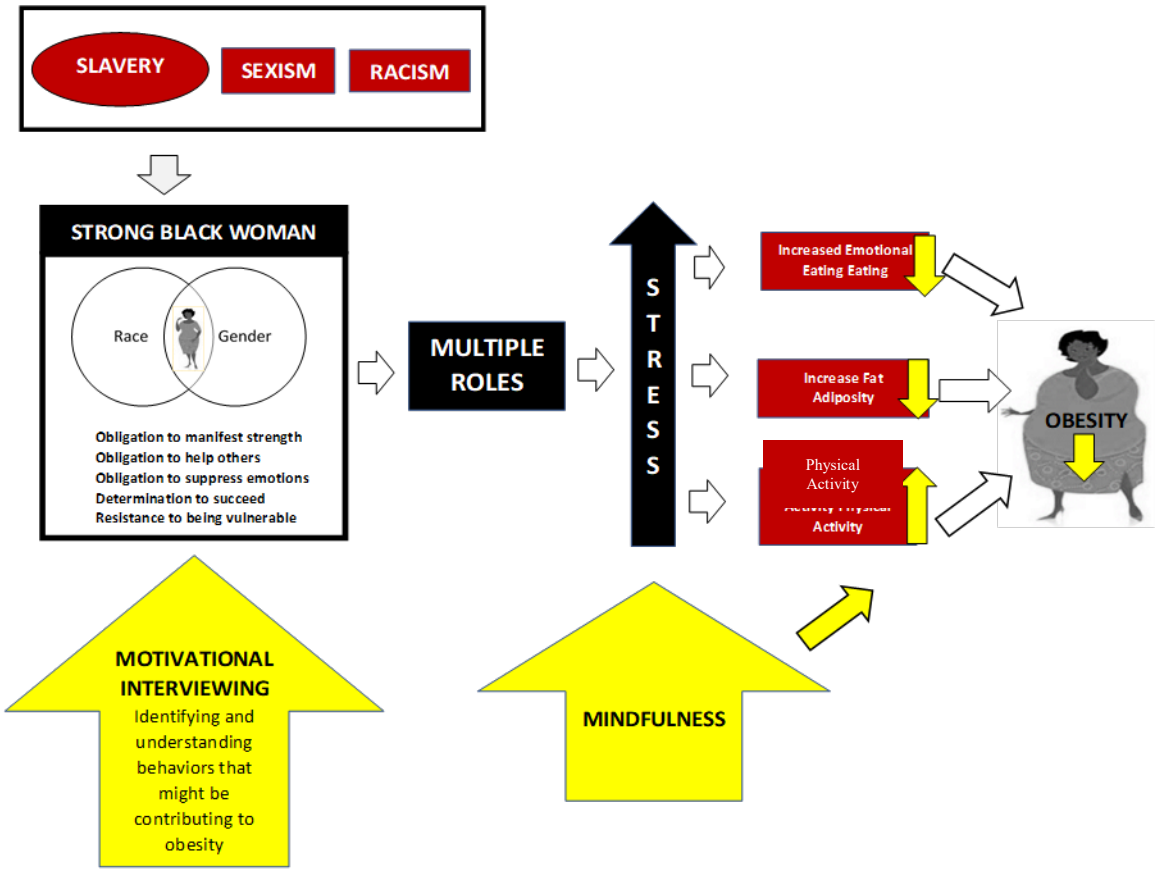

Figure 5 Towards the Framework for Healthy Strong Black Women

Figure 5 describes the framework of moving an obese SBW to a healthy SBW. This framework uses the Strong Black Woman Social Ecological Obesity Framework mentioned in Chapter 2 as the foundation, and adds motivational interviewing and mindfulness to help change the behaviors that might be contributing to obesity among SBW. This framework postulates that

after an AA woman has been identified as a SBW, motivational interviewing is used to help restore self-power, as well as help explore and identify conflicting beliefs (Miller, 1991) that might be preventing the SBW from adhering healthy lifestyle behaviors. Once conflicting beliefs have been identified, mindfulness is used to help the SBW focus on the experiences occurring in the present moment (Kabat-Zinn, 2013). In that way, the SBW can become more aware of her emotions, particularly during periods of stress, that might be leading to unhealthy behaviors. It is hypothesized that emotional eating would decrease due to being more aware of self, and that physical activity would increase; therefore, fat adiposity would decrease because the effects of stress would not have the same impact on the body.

5.6 Lessons Learned

The lead researcher had success with church buy-in and participant recruitment. Such success could likely be attributed to: (1) the race/ethnicity of researcher, which mirrored that of the recruited participants, and (2) the Pastor, a trusted leader within the church, shared information about the study with the female congregants. The most difficult task for the researcher was the data entry of paper surveys, which was time consuming and increased the possibility of errors. Paper surveys were chosen because it was assumed that the population might not have access to technology; however, in the future, use of an online survey accessible via computer or smart phone may be more successful.

To assess universality of the SBW ideology amongst AA women, a future study may consider including AA women who are non-church members. This could allow for a comparison between church and non-church attendees. Also, a future study could include items that measure

physical activity and nutrition to assess whether women who had higher levels of SBW ideology also had lower physical activity and/or improper nutrition. It would also be interesting to assess the relationship between stress and these health behaviors in a similar sample of AA women who attend church.

5.7 Conclusions

The current study is an important step toward understanding the relationship between the SBW ideology, stress, and obesity amongst AA women who attend church. AA women have the highest obesity rates in the U.S., and with obesity being the second leading cause of preventable death and responsible for much of the morbidity and disability seen in the overall population (Hales et al., 2017), understanding the factors contributing to obesity among AA women is important. Researchers have been trying to understand the cultural factors influencing obesity (Woods-Giscombe, 2000), but to understand obesity within a certain population, the history of the population needs to be investigated. The history of AA women in the U.S. has been complicated by slavery, racism, sexism, and the fracturing of family unity and financial instability (Offuit, 2013). These social injustices and the social structure within the AA community have led to the development of the SBW. Being a SBW is not necessarily a negative trait, but understanding that being a SBW might increase the likelihood of unhealthy behaviors which can lead to obesity is important.

The information from this study is important and has implications for personal trainers/health coaches, health care providers, clergy and faith-based settings, and researchers. The findings can be beneficial in developing culturally-tailored health promotion programs and

interventions that target AA women's weight and health issues, by possibly implementing motivational interviewing and mindfulness techniques to help AA women change behaviors. These results also suggest the need to promote mental and physical health in AA women, perhaps using interventions delivered in faith-based settings using lay health professionals and Pastors. Such approaches would be in-line with the Healthy SBW framework, promoting health and addressing the large amounts of stress endured within this population.

Appendix A Recruitment Script

Good Evening Pastor _____, Camille Clarke-Smith, First Lady of Destiny International Ministries here. How are you doing today? The reason for my call is I am currently pursuing my doctorate at the University of Pittsburgh in the Health and Physical Activity EdD program and I am starting to collect data for my study. The focus of my study is to gain an understanding of how African American women who attend church perceive and cope with stress.

I was wondering if you would be willing to have me present my study to your female congregants after one of your Sunday services in the month of October or November. The survey should take no more than 30 minutes and the total process should take no more than 45 minutes.

If they say yes…

Thank You, I really appreciate it, which Sunday works for you and what time is your service or services? Also, I was wondering if you had a private area with some tables or if I can have privacy in your sanctuary after the sermon to conduct the study?

Appendix B Introduction/Informed Consent

Hello, my name is Camille Clarke-Smith, First Lady of Destiny International Ministries. I am conducting a study as a doctoral student in the University of Pittsburgh's Health and Physical Activity Program. The focus of my study is to gain an understanding of how African American women who attend church perceive and cope with stress. Completion of this study will fulfill the dissertation requirements for my doctoral degree, but my hope is that it contributes to the development of programs to help African American women cope with stress and improve their overall health.

I am here requesting your participation in this study. As a participant of the study you will be asked to complete a survey, which will require between 20-30 minutes of your time. You are not required to participate in this study, your participation is completely voluntary. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate or discontinue participation. There are no direct benefits or compensation for participation in this study.

All of your responses will be confidential. You will be given a packet with all of the survey items. Please do not place your name on the surveys. Confidentiality is assured by ID numbers that are included on the front of all packets as well as on the booklet of surveys. The surveys will remain completely anonymous. It is important to try to answer every question, even if you have to make a guess as to the best answer. While your cooperation in answering the questions is greatly appreciated, you do not have to answer any question that makes you uncomfortable or that you wish to skip over.

If you have any questions while completing the survey, I would be happy to answer them for you. If you would like to ask your questions privately, please feel free to come forward or signal by waving your hand and I can answer your questions privately.

When you have finished completing the survey, please put them back into the envelope and seal it and return it to me. The envelopes will remain sealed until all of the completed surveys are collected so that it is not possible to tell which one is yours. The data collected will only be available to me as the researcher, as well as my Advisor and Committee Chairperson, Dr. Sharon Ross.

Should you wish to receive results of the study, you may request a copy by contacting me at (412) 865-9343. If you have any questions or concerns about the study, you can also contact Dr. Ross at (412) 383-4042 for additional information.

Appendix C Demographic Questionnaire

Please answer each of the following questions. If you cannot respond to one of the questions, please write N/A in the space provided.

1. **What is your age? _____**
2. **What is your current weight? _____**
3. **What is your height? _____**
4. **What is your marital/relationship status (circle one)?**
    - **a.** Single
    - **b.** Have a Partner
    - **c.** Married
    - **d.** Divorced
    - **e.** Separated
    - **f.** Widowed
5. **What is the highest education degree that you have obtained?**
    - **a.** None
    - **b.** High school diploma
    - **c.** Associate degree
    - **d.** Vocational degree (e.g. cosmetology school, etc.)
    - **e.** Bachelor's degree
    - **f.** Master's degree
    - g. Ph.D., J.D., M.D., etc.
6. Have you ever been diagnosed with any of the below chromic conditions. Please circle all those that apply.
    - a. High blood pressure
    - b. Diabetes
    - c. High Cholesterol
    - d. Other _____(please list)

Appendix D Strong Black Woman Cultural Construct Scale

Instructions – Please circle how often you think that each of the following statements apply to you.

1. I believe that it is best not to rely on others.
Never Rarely Sometimes Frequently Almost Always

2. I feel uncomfortable asking others for help.
Never Rarely Sometimes Frequently Almost Always

3. I have difficulty showing my emotions.
Never Rarely Sometimes Frequently Almost Always

4. I do not like to let others know when I am feeling vulnerable.
Never Rarely Sometimes Frequently Almost Always

5. I believe that everything should be done to a high standard.
Never Rarely Sometimes Frequently Almost Always

6. I am independent.
Never Rarely Sometimes Frequently Almost Always

7. I take on more responsibilities than I can comfortably handle.
Never Rarely Sometimes Frequently Almost Always

8. I believe I should always live up to other's expectations.
Never Rarely Sometimes Frequently Almost Always

9. I should be able to handle all that life gives me.
Never Rarely Sometimes Frequently Almost Always

10. I am strong.
Never Rarely Sometimes Frequently Almost Always

11. I need people to see me as always confident.
Never Rarely Sometimes Frequently Almost Always

12. I like being in control in relationships.
Never Rarely Sometimes Frequently Almost Always

13. I cannot rely on others to meet my needs.
Never Rarely Sometimes Frequently Almost Always

14. I take on others' problems.
Never Rarely Sometimes Frequently Almost Always

15. I feel that I owe a lot to my family.
Never Rarely Sometimes Frequently Almost Always

16. People think that I don't have feelings.
Never Rarely Sometimes Frequently Almost Always

17. I try to always maintain my composure.
Never Rarely Sometimes Frequently Almost Always

18. It is hard to say, "No," when people make requests of me.
Never Rarely Sometimes Frequently Almost Always

19. I do not like others to think of me as helpless.
Never Rarely Sometimes Frequently Almost Always

20. I do not let most people know the "real" me.
Never Rarely Sometimes Frequently Almost Always

21. In my family I give more than I receive.
Never Rarely Sometimes Frequently Almost Always

22. At times I feel overwhelmed with problems.
Never Rarely Sometimes Frequently Almost Always

Appendix E Perceived Stress Scale

Instructions: The questions in this scale ask you about your feelings and thoughts **during the last month**. To answer, select the number that corresponds with *how often* you felt or thought a certain way.

1. **In the last month, how often have you been upset because of something that happened unexpectedly?**

Never Almost Never Sometimes Fairly Often Very Often

2. **In the last month, how often have you felt that you were unable to control the important things in your life?**

Never Almost Never Sometimes Fairly Often Very Often

3. **In the last month, how often have you felt nervous and "stressed"?**

Never Almost Never Sometimes Fairly Often Very Often

4. **In the last month, how often have you felt confident about your ability to handle your personal problems?**

Never Almost Never Sometimes Fairly Often Very Often

5. **In the last month, how often have you felt that things were going your way?**

Never Almost Never Sometimes Fairly Often Very Often

6. **In the last month, how often have you found that you could not cope with all the things that you had to do?**

Never Almost Never Sometimes Fairly Often Very Often

7. **In the last month, how often have you been able to control irritations in your life?**

Never Almost Never Sometimes Fairly Often Very Often

8. **In the last month, how often have you felt that you were on top of things?**

Never Almost Never Sometimes Fairly Often Very Often

9. **In the last month, how often have you been angered because of things that were outside of your control?**

Never Almost Never Sometimes Fairly Often Very Often

10. **In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?**

Never Almost Never Sometimes Fairly Often Very

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