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ABSTRACT

How Social and Lifestyle Factors of African American Women Influence Behavior and Prevalence of Obesity: Literature Review

By

Briana E. Oliver

August 20, 2018

The US is experiencing what many in public health are calling an “obesity epidemic”. The American Heart Association estimates that about 70% of the population is overweight or obese. This issue is especially concerning for minority populations as being overweight or obese disproportionately affects African Americans more so than any other racial grouping in the country. African American women, in particular, are more likely than any other demographic to be overweight or obese throughout their life course. Intervention programs are proving to be ineffective in curtailing this epidemic because they aren’t addressing the root cause of the issue: changing the attitudes and behaviors of those most affected by obesity. This capstone explores the complex nature of obesity prevention in regards to social and lifestyle factors that influence behavior among African American women and prevalence of obesity via a literature review of previous research done in this area, categorized in four major areas: lack of comprehensive interventions, impact of culture and lifestyle, how African American women view themselves and their health, and the effects mental health issues have on behaviors that influence obesity. Recommendations will also be discussed of the role public health professionals can play in combating the high prevalence of obesity in this community from the social/behavioral level.

**How Social and Lifestyle Factors of African American Women Influence Behavior and
Prevalence of Obesity: Literature Review**

by

Briana E. Oliver

Bachelor of Science, Georgia State University

A Capstone Submitted to the Graduate Faculty
of Georgia State University in Partial Fulfillment

of the

Requirements for the Degree

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ATLANTA, GEORGIA

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APPROVAL PAGE

**How Social and Lifestyle Factors of African American Women Influence Behavior and
Prevalence of Obesity: Literature Review**

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Author's Statement Page

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Briana E. Oliver

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Chapter I

Introduction

Overview/Background

The American Heart Association defines obesity as a “health condition in which a person is 20% or more above their ideal healthy weight” (AHA, 2018). It’s becoming an ever-increasing problem in the US that nearly 70% of American adults can be classified as being either overweight or obese (AHA, 2018). Excess body weight is associated with a variety of health conditions: heart disease, stroke, high blood pressure, diabetes, and other chronic illnesses (AHA, 2018). However, there are certain populations within the US that are seeing alarmingly disproportionate prevalence of being overweight and obese. For example, African Americans are said to have higher prevalence of being overweight or obese than any other racial grouping in the US (AHA, 2018).

Geographically, Southeastern US has the highest prevalence of individuals who are overweight and obese in comparison to the rest of the country (Ogden et al, 2014). To combat this problem, there has been a massive push to formulate prevention methods surrounding healthy diets, increased physical activity, and increased access to health professionals for consistent checks on health status for members in the community (Ogden et al, 2014).

These are all interventions that are highly beneficial. But is it enough to just provide the services in hopes that people will use them without understanding why they may or may not? One of the major issues for why prevention programs aren’t really curtailing the obesity

epidemic is because they aren't addressing the roots of the problem: changing the attitudes and behaviors of those most affected. In many instances, preventative measures employed by public health professionals don't address the driving force of why weight gain/obesity disproportionately affects certain populations over others and why these populations aren't benefiting from the resources being developed. For example, African American women are more likely than any other racial group to be overweight or obese throughout their entire life cycle.

Purpose of the Study

In terms of this community, the attitudes and perceptions towards weight, diet, and physical activity are influencing how they interpret, internalize, and adjust to public health information provided about diet and exercise (Whitaker et al., 2016). For this capstone, I seek to explore the complex nature of obesity prevention in regards to social and lifestyle factors that influence behavior among African American women and their prevalence of obesity in four major areas: lack of comprehensive interventions, impact of culture and lifestyle, how African American women view themselves and their health, and the effects of mental health. I will also provide recommendations on the role public health professionals can play in combating the high prevalence of obesity in this community from the social/behavioral level.

Chapter II

Obesity amongst African American Women

Obesity is a condition that impacts more than just physical body weight. Increased body mass is associated with an increased incidence of diabetes mellitus, cardiovascular disease, stroke, high blood pressure, sleep apnea, certain cancers (breast, colon, liver cancer, etc.) and nonalcoholic fatty liver disease; conditions that are also prevalent in African American populations as well (AHA, 2018). Lipogenesis or fat generation serves important biological functions, such as creating energy reserves and is regulated by a number of hormones including leptin, growth hormone, and insulin.

Lipogenesis is sensitive to dietary changes and habits and can be further “stimulated by a high carbohydrate diet” (Coelho et al., 2013). Inhibiting lipogenesis by incorporating polyunsaturated fats (found in foods like walnuts, flax seeds, tuna, salmon, etc.) or by fasting, will influence the amount of fat storage an individual can experience (Kersten, 2001). Consistent physical activity and reduction in carbohydrate intake allows the individual to improve energy balance, resulting in weight loss. Obesity reflects altered energy balance or energy homeostasis. Diet and physical activity help to restore and/or maintain energy homeostasis through weight loss and maintenance.

It is theorized that behaviors that lead to lipogenesis (such as a lack of exercise, high carbohydrate diets, eating highly processed foods with high fat content, etc.) in African Americans can be the reason for the higher than average prevalence of obesity within this

community (Agyemang et al., 2013). However, other researchers indicate that the problem could be much more complex than that of just diet and exercise.

Many studies of dietary and behavioral treatments have shown that maintenance of weight loss is difficult for most individuals to maintain long term, and is of particular concern for minority populations like African American women (Fitzgibbon et al., 2012). It is often theorized that there are social and economic costs of obesity and the attempts to prevent and/or treat obesity are high for African American women, a possible explanation for the disproportionate prevalence of obesity within this community that will be further explained (Fitzgibbon et al., 2012).

The CDC reports that overall, women who have high income levels are less likely to have obesity than those classified as low-income (Ogden et al, 2007). Statistics show that of all households in the US, African Americans show the lowest median income from the years 1967 to 2016. The median income recorded for African Americans in 2016 was \$39,490, the lowest of any ethnic group in the country (US Census Bureau, 2017). Coupled with income statistics and obesity statistics about the US, African Americans show the highest age-adjusted rates of obesity with 48.1% as reported by the CDC (2017a).

Researchers have found that African American women in particular are seeing disproportionate prevalence of obesity (Dingfelder, 2013). Some of the contributing factors for this phenomenon could be income levels, how low income affects day to day living with regards to health decisions concerning diet and exercise, as well as other lifestyle factors related to

culture or behavior in regard to prioritization of a healthy lifestyle for African American women (Dingfelder, 2013).

Research that has been done in this area has been focused mainly on the interventions that can be implemented at the individual and community levels to treat obesity; diet, exercise, control of other chronic conditions, etc. (Knox-Kazimierczuk et al., 2017). However, these interventions have been shown to not be efficient in reversing the higher prevalence of obesity within the African American community. The purpose of this capstone is to examine the social and lifestyle factors of African American women that are not always of focus when public health professionals discuss obesity within this community with intervention techniques. By analyzing those, better recommendations can be made that might influence obesity prevalence amongst this population.

Chapter III

A Lack of Comprehensive Interventions

One of the reasons suggesting why African American women are not seeing improvements in the battle against obesity assume failed interventions that don't address the root cause of the problem. Fitzgibbon et al. have conducted systematic reviews of intervention trials on lifestyle factors and their influence in weight loss in relation to reversing health conditions such as hypertension (2012). Diet and exercise were typically the exploratory intervention factors of these studies, with weight loss being one of the outcome variables. In general terms, African American women were exposed to a specific diet, exercise plan, or a combination of the two and their progress towards losing weight were tracked and compared to others in their group who were given the same protocol (Fitzgibbon et al., 2012).

Based on two studies in particular, researchers found that African American women did not lose as much weight as Caucasian women when the results were stratified by race. For example, the results of the study Hypertension Prevention Trial revealed that mean weight loss was -4.7 kg for white women compared to -2.6 kg for black women (Fitzgibbon et al., 2012). And in other trials such as the Trials of Hypertension Prevention (a separate trial from the Hypertension Prevention Trial), mean weight loss was -4.9 kg for white women and -1.9 kg for black women (Fitzgibbon et al., 2012). When looking at the basis of consistency and the ability to maintain weight loss, African American women were able to retain less percentage weight loss than that of Caucasian women (Fitzgibbon et al., 2012).

The conclusions of these studies indicated that African American women were predisposed to gaining or maintaining excess weight on the body due to biological factors. However, Fitzgibbon et al. theorized that the problem was more than just this group of women carrying excess weight via the purpose of biology; the problem can be far more complex than what is typically concluded in many of these studies (2012). Fitzgibbon et al. suggested that there were limitations inherent in the above hypertension trials. These researchers stated “a greater percentage of black Americans live below the federal poverty line (24.7%) compared to Americans overall (13.2%)” (2012).

As a result, it was suggested that African American women were at a disadvantage in the aforementioned trials because “participants who have more choices regarding their environment are at an advantage” and are more likely to engage in behavioral changes as a result of their advantageous life conditions, for which some African American women did not have based on their socioeconomic status. Further, Fitzgibbon et al. discussed some of the factors that limit individuals below the poverty line in making behavioral changes concerning their health. They include: limited affordability of healthy foods at grocery stores, easier access to smaller stores (often referred to as convenience stores) that offer only high fat content foods and heavily processed goods (snack cakes, chips, cookies, soda, etc.), and the strategic locations of said grocery stores and convenience stores in relation to impoverished neighborhoods (more convenience stores are often in these neighborhoods than actual grocery stores) (2012).

Fitzgibbon et al. further discussed the intricate relationships between affordability and accessibility for those that live in poverty. These researchers proposed that future studies that

are conducted with regards to weight gain within the African American community must be comprehensive in their approach and should seek to analyze all factors “that influence both individual consumption and cultural/ethnic preferences reinforced by family, peer, and social networks” to further explore the complex nature of weight gain and effective intervention methods that can combat a system of racial bias, with increased obstacles that would make behavioral change difficult for those with limited access (2012).

Overall, Fitzgibbon et al. concluded that factors influenced by race and socioeconomic lifestyles (such as affordability and accessibility) were not properly assessed when comparing the outcomes of the participants in the hypertension trials (2012). Many who have examined this phenomenon have tried to assess weight gain through a strictly scientific lens and have chosen to take race and socioeconomic factors out of the equation to study the impact a particular protocol has on the participants in the study (Tussing-Humphreys et al., 2013). As a result, researchers often miss vital information that social and cultural factors might have on the outcome of the study.

This methodology is a rather simplistic view and takes away much of the context with which African American women operate when it comes to matters of their health and their ability to follow new exercise regimens and dietary updates (Tussing-Humphreys et al., 2013). By removing the context of race, SES, and other cultural influencers, it is difficult to get the full picture of not just how and why obesity is disproportionately affecting one group more so than others, but it also limits the collective understanding of how to best treat this issue. Thus far,

the results of these intervention methods have seen mixed results at best by the removal of these important factors that influence this health outcome.

Chapter IV

The Impact of Culture and Lifestyle

After understanding that it's less than futile to remove race from the equation, a number of researchers such as Kong et al. have tried to understand intervention protocols keeping race and cultural factors in mind when developing the best strategies in handling obesity in African American women (Kong et al., 2014). By incorporating protocols that are "culturally salient" or significant to African American women, some researchers have theorized that this is the avenue for which public health professionals should be taking in general when combating chronic diseases that disproportionately affect minority populations (Kong et al., 2014).

Like before, the research done in this regard looked at diet as an exploratory factor and weight loss as an outcome. Kong et al. reviewed studies that took the cultural approach and placed emphasis on how these groups regarded food via their values and belief systems and experiences surrounding food with a questionnaire that was distributed to participants beforehand (2014). Based on the results of the questionnaire, a specific diet plan for each individual was developed with those cultural values in mind, or "tailoring" as some researchers called it in an attempt to not generalize or overstate a particular belief across a group that might be highly variable outside of their race (Kong et al., 2014).

In general, after using culture as a basis of proper intervention method, researchers saw significant improvements of African American women's weight loss outcomes, as well as ability to maintain the weight loss (Kong et al., 2014). More research needs to be done in this regard

to understand the specific nature of a cultural approach to interventions but these initial studies for which this was the focal point saw great promise for what could be implemented further for African American women (Kong et al., 2014).

For a more specific example, one study in particular looked at the reasons why African American women would be reluctant to engage in physical activity from a cultural perspective. Railey studied African American women from across the US and examined behavioral interventions that could improve upon the prevalence of obesity for this group (Railey, 2000).

Data for this study were further collected using a questionnaire to understand the participants' behaviors. The questionnaire discussed factors relevant to socioeconomic demographics, level of education, diet and exercise habits, perceived stress, stress management, as well as their childhood exposures which could lead to an increased prevalence of obesity. The research conducted found that the main concern African American women had as it related to increased exercise was hair care issues and what the impact of sweating could do to styles and long term hair care maintenance (Railey, 2000).

For background on this topic, African American women culturally take great pride in their hair and hair styles. It is a sense of pride and self-esteem to wear elaborate or culturally significant hair dos for regular day to day living, weddings, vacation, or other special occasions (Browne, 2006). It is not uncommon for African American women to spend a great deal of time (and money) on their hair; with the expectation they can wear a hairstyle for a particular duration of time (can be as short as a few days or as long as 6 weeks depending on the style) (Browne, 2006). As a result, many will avoid engaging in certain activities (such as exercise) to

maintain a hairstyle that might have taken a long time to do, was expensive to create, or to maintain this hairstyle for as long as they intended. Sweat and humidity are often the main threats against maintenance of African American hairstyles, for which many in this demographic seek to avoid. It is for this reason some have not incorporated exercise into their lifestyle (Railey, 2000).

Additionally, Railey also found that childhood role models and what the family culture was surrounding food and exercise at home played a major role in how adults viewed food and exercise in the present (Railey, 2000). Individuals, who didn't have role models who exhibited an active lifestyle, and incorporated healthy lifestyle techniques such as the integration of more fruits and vegetables and less processed and fried foods, ultimately impacted the views one had as an adult in relation to the need or motivation to be engaged in an active and healthy lifestyle (Railey, 2000).

The study Railey did found that culture and family values were an important point of consideration when understanding how African American women feel about diet and exercise as it relates to engaging in intervention practices to lower obesity prevalence. Railey stated that further research should be done in this area with non-obese African-American women to further understand the complexities of African American culture and lifestyle choices (Railey, 2000).

Chapter V

How African American women view themselves and their health

As the above researchers have shown, culture plays a major role in how African American women view weight loss interventions. However, many researchers did not recognize that the issue could be far deeper than just a matter of weight loss. Agyemang et al. found that African American women had positive connotations with weight gain at different points of their life course (2013). These researchers explain a trend among African American women in which not only is larger body size acceptable, some women in the community seek to gain more weight even if they technically are considered overweight already (Agyemang et al., 2013).

Even further, there are beauty standards present within this community that is not well researched by public health professionals in terms of understanding why African American women have higher prevalence of obesity, and why some may be reluctant to lose weight or fully engage in weight loss intervention programs. Studies have shown that when women were asked how they feel about their bodies, African American women exhibited higher scores of positive reactions in comparison to other ethnic groups (Agyemang et al., 2013).

Agyemang et al., further analyzed NHANES data from years 2003–2006 to show how perception of weight and body type influence activity related to weight loss (2013). Their analysis determined that African American women that were found to be overweight or obese, not only had a statistically positive view of their bodies, but as such, were less likely to engage in exercise and other physical activity to lose weight, preferred a sedentary lifestyle so as to maintain their current weight, or didn't feel as if there was a problem and sought to gain more

weight (2013). Researchers involved in this study defined that phenomenon as weight misperception (Agyemang et al., 2013).

Weight misperception occurs across all ethnic groups in the US. However, it's particularly concerning for those that are not aware that they are overweight, and seek to gain more weight to fit a standard of beauty. Attempts at studying this phenomenon have missed the nuances and intricacies that occur within the cultural confines of the African American community. When research has been conducted in this area, it has been in terms of mainstream beauty and health standards, which are based on Caucasian individuals and what they perceive to be the ideal (Awad et al., 2015).

Awad et al. did a study with African American female college students and their perceptions of beauty as it relates to hair, skin color, and body image in comparison to the beauty standards within the community (2015). Awad et al. found that when asked specifically about their body image, African American female college students strived to live up to the ideal of the "thick/toned/curvy" body type and would engage in practices that would achieve that body type (2015). Participants' interviews were also recorded. One individual when asked specifically how they felt about this issue stated: "Growing up in the Black community, it's really pushed to be thicker. I always wanted to have a big butt. I tried to do like squats and stuff and then I heard you know if you eat this, if you play volleyball then you'll get it" (Awad et al., 2015).

The above quote not only demonstrates how African Americans view a curvy body type as ideal, but also the ways in which some African American women strive for that ideal and

engage in behavioral practices that will make that possible; i.e. eating certain foods, doing squats, gaining more weight, not engaging in activities that are too vigorous that they lose weight, etc.

Furthermore, there's not a lack of health literacy in relation to the health effects of excessive weight gain and the need for some women to "not lose too much weight" to maintain their own curvy body image ideals (Agyemang et al., 2013). It is not a matter of African American women not having the information of the health effects related to obesity; they do. However, the information is not as emotionally salient, or impactful, as it relates to their particular culture and lifestyle in which weight gain is seen as ideal, attractive, and methods that impede those ideals are not likely to be effectively implemented (Agyemang et al., 2013). Public health professionals often don't ask these types of questions related to culture and lifestyle factors and therefore do not know how to incorporate these values into weight loss interventions, nor consider these cultural implications as to why African American women do not keep the weight off.

Chapter VI

The Effects of Mental Health

Researchers have also stated that mental health can play a role in the higher prevalence of obesity among African American women. For example, Rowser studied the link between depression symptoms and increased prevalence of obesity among African American women who were on welfare (2008). It was found that African American women are twice as likely to experience depressive symptoms as women of other races in conjunction with their higher prevalence of obesity (Rowser, 2008). Luppino et al. further studied the relationship between depressive symptoms and obesity via a meta-analysis of systematic reviews of longitudinal studies that focused on this issue (2010). Luppino et al. found a “reciprocal relationship between depression and obesity” using odds ratios from the respective studies of the systematic review (2010).

The relationship between depression and obesity can be explained by different mechanisms. Depression can induce an individual into “eating more or less than usual, not wanting to do activities, or difficulty in making decisions,” especially as it relates to making healthy lifestyle choices (CDC, 2017c). As Luppino et al. pointed out, as depression can induce obesity, obesity in turn can increase the risk of depressive symptoms and create a cycle in which individuals engage in lifestyle choices that promote obesity, become more depressed, and depression creates an environment where obesity can propagate further (2010).

Taking into account the relationship between depression and obesity, is important to examine why the two conditions are seen more often among African American women

(Rowser, 2008). Again, this area has not been often studied in African American women so more research needs to be done to understand how mental health impacts obesity prevalence in this community and whether obesity can be considered a possible large-scale side-effect of depression within the community.

African American women statistically show higher rates of stress and hypertension as a result of their socioeconomic status and other lifestyle factors such as racism that impede access to many things in the US. Stress and hypertension are risk factors for obesity (CDC, 2017a). There has been some research conducted as to the influences in why this is the case but more needs to be done to fill the gaps present in this area. Researchers such Ward et al. have hypothesized that stressors related to work/working more than one job, family related stress, low income/poverty, lack of resources related to transportation, food, medical care, racial microaggressions that affect the above systems, household structure as well as geographic location of the home/safety of the neighborhood, etc. can affect mental health issues in African American women (2009).

Even further, Ward et al. examined the stigma present in African American communities related to mental health illness as well as treatment related to medications and therapy; found that many go undiagnosed for mental health issues, and those that were diagnosed, would not fully engage in treatment because of the stigma and bad connotations within the African American community for those that suffer from mental illness (Ward et al., 2009). Instead, participants in the study favored coping mechanisms in place of treatment in the form of food

for comfort, advice from family on how to cope (which may or may not be helpful advice), and religion in the form of praying about their problems (Ward et al., 2009).

Undiagnosed mental health issues, lack of treatment, and using coping techniques that could prove unhealthy in the long term (such as using food for comfort) is theorized to have an impact on the prevalence of obesity in African American women. There is yet to be a link however because of the lack of research done in this area that focuses on the mental health of African American women and their overall health outcomes.

Chapter VII

Conclusions

Strengths and Limitations

The main objective of this capstone was to review how social and lifestyle factors influence obesity prevalence in African American women and recommendations on intervention practices that can be used to better treat African American women specifically as it relates to obesity and their social and lifestyle influences. What has been shown is a level of misunderstanding or just not knowing exactly how culture and social behaviors influence African Americans, and the choices with which they make as a result of these influences. Throughout this paper, four main prompts have been addressed on this topic: a lack of comprehensive interventions, the impact of culture and lifestyle, how African American women view themselves and their health, and the effects of mental health.

As mentioned, there is a lack of comprehensive interventions for African American women that specifically address their particular needs so as to treat their obesity and get them to a healthy and manageable weight goal. Diet and exercise programs alone are not working as the prevalence for obesity in this community continue to rise even after implementation of these interventions have occurred. There is a disconnect between what public health professionals are trying to measure and treat within African American women and their prevalence of obesity. The research for the literature reviews showed that incorporating “culturally salient” interventions could be of benefit to making an impact on the prevalence of obesity within this community (Kong et al, 2014).

Recommendations and Prevention Strategies

This brings us to the first recommendation proposed for public health professionals to consider in affecting change for African American women: understanding the complexity of culture within the African American community. As previously mentioned, there is value in taking a purely scientific perspective of the issue, in that researchers are able to identify that a problem exists and are able to prove it with scientific techniques. However, one cannot mitigate or remove the part race and culture plays when it comes to the everyday lives of Americans and racial groups within America and their health choices. These things shouldn't be removed when analyzing the impact a particular protocol is having on African American women after implementation.

It is difficult to study what is not known and most of public health research does not focus on the cultural aspects of African American women. How they view their bodies and health, the impact hair care has on the motivation to exercise, their beauty ideals and the methods they engage in to obtain their favored body types are all important factors in understanding what the culture is for this community.

This is recommendation number two: more medical and public health related research needs to be done with both obesity and overweight health outcomes and cultural practices. To date, there are studies that are done for one or the other; in particular cultural anthropologists have a vast knowledge of African American culture and what the community values in terms of customs and traditions. But these practices have not been translated into the public health arena and properly compared to health outcomes like obesity or diabetes, let alone

comprehensive intervention techniques that will effectively address these cultural factors. More research will bridge the gap and allow for better interventions to be “tailored” to African American women in the fight against obesity (Kong et al, 2014).

And lastly, mental health within the African American community goes largely unnoticed and undiagnosed. Research has shown that depression and other mental ailments can lead an individual into making unhealthy choices that can be potential risk factors for obesity such as eating too much or lack of motivation to engage in physical activity (CDC, 2017c). Even further, mental illness is of particular concern for African Americans because of the stigma within the community of having mental illness and engaging in treatment. Undiagnosed mental health issues increase the risk of other health outcomes like obesity, of occurring. In favor of forgoing mental health treatment, African American women often resort to coping mechanisms to deal with their situations which include: food for comfort and praying (Ward et al, 2009).

Recommendation number three includes developing better outreach programs for mental health in African American communities in hopes of removing this stigma and allowing for these underlying mental health issues to be treated.

Conclusions

Social and cultural factors are such a multi-faceted, complex conundrum to unpack; it’s often difficult to then utilize them to develop intervention programs that address the issues that come about as a result of lifestyle behaviors. But this is necessary if the goal is to decrease the prevalence of obesity within this community. Culture and race cannot be removed from the conversation as African American women are one of the groups most affected, and are seeing

less of an impact with the intervention methods that have been introduced thus far. There has to be reasons for why this is occurring and the best way to figure that out is to study it; to make it a priority to understand how and why this community isn't interested in these interventions, why the interventions aren't working for them even if they are engaged in the process, and developing techniques that better fit their particular needs.

Prevention and treatment programs can only be sustained when they address the major influencer of getting individuals to be successful with the intervention: it must change the attitudes and behaviors of those most affected. To understand how race impacts health outcomes in this regard is to then understand how to better solve the obesity epidemic and prevent it from occurring in others.

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