Abstract

Title of Thesis: "THAT CHART AIN'T FOR US": AN EXAMINATION OF BLACK WOMEN'S UNDERSTANDINGS OF BMI, HEALTH, AND PHYSICAL ACTIVITY

Tori Thompson, Master of Arts, 2019

Thesis directed by: Professor Shannon L. Jette
Department of Kinesiology

Significantly, black women have the highest rates of being overweight or obese compared to other groups in the United States, with 60% being classified as obese per the BMI. However, there is currently a lack of scholarship which examines black women's perceptions of the BMI, and how/if those perceptions influence their attitudes toward health and physical activity. In this project, I take a Foucauldian approach to analyze data collected from eight semi-structured interviews with black women who self- identify as obese *and* who are physically active. Findings suggest that black women find the BMI to be irrelevant to their health and well-being, and do not attribute their engagement in physical activity to their BMI. Instead, their reasons for partaking in physical activity are due to their individual experiences, understandings of health, and black female identity. These results have the potential to inform healthcare policies, physician practice, and public health interventions that target communities of color

“THAT CHART AIN’T FOR US”: AN EXAMINATION OF BLACK WOMEN’S UNDERSTANDINGS OF BMI, HEALTH, AND PHYSICAL ACTIVITY

By

Tori Alexis Thompson

Thesis submitted to the Faculty of the Graduate School of the University of Maryland, College park in partial fulfillment of the requirements for the degree of Master of Arts

2019

Advising Committee: Professor Shannon Jette (Chair)

Professor David Andrews

Professor Jennifer Roberts

Table of Contents

List of Tables

Introduction

Obesity is the medicalization of fatness (Guthman, 2014), and is commonly screened by a calculation called the body mass index (BMI), which is a ratio of body mass (kg) divided by the square of body height (m^2) (CDC, 2017). Presently, the BMI as a classification system, labels individuals as "under" weight (below 18.5), "normal" or "healthy" weight (18.5-24.9), "overweight" (25.0-29.9), or "obese" (30.0 and above) (CDC, 2017). Despite its ubiquity as a screening tool in healthcare contexts, a growing number of scholars have been critical of its application and its influence on healthcare practice and policy as it relates to obesity (Foley et al., 2012; Gard and Wright, 2005; Guthman, 2014; Hales, 2017; Lupton, 2012). Scholars argue that its use as a marker of excessive fatness greatly influences the identities and behaviors of those who are categorized as overweight and obese, and it influences the aforementioned healthcare policy and practice (Hales et al., 2017; Herndon, 2005; Knox-Kazimierczuk et al., 2018).

Contrary to its present application within the modern medical establishment, the BMI was not developed to indicate fatness (Jahoda, 2015). BMI was created by Belgium intellectual Adolphe Quetelet in the mid 1800's to measure the "average man" (Quetelet, 1969). Quetelet is noted as having an obsession with statistics, and developed the standard of the "average man" to be the 'mathematical truth' of the ideal man (Cryle and Stephens, 2017). Quetelet was deemed the father of statistics and believed that conclusions come from large amounts of data rather than from a study of individuals (Quetelet, 1969). His ideals of the numerically "average man" led to the height weight ratio formerly called *Quetelet's Index* and now the BMI. He based his index on data that he gathered by quantifying white Belgian bodies, first male and subsequently female. It was not until the 1940's that *Quetelet's Index* became known as the BMI, and life insurance companies in the United States began to use it as "Tables of Desirable Weight". Starting around

1980 physicians also began to incorporate the tables as standards in their practice (Evans and Colls, 2009; Nutall, 2015). Although contemporary scholars agree that BMI is a limited measure as it does not consider variations based on ethnicity, muscularity, bone density, gender, and age (Lupton, 2012), the BMI continues to be used as a measurement of obesity which, according to some scholars, is problematic because it constructs bodies that fall outside of arbitrary norms as abnormal and deviant (Gard and Wright, 2005; Herndon, 2005; Lupton, 2012)

In addition to debate about the use of BMI to measure obesity, obesity itself remains a highly contested scientific and social fact (Saguy and Riley, 2005). Since 2001, obesity has been a consistent topic of discussion in public health campaigns, medical literature, and the popular press (Evans and Colls, 2009; Guthman, 2011; Van Amsterdam, 2013). For instance, between 1980 and 2004 media attention to obesity increased exponentially from 62 articles published in the Lexis-Nexis US News Sources to over 6500 in 2004 (Campos et al, 2005). As the number of reports on obesity increased, so did the negative narratives portraying obese bodies. Dominant social and scientific narratives frame obesity as a 'disease' and 'epidemic' that has plagued Western civilization, and have positioned obesity as the "people's choice" as individuals are choosing to partake in fast-food drive-thrus rather than physical activity (Campos et al., 2005; Herndon, 2005). Thus, some critical health scholars argue that the obesity epidemic has been constructed not only as a medical issue due to the physiological problems that can derive from excess fat, but also as a social issue given its framing as a marker of laziness that burdens public health (Campos et al., 2005; Evans and Colls, 2009; Gard and Wright; 2005; Guthman, 2014; Saguy and Riley, 2005).

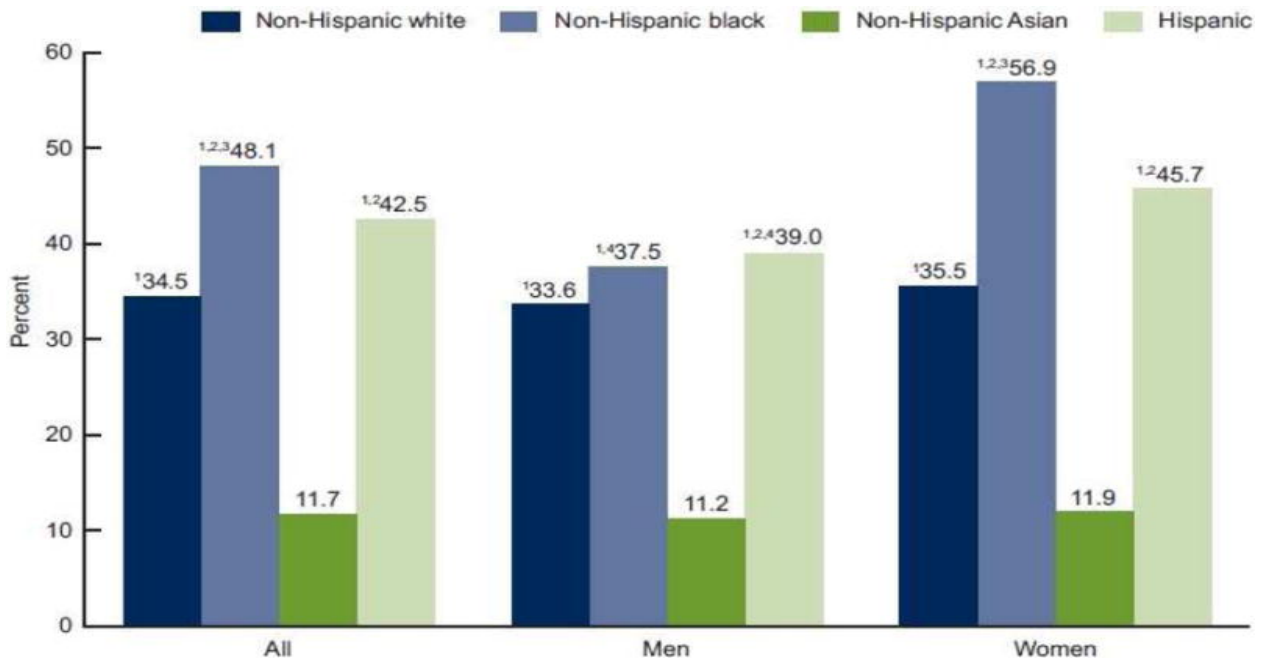

Table 1: Obesity prevalence among adults aged 20 and over, by sex and race and Hispanic origin: United States, 2011- 2014 *From* Ogden CL, Carroll MD, Fryar CD, et al. Prevalence of Obesity among Adults and Youth: United States, 2011–2014. NCHS Data Brief 2015: No. 219

Though obesity is an issue that is said to burden the U.S. population in general, the CDC and the National Center of Health Statistics (NCHS) reports that black women are most likely to be classified as obese by way of BMI (CDC, 2017; Ogden and NCHS, 2015). Approximately 57% of black women are labelled obese as per the BMI (see Table 1; CDC, 2017) and the burden of obesity is disproportionally shouldered when compared to white women (Herndon, 2005; Knox-Kazimierczuk et al., 2018). For example, the American's Changing Lives study (1986-2002) consisted of 2,194 black and white women for which BMI trajectories were computed. The study concluded that "racial differences in BMI [black women had higher rates of obesity than white women] persist even after controlling for socioeconomic status" (Insaf, Shaw, and Yucel, 2014). This article (re) produces the notion of race as a biological outcome, although it is scientifically established that race is not biologically determined nor distinguished, rather a socially and politically derived category (McWhorter, 2010).

As scientific research and the popular press continue to represent black women as the population at highest risk of obesity based upon their BMI (Guthman, 2014), public opinion studies show that negative attitudes towards race and sedentary lifestyle practices are positively correlated (Campos et al.,2005). As black women are portrayed in the medical literature and popular press as the most obese population, they are most likely to be aligned with negative social stigma (Campos et al., 2005). In conjunction with the data that is shown on *Table 1* that indicates obesity prevalence by sex and race, the epidemiological data has established that black women are the most obese *and* the least likely to engage in physical activity (CDC, n.d.; CDC, 2017; Ogden and NCHS, 2015).

In addition to opinion studies and descriptive epidemiological data, various critical scholars (re)produce the notion that physical inactivity is a primary reason black women are obese (see D'Alonzo, Stevenson, and Davis, 2004; Mohamad et al., 2013; Webb et al., 2016; Ray, 2014). This scholarship tends to focus on barriers to black women's physical activity, with particular emphasis on racial and gendered power relations as they pertain to black women's physical culture experiences. While this critical scholarship provides us with important insights about structure and cultural barriers to black women's physical activity, it does tend towards representing black women as an inactive population, and in this regard, supports the rhetoric dominant obesity discourse which centers black women as the most obese population, due in part to their lack of physical activity.

It is against the backdrop of a purported obesity epidemic that disproportionately impacts black women and which is commonly diagnosed via the BMI that I situate my project. More specifically, I use the qualitative research method of semi-structured interviews to examine how black women who are classified as obese (per the BMI) and who are physically active (n=8)

understand BMI, health, and physical activity. In doing so, I am particularly interested in exploring how the BMI might operate under the guise of objectivity to discipline deviant bodies which, in this case, are obese black women. While the BMI is a simple ratio, it is also a numerical classification system that has the potential to align individuals with the negative attributes that are associated with obese bodies through the dominant obesity discourse. In addition to using a numerical standard to categorize what constitutes the average or normal body—and by extension, the atypical or abnormal body— numerical classification systems ascribe social characteristics to categories. The characteristics that define bodies within numerical classification systems are often a product of dominant societal beliefs and ideals (Gould, 1996; Hatch, 2016; O'Neil, 2016). The scholarship of Stephan Gould (1996) and Ryan Hatch (2016) explores how classification systems reinforce dominant societal ideals about race, and justify racist policies and practices that can operate under the guise of science and objectivity. While I am not claiming that the BMI is an explicitly racist classificatory system, I draw attention to how it is based on the 'ideal' of the white body and what this might mean for 'other' bodies (of color) that do not measure up to the ideal.

In consideration of these arguments I examine how black women who are classified as obese understand this classification system, including how/if this numerical classification negatively reinforces social stigmas. In doing so, this project examines the power relations that inform how black women come to know and understand themselves as well as offers a critical perspective of how society (specifically the medical literature) situates obese black women. This examination contributes to scholarship in the field of PCS that focuses on power relations and the (in)active body and issues of embodiment within sociology of sport, health, gender, and racial studies (Andrews and Silk, 2016, pg. 84). As I explore in greater detail in my review of

literature, there is little to no research pertaining to how/if black women are influenced by BMI, and how/if BMI discourse shapes their physical activity and identity (although see Foley et al., 2012; Knox-Kazimierczuk et al., 2018; Kumanyika et al., 2007). My project provides insight into how being outside of BMI's 'normal' range influences black women's attitudes on physical activity, health, and bodies, it at all. Moreover, and as mentioned above, there is little to no scholarship that focuses on the experiences of obese, physically active black women, as the small body of critically-informed scholarship on the topic of black women, obesity, and physical activity focuses on barriers to exercise, with the understanding that lack of exercise contributes to the obesity epidemic (D'Alonzo, Stevenson, and Davis, 2004; Mohamad et al., 2013; Ray, 2014; Webb et al., 2016). This research has the potential to inform healthcare policies, physician practice, and public health interventions that target communities of color, as obesity interventions and treatments are reported as ineffective and unsuccessful for this population (Foley et al., 2012; Kumanyika et al., 2007).

Given these considerations and gaps in the research, I pursue the following research questions: What meanings do black women ascribe to the BMI? How does that ascription and meaning inform their understanding of their own bodies, how they act within their own bodies and notions/ experiences of physical activity?

I begin my project with a substantive literature review in which I outline relevant scholarship pertaining to scientific racism and classificatory systems, critical obesity scholarship, and black women's perception of fatness and body image. This is followed by a review of the theoretical concepts drawn from the writings of Foucault (and Foucauldian scholars) that inform my analysis, after which I outline my methodological approach. With this substantive, theoretical, and methodological background, I further discuss the significance of my project. I

then present and discuss key findings around how participants understand BMI, health, physical activity, and bodies, followed by a conclusion in which I discuss the limitations of the research and future directions.

Substantive Literature Review

Scientific racism, classificatory systems, and BMI

Numerical classification systems frequently reflect society's dominant beliefs and attitudes on bodies, and are founded on political notions which are authenticated by 'expert' knowledge (O'Neil, 2016). As modern race is a political construct, 'objective' numbers are required to verify the political sanctioning of racism within the United States, and it is by this practice we come to understand race (McWhorter, 2010). Stephan Jay Gould (1996) demonstrates this through his historical analysis, *The Mismeasure of Man,* where he documents how numerical representations of society's ideals were assuredly political: "the use of these numbers to rank people in a single series of worthiness, invariably to find that oppressed and disadvantaged groups—races, classes, or sexes—are innately inferior and deserve their status" (Gould, 1996, pg. 21). For instance, Gould analyzed the work of scientist Samuel Morton whose fame derived from his "American Golgotha" – a collection of nearly 1,000 human skulls which he 'unconsciously' wrongly assigned numerical classification based upon the race to which the skull belonged (Gould, 1996). Gould's analysis of Morton's work is often discussed in the field of objective human variation and scientific racism. Gould's claim is that quantitative science based in human variation is frequently influenced by individual and societal bias, and therefore, may leads to the (re)production of racism.

In addition to his discussion of Morton's work, Gould (1996) highlights that the rationale for the development of the IQ test was based upon the assumption that intelligence is hereditary. Gould notes how the IQ test was developed post-World War I—which was an unmatched period of parochial patriotism and heightened racism. He argues that the IQ test scientifically validated

the mental worth of the white Western race[1], and 'objectively' ranked other races as mentally inferior based on the IQ classification system. Gould (1996) stresses that the 'science' behind the classification of bodies, and the societal hierarchy that is a product of that classification, is a consequence of historical views and resistance to racial integration in the United States.

Gould also refers to several of the nation's founding fathers of the United States, including Benjamin Franklin, and highlights their influence in the production of biased classificatory systems, as the dominant political narrative and science are not exclusive; rather, they are entangled as science authenticates politics (such as the concept of race) and politics drives the scientific objective (Gould, 1996). For example, the founding father's resistance toward integration resulted in the exclusion of non-white bodies in laws such as the U.S. Constitution (Gould, 1996; McWhorter, 2010). Due to this political rationale, along with the social discourse that framed racial integration as detrimental to white superiority, many scientists and scientific conclusions supported the concept of racial difference (Gould, 1996). Specifically, classificatory systems have been used in support of the dominant narrative of white superiority, and society's beliefs about white superiority are embedded within the categories they produce. Gould (1996) highlights the dialectic relationship between classification systems and social ideals as they are mutually reinforcing; in other words, science is a social phenomenon that does not record the absolute truth, but the alteration of cultural contexts that influence it.

Though this form of scientific racism is depraved as it justified racism, slavery, segregation, the separation of families, and the killing of non-white bodies, Gould (1978) points out that scientist who partake in these methods are "human beings rooted in cultural contexts, not automatons directed toward external truth" (pg. 503). In his view, the scientists are not

[1] The hereditarian concept of IQ arose in the United States. However, French psychologist Alfred Binet, created the Binet scale which is the original IQ scale (Gould, 1996).

confirming impartial truths, but their subjective understandings of the results of their experiments which are entrenched in social rhetoric. Many scholars have examined historical examples of scientific racism, in which numerical classification systems are used to solidify societal preconceptions of European superiority (Gould 1996, Hatch, 2016, O'Neil, 2016), and as issues of racial discrimination continue to evolve in fields of health, law, and education, researchers continue to expose classification systems that disadvantage people of color (O'Neil, 2016; Garrod, 2006). However, it is important to note that scholars who expose such modern systems do not consider the modern developers, users, and promoters of these systems as explicitly racist (Schiebinger, 1999). Rather, they acknowledge that scientific racism operates in a subtle manner such as choosing particular bodies on which to establish the 'average', 'normal', and 'ideal'.

The practice of choosing particular bodies on which to establish the 'average' is corroborated by Schiebinger (1999), as she explains how, in the 1980's, the Women's Health movement pushed for the inclusion of female minority bodies in medical research, as standardized women's health practices in the clinical context were solely based on white female participants. Schiebinger (1999) argues that although blacks were subjects of medical research, they were not ethically operated upon as ethical inclusion of blacks was not a legal requirement nor a societal expectation. She describes several medical experiments on blacks, such as Dr. J. Marion Sims' gynecological experiments on slave women in 1840 (without anesthesia) and the Tuskegee Syphilis Study, and states that modern medical techniques on these topics were developed on the unethical and racist treatment of black people. Black women were excluded from *ethical* medical research until 1993 which is when National Institutes of Health (NIH)

mandated the inclusion of minority women in medical testing and in medical research[2]. To this point, the medical establishment has a history of developing standards based on white bodies (Gould, 1996; Schiebinger, 1999) and those methods and strategies are the foundation for which contemporary medical treatments and practices are built upon—hence *modern* scientific racism.

Ryan Hatch's (2016), *Blood Sugar: Racial Pharmocology and Food Justice in Black America,* examines a contemporary example of scientific racism—and the subtle manner in which it can operate—as he critiques the racial discourse around metabolic syndrome. Metabolic syndrome is the articulation of several risk factors (Grundy, 2005; Hatch, 2016). Underlying risk factors which lead to metabolic syndrome are dyslipidemia, elevated blood pressure, elevated plasma glucose, insulin resistance, and abdominal obesity (Grundy, 2005; Moore, Chaudhary, Akinyemiju, 2017). According to the National Heart Lung and Blood Institute and the National Institute of Diabetes and Digestive and Kidney Disorders (NIDDK), *ethnicity*, family history, and older age are also underlying causes of metabolic syndrome (Hatch, 2016). In this case, how the U.S. federal government determines race (which is referred to as ethnicity by the NIDDK) as a risk factor for metabolic syndrome is integral to Hatch's argument. He emphasizes that early twentieth century metabolic research did not contain any racial minorities, and that white European bodies provided the empirical data for early metabolic research[3]. Hence, "the metabolism of the white European body became the norm against which other bodies would be compared" (Hatch, 2016, pg. 64). It was not until the 1980's that the State would fund metabolic research on non-white European populations (Hatch, 2016; Schiebinger, 1999).

[2]NIH issued prior mandates, in 1987 and again in 1990, to include minority women in medical testing and research, but the guideline was largely ignored (Schiebinger, 1999).

[3] This is due to the fact that metabolic rates were steadily increasing in the white population which was the main population of study (Hatch, 2016).

Although the federal government allowed for the inclusion of racial minorities in metabolic research in 1980, Hatch (2016) further argues that the mandate constituted a paradigmatic shift within biomedical metabolic research that encouraged studies to narrowly focus and emphasize race as genetic and biological 'causality' for metabolic syndrome. Scientific 'causality' between race and metabolic syndrome has subsequently become a way of explaining racial health disparities in the United States. Hatch defines this modern form of scientific racism as "[consisting] of discourses and practices that serve to explain and justify social inequalities as the natural outcome of the hierarchically organized biological difference understood as racial difference" (Hatch, 2016, pg. 62). Hatch (2016) emphasizes that racial essentialism is a form of logic in Western science, and this rationality justifies social inequalities that disadvantage people of color.

As obesity is a risk factor for metabolic syndrome, Hatch (2016) discusses BMI's category of obesity. He is critical of BMI's authority to diagnose obesity explaining that in order for the BMI to indicate risk of obesity, statistical validity must be established. Due to this, health organizations, such as the World Health Organization (WHO), have recommended standardizing obesity measurements based upon race and ethnicity for the prognosis of metabolic syndrome (Hatch, 2016). However, those standardizations may establish scientific *causality* for race and ethnicity—because the data will show that blacks historically exhibited metabolic syndrome and obesity at higher rates comparatively— which will make being 'black' a risk factor in itself (Hatch, 2016).

In addition to these questions raised about the standardization of BMI and its applicability to black bodies, there are the origins of BMI to consider. In his search for the 'average man' in the nineteenth century, Adolphe Quetelet recorded the measurements of many

Belgium men, and later women (Cryle and Stephens, 2017; Jahoda, 2015). When he was able to measure the bodies of men and women from other ethnicities such as Swedish, Scottish, and White American, he tested them against the standard Belgian (Cryle and Stephens, 2017; Jahoda, 2015). Quetelet's objective of finding the 'average man' was due to his desire of mathematically defining morality. The 'average man' was not just a numerical measure of physical stature, but a social measure of intellect and morals (Caponi, 2013; Cryle and Stephens, 2017). With ethics and mores driving the definition of what is "normal", "ideal", and "average", Quetelet excluded various races and ethnicities as he was determined to statistically define the perfect "social body" free from irregularities (Caponi, 2013; Cryle and Stephens, 2017; Jahoda, 2015).

With the origins of BMI in mind, we may see how the development of the "normal" category was established on white bodies and ideals, and how the exclusion of bodies of color in medical research operates as a mechanism of scientific racism (Schiebinger, 1999). With that being said, modern scholars are critical of the BMI and the statistics that are generated by the use of the BMI (Hatch, 2016; O'Neil, 2016). Although many do not consider the origins of BMI itself, they do call attention to the arbitrary nature of the classification system and how its exaggerated statistics have catalyzed and reified the 'obesity epidemic' (Evans and Colls, 2009; Gard and Wright, 2005; Guthman, 2011). Many critiques of the BMI and how it contributes to the social discourse around obesity is found within Critical Obesity Scholarship, to which now I turn.

Critical obesity scholarship

The critical obesity perspective calls attention to exaggerated statistics and generalized scientific conclusions about obesity, and seeks to identify scientific uncertainties and complexities which shape researchers' opinions about their findings (Lupton, 2012). Scholars in

this field challenge over simplified data which, in many cases, are misleading. Rail (2012) presents and explains eight key elements of dominant obesity discourse.

First, obesity is a disease. Obesity is constructed as a legitimate disease due to the investments of government lobbies, research sponsors, multinational pharmaceutical complexes, and insurance agencies that benefit from the "disease"; in addition, the arbitrary use of the BMI to materialize the construction of obesity as 'beyond normal' or 'abnormal' (Rail, 2012). Second, obesity is directly related to health problems. In the last 27 years, studies linking obesity to morbidity and mortality have reified that the relationship between health and obesity is linear: there is a direct positive link between BMI and morbidity and mortality rates (Rail, 2012, pg. 231). Third, lifestyle is directly related to obesity. Lifestyle choices, namely poor diet and inactivity, are the *individual* reasons for obesity: If one no longer wants to be fat, they should change their lifestyle (i.e. eat less and exercise more) (Rail, 2012). Fourth, obesity is a question of personal responsibility and individual risk. Epidemiologists and marketers invoke the neoliberal language of individual responsibility, and tend to focus on individual risk to health than population risk (Rail, 2012). Fifth, there is a global epidemic of obesity. The obesity epidemic has been dispersed in the medical literature as a crisis which afflicts an increasing number of countries in the world (Rail, 2012). Sixth, when it comes to obesity experts know best. Only obesity 'experts' know the 'truth' of obesity, and they are they only 'experts' with the authority to diagnose obesity and prescribe treatment (Rail, 2012). Seventh, weight loss is the right prescription for obesity and it will improve health. Powerful authorities, such as the CDC and WHO, support that weight loss will improve health as BMI is directly related to morbidity and mortality (Rail, 2012).

The final element is that targeting women and 'unhealthy others" is a key strategy to fight obesity. Though everyone is 'at-risk', women have always been the central targets of weight-loss campaigns and industries (Rail, 2012). Rail (2012) provides snapshots of the construction of dominant obesity discourse that critical obesity scholars attempt to expose and challenge. In addition to critically examining obesity science (and the knowledge produced), they also explore the lived experiences of being obese, and utilize textual analyses (among other methods) to identify the ways in which fatness and obesity are portrayed and embodied by overweight individuals (Gard and Wright, 2005; Lupton, 2012).

Critical obesity scholars frequently critique BMI and often argue that the 'obesity epidemic' did not exist before BMI and its arbitrary cut-off points were brought into play (Gard and Wright, 2005; Lupton, 2012). As BMI is the main tool used to collect data on obesity across the population (CDC, 2017), critical obesity scholars critique the dominant assumption that obesity equates to unhealthiness (Evans and Colls, 2009). In *Fat* (2012) Deborah Lupton states that:

> A poststructuralist perspective on fatness contends that the condition of 'obesity' did not exist before a decision was made that a certain constellation of bodily characteristics should be given this label. The very label of 'obesity' as it is bestowed upon individuals depends on the construction of the Body Mass Index (BMI) measurement, which is the result of a decision made to use specific bodily characteristics in a defined mathematical formula to produce a number (pg. 8).

Through this classification system, health systems and practitioners can 'effectively' label overweight and obese bodies as this method of categorization is inexpensive and easily reproducible (Lupton, 2012). BMI categorization has been critiqued and challenged by many

scholars, but the fields of critical obesity studies, fat studies, and fat acceptance—which all fall under the umbrella term of critical obesity scholarship— have provided scholarship which works to de-legitimize the BMI and policies associated with it (Lupton, 2012). Gard and Wright (2005), in their seminal critique of the dominant obesity discourse, point out that "the 'obesity epidemic' is a social idea, a constructed intersection of scientific knowledge, and a complex of culturally-based beliefs, values and ideals" (pg.168). As scientific knowledge is influenced by social ideals (Gould, 1996; Hatch, 2016), Gard and Wright (2005) not only challenge BMI's objectivity, but also emphasize the role societal beliefs play in the advancement of the BMI as an essential objective classification system. As the BMI continues to inform public health campaigns and drive anti-obesity policies, critical obesity scholars are particularly vocal of the limitations of the BMI.

Seminal critical obesity scholars, Evans and Colls (2009), argue that the BMI is a flawed and crude measurement that should not have the authority to classify bodies as 'diseased', 'lazy', 'inept' or vice versa. They further argue that the BMI is often utilized as a direct indicator of excessive fat accumulation, but it can only ever be a proxy measure as it is unable to measure body fatness (Evans and Colls, 2009). The scientific 'truth' of obesity refers to "an excessive accumulation of triglycerols (fat)" (Nutall, 2015); however, the BMI is unable to determine excessive triglycerols because its ratio is a simple calculation of weight and height (Evans and Colls, 2009; Gard and Wright 2005; Lupton 2012; Nutall, 2015). Therefore, defining obesity by the BMI does not accurately depict one's health status as it is a measure with significant limitations. Even though scientific literature has established a correlation between increasing BMI and risk of cardiovascular disease, it is important to note that being overweight, as

determined by BMI, is not as dire as public health campaigns lead society to believe (see Bacon and Aphramor, 2011; Lamarche et al., 1992).

Although studies show that an individual can be healthy *and* obese (Bacon et al., 2005; Bacon and Aphramor, 2011; Lamarche et al., 1992), public health campaigns, media, and scientific literature endure to support the social 'shaming' of those who are classified as obese (Puhl, Peterson, and Luedicke, 2013) as they reiterate neoliberal notions healthist notions of irresponsibility and immorality (Ayo, 2012; Guthman, 2014). As black women are the most likely population to be classified as obese (CDC, 2017), how the dominant obesity discourse influences their lived experience and understanding of self is the topic to which now I turn.

Black Women, Bodyweight, and Body Image

This section of the literature review discusses the scholarship that examines how black women understand bodyweight and body image. With regard to BMI, the scholarship that focuses on black women is limited; therefore I draw upon scholarship that examines BMI and race more generally (Shaw (2005), Rubin, Fitts and Becker (2003), and Knox-Kazimierczuk et al., (2018)).

Given that black women are disproportionately classified as obese, scholars have explored how this group understands fatness, beauty, and body image. Shaw (2005) discusses black female fatness, as she refers to 'Fat Mammie' and 'Aunt Jemima', as being historical visual representations of how black women were viewed by society. As positive black bodily standards were scarce during the late 18th and early to mid- 19th centuries due to heightened racist societal norms, images like 'Fat Mammie' and 'Aunt Jemima' have become embodied within black culture and manifested upon the bodies of black women (Shaw, 2005). Therefore, Shaw (2005) argues, exercise and 'healthy' eating may not align with black culture. Rubin, Fitts and

Becker (2003) discussed this notion with educated black women, college students, and a university faculty member, and found that black women's understanding of body ideals and ethics differed from the dominant narrative. Specifically, when black women were asked about size and weight, researchers found that personal style, confidence, and respect for one's body is more important to African- American communities. One of the black female participants stated that "you can be huge, but as long as you're dressed, it's more a matter of how you present yourself" (Rubin, Fitts and Becker, 2003, pg. 56). Given that, others in the group nodded in support of this statement, the authors argued that the statement was a collective perspective of obesity and illustrates how being obese affects the identity of the black women.

Additional insights are offered by the limited scholarship pertaining to black women, body weight, and body image (D'Alonzo and Fishetti, 2008; Ray, 2014). Focus groups conducted by D'Alonzo and Fischetti (2008) examine cultural beliefs and attitudes of black and Hispanic college women. The black female students specifically, explained that their lack of physical activity on campus was partially due to the scarcity of women that "looked like them" in the gym and the 'white' music that blares over the gym speakers. Thus, the gym space itself served as a racial barrier to physical activity as it favors a certain demographic. Participants of this study state that they understand the importance of physical activity, but if you already 'looked good', you do not have to partake in exercise (D' Alonzo and Fischetti, 2008).

Much of the critical literature echoes Ray (2014) who conducts an intersectional analysis to explain why there is a lack of physical activity—and therefore increased rates of obesity—among middle class black women. He argues that exercise is a "privilege rooted in how race, place, gender, and body image converge differently on black women's propensity to be physically active than other race and gendered groups" (Ray, 2014, pg. 781). Ray goes on to

explain the barriers to physical activity for black women that are most discussed in the scholarship that he examined, namely time allocation, neighborhood composition, and body image[4] (Banks, 2011; Coogen et al., 2011).

Time allocation is reported to be a barrier given research suggesting that black women are more likely than white women to be single mothers and take on the majority of the household responsibilities as they are more likely to have children and less likely to be married (Banks, 2011). Thus, time allocation is frequently mentioned as 'black women split most of their time between work and caring for their families' (Ray, 2014; D'Alonzo, Stevenson, and Davis, 2004).

Second, black neighborhoods are indicated to be barriers (as a result of racial segregation) because they lack facilities, clean parks, and green spaces regardless of economic status (Powell et al., 2006; Ray, 2014). Lastly, body image is regularly mentioned as a barrier to exercise for black women as studies report black women prefer larger bodies. Many reports conclude that black women are less susceptible to mainstream images of beauty, when compared to white women, which leads to the acceptance of larger bodies and the avoidance of physical activity (Mohammad et al., 2013; Ray, 2014; Shaw, 2005; Strings, 2015; Van Amsterdam, 2013).

Scholars also report a correlation between anti-black (racist) and anti-fat attitudes (those who ascribe negative characteristics to black bodies are highly likely to ascribe the same negative characteristics to 'fat' bodies) (Van Amsterdam, 2013). Attitudes and perceptions are often mentioned in scholarship which relates obesity and race, but the association is regularly summed up as 'black women do not agree with white standards of beauty' (Van Amsterdam, 2013). This

[4] The monetary cost of exercise is also positioned as a barrier within the literature that examines black women and physical inactivity (Joseph et al., 2015), however, this specific barrier was not covered in Ray's (2014) intersectional analysis.

narrative is dangerous because it assumes that thinness is the embodiment of whiteness and fatness is the embodiment of blackness (Thompson, 2015). Due to this narrative, we may find society's dominant attitude towards black women as being the antithesis of corporeal standards. Sabrina Strings (2015) discusses the dominant attitude towards obese black women in which she states:

> The discourse of obese black women engaging in behaviors that place themselves and others at risk is not solely, or principally, a matter of the (inconsistent) medical findings as they relate to weight and health. Instead, they are the latest innovation in the familiar medical trope of the unrestrained black women as **deadly**. Within this trope, African American women lack control over their sensual appetites and are thus willing to engage in deviant high-risk behaviors. Black women's sensualism is not only deemed responsible for their diminished health and well-being; it also makes them deadly agents of disease (pg. 108).

Strings (2015) places emphasis on the term 'deadly' throughout this article to highlight the 'wildly animalistic' and deviant rhetoric that is often associated with the black culture. Black women, similar to their male counterparts, have been constructed as sexually deviant, especially during the era of slavery as they had sexual encounters (consensual and coercive) with white slave owners. Therefore, black women need to be tamed due to their inherent lack of sexual self-control (Strings, 2015). Strings (2015) argues that the narrative that aligns lack of self-control with black women's sexual deviance, is also translated to the lack of control over their bodies as it regards their weight. As studies report that the sensual black body is also an obese body, scholars suggest that the only way to 'fix' black women's obesity is to "undo the validation of voluptuous bodies" within black culture (Sanchez-Johnson et al., 2004 in Strings, 2015).

Therefore, Strings (2015) argues that current obesity discourse illustrates obese black women as individuals who "unduly carry around heavy weight that is not only jeopardizing the health of themselves and their families, but is also a long-term oppressive burden on public health". Although Strings (2015) discusses the dominant perspective of the relationship between obesity and black women, she purports that obese black women are 'victims' of historical and contemporary stigma. Thus, while Strings (2015) scholarship is illuminating, there is a need to focus on black women's agency as it relates to body weight, body size, and physical activity.

Scholars argue that historical and contemporary forms of representation, such as the Mammy and the Sexy Jezebel, have led black women to underestimate their weight (Ray, 2014; Van Amsterdam, 2013) and indicate that their partners for marriage prefer larger bodies (Mohamad et al., 2013) which lead to the acceptance of larger bodies and the avoidance of physical activity. While this literature provides insight as to why black women might be less likely to exercise, what is also needed is research examining the experiences and understandings of black women who are obese *and* physically active—a gap my project fills.

A final gap in the literature pertaining to black women, obesity, and physical activity is understandings of BMI. Knox-Kazimierczuk et al., (2018) recently worked to examine how BMI influences race and gender, and specifically how black women come to understand themselves through obesity discourse. To gain this insight they utilized questionnaires and critical race theory to analyze and understand the intentions and motivations of the health behaviors of black women (Knox-Kazimierczuk et al., 2018). By engaging Sellers' (1997) dimensions of racial ideology, racial salience, racial centrality, and racial regard, Knox-Kazimierczuk and colleagues came to several conclusions about the relationship between BMI and the black woman's identity.

First, as evidenced by participants' questionnaires, their study found that "African American women participants who identified closely to poor African Americans were associated with a higher BMI" (Knox-Kazimierczuk et al., 2018). The concept of racial centrality, which correlates the individual's closeness in ideas and feelings to race, showed that the women of this study felt a greater engagement with other the people with whom they associated; therefore, if participants identified closely with poor African Americans, they were more likely to come into contact with poor African American's. The authors conclude that greater contact with other poor African Americans could mean a higher chance of consuming low nutrient-dense foods and little-to- no engagement with physical activity (Knox-Kazimierczuk et al., 2018).

Second, "the perception of African Americans being violent, being lazy, and giving up easily was associated with a higher BMI" (Knox-Kazimierczuk et al., 2018). This illustrates the concept of racial regard, as racial regard refers to the embodiment of racial stigmas and stereotypes. As the internalization of negative stereotypes and stigmas is associated with a higher BMI, it is expected that the internalization of positive racial qualities would improve health outcomes and reduce obesity rates. Third, racial ideology, was not measured in this study as it did not have sufficient proxies in the questionnaire. Lastly, racial salience, the concept which emphasizes either the importance of being seen as black, American, or a person, were inconclusive as participants in this study emphasized the importance of being seen as black and being seen as a person (Knox-Kazimierczuk et al., 2018). However, social status and position, self-esteem, and self- concept of the individual contributed to what types of health behaviors that the individual engaged in.

While the study by Knox-Kazimierczuk and colleagues (2018) demonstrates that obesity is a complex and multifactorial process that requires the examination of racial identity, this study

is limited for several reasons. First, although the BMI is the central measure for this study, the authors do not engage the historical origins of BMI's development nor its present weaknesses. Although the authors attempt to examine BMI's influence on racial identity, they do not ask their participants their perspectives on BMI; rather, participants are administered a questionnaire which correlates participant responses with their BMI. Knox-Kazimierczuk and colleagues (2018) write that that purpose of the questionnaire is to assess quality of African American life as it regards BMI, but this process *statically* correlates the relation between BMI and the perception/ lived experience of African American life. For instance, black women are most likely to be obese, have a lower socio-economic status, and to be single (Banks, 2011; Coogan et al., 2011; Ray, 2014). By statistically validating this correlation and framing it as scientific 'fact', Kazimierczuk and colleagues (2018) are not only reinforcing stereotypes, but scientifically establishing/ corroborating the black identity as a health risk, and reiterating the dominant obesity discourse that weight loss (lower BMI) is directly related to the improvement of health and quality of life (see Rail, 2012).

Theoretical Framework

Overview

Scholars agree that Michel Foucault's post-structuralist view of the body may be used to understand the effects of power within the twentieth century (Selby, 2007). Although Foucault does not refer to himself as a post-structuralist, he is credited with being the catalyst of the second movement of post-structuralism in the 1980's, with his rejection of the structuralist notion that identities and subjectivities are "fixed" (Poster, 1989). Foucault claims that identities and subjectivities are products of discourse and knowledge, and that discourse and knowledge are constituted through effects of power (Markula and Pringle, 2006; Mills, 2003). To this point, Foucault takes an anti-positivist/scientific stance as he questions the status of science itself claiming that it is impossible to step outside of discourse and view situations objectively (Poster, 1989; Selby, 2007). Critical obesity scholars have usefully looked to Foucault to illustrate how discourse associated with obesity work to discipline and regulate bodies in racialized and gendered ways (Gard, 2008; Harwood, 2008; Wright, 2008). In my examination of how black women understand and experience obesity, BMI, health, and physical activity, I similarly look to the work of Foucault and his concepts of biopower, discourse, governmentality, and racism. In what follows, I first provide an overview of Foucault's ideas around power, knowledge, and discourse as well as governmentality and risk as they relate to my project. I then discuss Foucauldian scholarship specific to race and biopolitics and apply these ideas to the BMI.

Power, Knowledge, and Discourse

Discourse is central to the work of Foucault (Markula and Pringle, 2006; Mills, 2003). Discourse is concerned with the statements which join together within specific social and cultural contexts that influence the 'real' world (Markula and Pringle, 2006). For instance, the

dominant obesity discourse projects a narrative which equates thinness to productivity and fatness to lazy, which impacts how employers view their overweight and obese employees (Ayo, 2012; Norman, Petherick and Cameron et al., 2016; also see O'Neil, 2016). Discourse guides social practices and shapes the way we come to perceive the world. Identities are not fixed, instead they are constantly shaped through discourse, and it is by these effects that individuals come to know themselves and others (Mills, 2003). Discourse provides a language for talking about—and a way of representing the knowledge about—a particular topic (Hall, 1997). Discourse constructs the objects of our knowledge (Foucault, 1977; Hall, 1997), and the way we view ourselves and our position within society is a result of discourse (Mills, 2003).

Text, talk, and language are the elements of discourse, and construct phenomenon around certain identities or subject positions constructed via discourse (for example, the subject position of a healthy person). However, Foucault stresses that the discourse which shapes the construction of subjects is complex, multiple, and conflicting, and that human identity is an ongoing formation (Markula and Pringle, 2006). The discourse around "what it means to be a healthy person", for instance, has changed over time, and our subjectivities are constantly shaped and reshaped by these altering, and sometimes conflicting, notions of health. Current obesity discourse constructs the "healthy body" through discourse concerned with exercise, slim waist line, muscles, and restrictive diets (Bacon and Aphramor, 2011; Guthman, 2014; Lupton, 2012). Popular commercial advertisements do not display a body as healthy if it has a "beer belly', nor is the narrative that an obese body is a healthy body advocated in popular media (Bacon and Aphramor, 2011). The healthy body does not simply exist, but is constructed through various social practices and social policies. As a result, the identity or subject position of a 'healthy' subject does not exist outside of discourse and how people perceive themselves is a product of

the narratives and 'truths' that circulate in society (McGannon, 2017). However, what we consider as 'truth' within a discursive field is often reified and corroborated by knowledge.

Foucault questioned the assertion that knowledge is objective in nature and problematized the claims of scientific 'truth' (Markula and Pringle, 2006). Foucault questioned scientific knowledge by drawing attention to power. While there are competing and contradictory knowledges as a result of complex discourse, those knowledges accepted as 'natural' (such as what constitutes the healthy body in Western contemporary society) are implicated through the authority of power; even if the knowledge is not true the discursive effects of power allow the knowledge to *become* true (Hall, 1997; Mills, 2003). As these power relations are intermingled throughout society through discourse, certain corporeal behaviors are produced (e.g., walking 10,000 steps) and others are limited (e.g., eating 'unhealthy' food). It is through the power, knowledge, and discourse triad, that we come to know claims as "common sense" or normal.

Foucault explains that for something to be established as true or normal, something else must be discredited, denied, or termed abnormal (1980). These normalizing interventions are not only the asylums and clinics that Foucault describes in many of his works (see Foucault, 1977, 2003a, and 2003b), but corporations and voluntary agencies also provide 'expert' knowledge and guidance on how to behave (Giulianotti, 2015 pg. 117). Our subjectivities and how we know ourselves are constructed through the knowledge and practices that are promoted and /or discouraged by the dominant discourse—including what is 'appropriate' behavior—and the dominant discourse if often tied to institutions such as the prison, the clinic, the university, and the government (Mills, 2003).

With Foucault's idea around the importance of knowledge and discourse, Foucault introduced a novel view of power as circulating throughout society as opposed to operating in a top-down manner (Foucault, 1977). *Discipline and Punish* (1977) brought disciplinary power to the fore as the practice of violent public punishment for prisoners began to decrease in the seventeenth century. Disciplinary power seemingly disappeared in the nineteenth century, but Foucault argues that a more subtle form of power was instituted to produce disciplined "docile" bodies. Foucault (1977) suggests that the achievement of disciplinary power arises from the use of surveillance (by surveilling others and surveilling the self) and normalization which allows for the imposition of unified judgements.

He employs the concept of 'panopticism' in his discussion of Jeremy Bentham's panopticon to provide an example of how modern disciplinary power operates subtly to render bodies 'docile'. The panopticon was a prison which consisted of a guard tower at the center which looked over separate cells. Although each cell had a window, the prisoner inside could not tell whether he/she was being observed (or if there was a guard in the tower at all). Panopticism instituted the concept of self-surveillance which was not only established in prisons, but as Foucault (1977) argues, became a disciplinary technique in other institutions such as schools and hospitals. To this point, power works 'bottom-up', as it regulates society through self-surveillance instead of physical duress.

Biopolitics, Normalization, and Risk

Foucault's concept of biopower, or power over life (bios) can be defined as the political control over the biological processes of the individual body and the collective social body, with the aim of controlling life and regulating the population (1980). According to Foucault (2003a) biopower marked a move away from the State being concerned with control of the individual

body to control of the population as a whole. Biopower is a "seizure of power that is not individualizing but […] massifying, that is directed not as man-as-body but at man-as-species" (Foucault et al., 2003a in Evans and Colls, 2009). Hence, while biopower may involve the adoption of techniques which may discipline individual bodies (such as self-surveillance), biopower operates to control the population through "ensuring they are not disciplined, but regularized" (Foucault, et al., 2003a pg. 247 in Evans and Colls, 2009).

On this basis, Foucault (2003a) asserts that biopolitics (political strategies that operate to control the population) introduces technologies of power that are different from disciplinary power. The mechanisms introduced by biopolitics include statistical estimates and overall measures, which must establish regulatory mechanisms (such as the average) in order to account for variations and thus optimize human life (Foucault et al., 2003, pg. 246). Foucault (2003a) recognizes, these two techniques of governance, disciplinary and regulatory, are not mutually exclusive, but function together to control bodies at the individual and population level through the concept of the 'norm'

The norm is the element that circulates between disciplinary and regulatory effects (Foucault et al., 2003a, pg. 253). Foucault states, "the norms is something that can be applied to both a body one wishes to discipline and a population one wishes to regularize" (Foucault et al., 2003 pg. 253). To this point, we live in a normalizing society in which the "norm of discipline and the norm of regulation intersect along an orthogonal articulation' (Foucault et al., 2003 pg. 253). For example, Evans and Colls (2009) examine a BMI monitoring program, and assert that BMI constitutes a mechanism of biopower. They refer to the monitoring program as a biopolitical strategy in the so-called "war on obesity," where biopolitics is a politics which "deals with the population" (Evans and Colls, 2009, pg. 1054). They conclude that BMI monitoring is

biopolitical strategy which disciplines *and* regularizes the body at the population and individual level, as it works to distinguish the 'normal' from the 'abnormal' (Evan and Colls, 2009).

The establishing of norms and how they are constructed is central to the Lupton's (1999) discussion around the establishing of risks. Risk plays a central role in constructing life and subjectivities (Lupton, 1999). Scholars such as Deborah Lupton and Nikolas Rose, have taken approaches from Mary Douglas and Michel Foucault in order to theorize risk and its effect within the socio-cultural sphere. Major perspectives on risk within the socio-cultural field consider broad cultural elements that contribute to the identification and management of risk, and often oppose the scientific 'experts' within techno-scientific fields as they often view risk through logic, rationale, and realist thinking (Lupton, 1999). Governments and corporations rely on the rationale of the 'experts' to identify, manage, and present ways of avoiding risk, but it is inherent in itself that risk cannot be avoided (Gard and Wright, 2001). This notion that 'risk cannot be avoided' is the product of the 'risk society' that we live in.

Risk societies are the construction of Western countries, which place the expert at the center of risk identification, management, and prevention (Gard and Wright, 2001). The role of the expert in a risk society is to "claim knowledge, expertise, and ability to control that which seems to be out of control" (Reddy, 1996). By seemingly being able to control the uncontrollable, the 'expert' is granted the authority to not only define 'risk', but also indicate *what* and *who* is risky. Identifying risk and who is at risk are the primary aims of the field of public health (Gard and Wright, 2001). More specifically within the past 17 years, the term risk has been used by the Office of the Surgeon General to manage and mediate behaviors that may result in obesity (Office of the Surgeon General, 2001). For example, in 2001 the Surgeon General's Call to Action, *To Prevent and Decrease Overweight and Obesity* goes as follows:

> The Surgeon General's Call to Action, *To Prevent and Decrease Overweight and Obesity*, seeks to engage leaders from diverse groups in addressing a public health issue that is the most burdensome faced by the Nation: the health consequences of overweight and obesity. The burden manifests itself in premature death and disability, in health care costs, in lost productivity, and in social stigmatization. The burden is not trivial. Studies show that risk of death rises with increasing weight. Even moderate weight excess (10 to 20 pounds for a person of average height) increases the risk of death, particularly among adults aged 0 to 64 years.

The Surgeon General's Call to Action is a political message to the country based on a collection of data that is gathered and analyzed by epidemiological experts, and the purpose of the message is to discipline and regularize overweight bodies at the individual and population level. The Call to Action may operate as a biopolitical strategy, as it uses the notion of 'risk' to manage and regulate the population. This message was the catalyst for a series of government funded anti-obesity campaigns, also called 'shame campaigns', which targeted populations most 'at-risk' of being a burden to public health (Puhl, Peterson, and Luedicke, 2013). This tactic of targeting those deemed 'risky' by the State, is a biopolitical strategy that is also seen during past eras of scientific racism and eugenics. The State has a history of managing and mediating life in the name of the well-being of the population (Rose, 2001). Historically, the State has worked to control populations which were deemed inferior by enforcing that only genetically superior populations may reproduce (Gould, 1996; Garrod, 2006). Motives behind this regulation were that inferior bodies presented a risk to those who were superior, and the qualities of the inferior should not intermingle with that of the superior (Gould, 1996; Garrod, 2006; Rose, 2001). Though the paradigm of risk has shifted from eugenic narratives (inferiority is based on race/

genetic inheritance and quality) to healthist narratives (inferiority is based on an individual's moral obligation to their body which is assessed by their outward appearance), the power of the institution (e.g., schools, hospitals) continues to control and mediate populations through the subjectification of modern subjectivities.

Foucault's concepts of subjectification and expert knowledge are vital to risk and governmentality and are often used by risk theorist to analyze how subjectivities are constructed through risk discourse. Lupton (2013) explains that expert knowledge provides guidelines under which populations are examined and managed, compared against norms, and rendered productive or deviant. Through this normalization, the individual is constructed as a product of these networks and techniques of power, and it is through these networks that the individual understands his/ her body (Lupton, 2013). Modern subjectivities are informed through risk discourse in general, but epidemiological risk is most impactful as the neoliberal healthist narrative positions the State as no longer expected to resolves society's need for health (Rose, 2001). As responsibility is placed on the individual through this network (Rose, 2001), the conduct of individuals is governed at a distance through the entanglement of epidemiologically constructed 'truths' (Peterson and Lupton, 1996). Epidemiological risk is statistically established and management and prevention of risk does not necessarily involve consultations with health professionals, but most often mass-targeted media campaigns which rely on the individual identifying themselves as being 'at-risk' (Lupton, 2013). However, in order for individuals to identify themselves as 'risky' they must also view themselves as deviant from the 'norm'.

As the notion of risk becomes more apparent in the neoliberal rationality of governance, Foucauldian scholars argue that risk theory may be used as an extension of governmentality as 'risk' is frequently used as a governmental strategy by which bodies become regulated by the

notion of 'risk' (Lupton, 2013). 'Risk' is central to health discourse, as identification, management, and mediation of 'risk' is the duty of the contemporary epidemiologist (experts who established obesity as an "epidemic") (Peterson and Lupton, 1996). 'Risk' management is an integral proponent of health care strategies and individuals are expected to self-regulate (exercise and diet) to avoid 'risk' (Peterson and Lupton, 1996). Individuals who do not self-regulate and engage in 'risky' behavior or lifestyle practices, are often stigmatized as immoral. Stigmatization of 'risky' bodies is the product of the healthist ideology that is promoted by neoliberal governance (Ayo, 2012). Healthism, as coined by Robert Crawford, places moral obligation and responsibility on individual bodies to engage in healthy behaviors, and bodies who do not are presented as immoral (Ayo, 2012).

In the neoliberal context, individuals are pressed to self-regulate and discipline their bodies by engaging in 'risk' eliminating practices (i.e. exercise and diet). This political strategy 'governs at a distance' in such a way that bodies are not overtly punished or coerced to self-regulate (Peterson and Lupton, 1996); rather, they acquiesce to the dominant healthist paradigm that constructs a 'risk-averse' individual as a good citizen. In the process, self-regulation, and risk-aversion are normalized to be regarded as "common sense".

Race, Biopolitics, Biopolitical Norms

Though some scholars believe that Foucault does not theorize race explicitly, Foucauldian scholars acknowledge that he made extensive observations about race during a lecture series in which he gives a genealogical account of biological forms of racism at certain points in history (Taylor, 2011). In *Society Must Be Defended*, Foucault explains that Medieval European society defined race by language, habits, and religion. Racism during this period was not based on one race being inferior to another; instead, one race had conquered or stolen the

land of another race's (Taylor, 2011). It was not until the 18th century that intellectuals began counting people anatomically and placing them into categories of red, white, yellow, and black. The basis of this type of racism, resulted in a discourse which is best summarized by the following:

> By the 18th century, the idea of 'race; began to change into an anatomical category. By this time there were debates about how many races here were, and intellectuals such as Immanuel Kant weighed in on the number, counting people by anatomically distinct groups, such as yellow, red, white, and black people. Now race had come to be about skin-color, bodies and morphologies, not about customs and languages. A black person raised in a white society would still be black, and the problem with blacks, this racist discourse claimed, was not that they were conquerors but they were anatomically and hence mentally and culturally inferior (Taylor, 2011, 750).

The discourse that arose from the anatomical categorization of races influenced scientific notions about other biological and social aspects such as mental capacity and character traits (Garrod, 2006). As a result, Foucault argues that "modern race no longer refers to different qualitatively neutral cultures, but to hierarchically ranked biological groups" (Foucault 2003a in Taylor, 2011, pg. 752). Race is a variable used by scientific experts to rank groups biologically and results with one race being physically superior to another. Through his genealogical account of race, Foucault argues that race discourse is often used as a tool wielded by the biopolitical state against its marginalized members (Taylor, 2011).

Individuals marginalized by the State are believed to be 'carriers of stigmata' (homosexuals, non-able-bodied people). Focused on the eugenics movement, Foucault explains how these individuals are ostracized by members of their own racial group and terms this form of

prejudice internal racism (Taylor, 2011). Internal racism is a biopolitical strategy by which members of the same race work to eliminate abnormal qualities from the race's 'gene pool' (Taylor, 2011). Later in his thinking, Foucault expands on his earlier concept of internal racism by distinguishing how modern racism is simultaneously substantiated by scientific knowledge and political discourse in order to control other 'inferior' racial populations (Foucault, 1980; Taylor, 2011).

As modern racism is the conception of political discourse and integral to the foundation of U.S. governing tactics (see McWhorter, 2010), it is also theorized as a biopolitical strategy. Racism, Foucault writes, is primarily a way of introducing a break into the domain of life that is under power's control: the break between what must live and what must die" (Foucault in McWhorter 2010 pg. 77). It is a way of marking, in biological terms, those individuals who pose a threat to the *bios* of the nation (McWhorter, 2010), which allows the state to warrant the population's death or enslavement, political or otherwise, in the name of the protection of life (Taylor, 2011).

Racism's secondary function, is to eliminate biological threats to the population (Foucault et al., 2003a). In a biopower system, killing is essential if it results in the elimination of the biological threat and the improvement of the society. In a normalizing society, racism is the required precondition that allows someone to be killed (Foucault et al, 2003a). Once the State engages biopower and biopolitical strategies, racism can justify the oppressive function of the State (Foucault et al., 2003a). However, when Foucault refers to "killing" he does not mean the direct decapitation, instead murder is done indirectly by the State when the *risk* of death, rejection, imprisonment, or expulsion is increased for *some* people (i.e. the 'risk' of imprisonment is higher for black men).

There are many strategies within various institutions in our country that persist to sustain the racist basis of which this country was founded (McWhorter, 2010). As it regards exposing these systems, McWhorter (2017) states:

> What must be dismantled is not a belief system or even individual attitudes; it is the normalizing discipline and its accompanying practice of biopower. The solution is not to raise everybody to acceptable standards of normality; it is to undermine normality's power to dictate the terms of human lives (pg. 290).

In a Foucauldian lens, BMI is a normalizing biopolitical tool which operates as a subtle form of racism as it is generated from data in which white bodies are the 'norm' and other bodies are constructed as abnormal and at greater 'risk'. By viewing the BMI as a normalizing disciplinary tool of the biopolitical State, this project not only exposes the continued use of racism (as determined by Foucault (2003a)) within the medical establishment via BMI, but examines how black women perceive the norm as few scholars have done so.

Significance of Research

Empirical, Methodological, and Theoretical Significance

Empirically, few scholars analyze the relationship between black women, BMI, and physical activity (Knox-Kazimierczuk et al., 2018). Collection of this data is essential as it will not only inform scholars of black women's perception of the BMI and physical activity, but it will also give further insight into how this perception influences their attitudes towards physical activity. As previously stated, the dominant obesity narrative, which is supported by empirical data, supports the notion that black women are obese because they do not engage in physical activity (Ogden and NCHS, 2015; Ray, 2014). However, given that I interview black women who do engage in regular exercise, I seek to provide an alternative perspective and offer insight about the practices, beliefs, and understandings of black women who do engage in physical activity. This research is significant as it may inform public health interventions that were previously unsuccessful when targeting black women. Based on my review of the literature, there has yet to be a critically-situated, qualitative examination of the voices of self-identifying obese black women who are physically active.

Bringing these voices to the fore is important in order to offer a critical analysis of how the BMI as a classificatory system is understood by a group disproportionately labeled as 'abnormal'. This view point is also politically significant as examining how BMI not only implicates obesity, but race and gender as well, offers a critical analysis of how BMI may work to (re)produce race and gender-related stigma. As Foucault (1972) notes, the biases and of the experts are reflected in their production of knowledge; therefore, as obesity is portrayed as a burden that primarily plagues black women by the medical establishment (Foley et al., 2012;

Hales et al., 2017) obesity discourse subsequently informs how society views black women, and how black women view themselves.

Advancing Areas of Inquiry

The continued promotion of the BMI leads many to assume that true self-knowledge, self-mastery, self-development, and self-care may be attained by falling within BMI's "normal" range, and losing weight to do so (Heyes, 2006). However, critical obesity scholarship challenges this dominant paradigm by shifting emphasis away from individual weight-loss to the social and scientific standards (namely BMI) that construct obesity as a threat to public health (Gard and Wright, 2005; Lupton, 2012; Saguy and Riley, 2005). This project advances the approaches of these fields by 1) being critical of how the BMI effects the intersection of race and gender and 2) offering insight on how/if black women's perception of BMI influences their physical activity. In doing so, obese black women may no longer be depicted as 'threats' to public health, but as the culmination of a complex series of entangled power relations.

BMI's power is not 'hard' or overt in a sense that it demands conformation, instead its authority gives rise to new forms of behavior through classification. Bodily behavior is essential to Foucault's notion of power as individual bodies are where power is enacted and resisted (Mills, 2003). BMI's power to identify obesity disproportionately acts on the bodies of black women. This is not to say that BMI does not classify *all* bodies, but the diagnosis of its obese category is ascribed to the majority of black women (Foley et al., 2012, CDC, 2017). Markula and Pringle (2006) discuss how the power of the institution influences discourse, and that we come to know ourselves through the language of the institution. Therefore, I am critical of the idea of BMI as an "objective" measure within clinical research—due to BMI's origins (Jahoda, 2015 ; Caponi, 2013) and the exclusion of minorities in medical research until 1994 (Schiebinger, 1999)— and how the classification system influences attitudes towards race.

As the goal of Physical Cultural Studies (PCS) is to expose and challenge biases within physical culture (Andrews, 2008), I challenge how the dominant obesity discourse portrays the relationship between black women, BMI, and physical activity. According to Silk and Mayoh, (2017), "PCS is a dialogic learning community, in which there is a commitment to critical and constructive conversation" (pg. 101). This thesis is a conversation that is centered on the critique of dominant obesity discourse, and its production will contribute to the "advancement of social formation and transformation" (Silk and Mayoh, 2017). By addressing this socio-cultural inequity, PCS will be better equipped to eliminate disparities as the crux of this project addresses medical bias based on the articulation of weight, race, and gender. With these goals in mind I pursue the following research questions: What meanings do black women ascribe to the BMI? How does that ascription and meaning inform their understanding of their own bodies, how they act within their own bodies and notions/ experiences of physical activity?

Methods

Methodology

In order to conceptualize and analyze the relationship between black women, BMI, and physical activity, I use qualitative interviews for epistemological and ontological understanding. Qualitative interviews are not biased knowledge rather they provide a deeper understanding of the participants' perspectives (Silk and Mayoh, 2017). I conducted eight (n=8) semi-structured interviews with black women who self-identify as 'obese' by the BMI and as 'regular gym-goers'. I chose this technique because my project's objective is to examine black women's perception of BMI, and how/if that perception influences their lived experience. In doing so, I strive to capture participant voices "as they were" (by leaving their words unfiltered and without correction) because this data has the potential to inform certain narratives in relation to black women, BMI, health, and physical activity.

In using the term 'narrative', I am referring to more than the literal words participant's used to discuss their understandings; narrative refers to the language which shapes our identity (Somers, 1994). Somers (1994) explains that this narrative concept informs our epistemological and ontological way of knowing the world, and it is through language and narrative that we constitute our social identities. While the body is central to this thesis, we must attend to how we ontologically come to know ourselves. In addition, what participant's perceive to be evidence/ knowledge also shapes their identity (King, 2005). By highlighting participant's epistemological view of BMI, scholars may better understand why this population is invulnerable to obesity interventions and public health campaigns (Foley et al., 2012; Kumanyika et al., 2007).

Recruitment and Sample

I recruited participants at LA Fitness in Upper Marlboro, MD during Member Appreciation Day (MAD). MAD is an event held within the gym that permits local vendors to promote their business inside of the gym. Those who came to my table, were given a brief description of the purpose of the project and were asked to email me (the principal investigator) if interested. Participants that agreed to do the study were given the approved IRB project description and consent forms. The IRB process was expedited as the project did not involve a vulnerable population, nor did it involve the taking of anthropometric measurements; therefore, IRB determines this project to be a Minimal Risk project. Once interviews were scheduled I gave further description of the project and explained consent before conducting the interview.

Interview Procedure

The semi-structured interviews were conducted from October 2018-December 2018. During the interviews I utilized a script of open-ended questions which allows the researcher to introduce the general topic and the interviewee to lead the discussion and give the researcher their uninterrupted perspective (Silk and Mayoh, 2017). This method is adjustable as each participant did not interpret and answer each question the same; therefore, the open-ended script was most useful as it allowed for flexibility between questions. I also developed new questions as participants mentioned ideas that were not previously included in the interview material guide.

Interview times ranged from a minimum of 30 minutes to a maximum of 50 minutes. Interviews were held at a location, during a date and time of the participant's choosing, and were audio-recorded with a battery operated digital recorder. Interviews were transcribed immediately after the interview into a *Microsoft Word* document.

Analysis of Data

I employed thematic analysis to analyze my data. Thematic analysis is a method used to identify and interpret themes, and is especially suitable for analyzing interviews (Clarke and Braun, 2016). I used Clarke and Braun's (2016) approach to thematic analysis to analyze the interview data, interpret the interview data, and contextualize it in relation to existing research. Clarke and Braun identify six phases to the analytic process:

1. Data familiarization which consists of reading the data to develop a deep sense of the overt meanings articulated by the participants. I became familiar with that data by transcribing the interviews myself and coding by hand prior to entering the data into Nvivo software.
2. Data coding which involves labeling data that is of potential interest to the research question. I engaged in closed-coding based on the categories of my interview guide. For example, codes that were generated from the data were "BMI relevance", "bias", "location of fat" and "doctor".
3. Searching for themes based on the codes. This phase was essential to my project as repeated ideas and concepts across cases suggested a pattern and required further interpretation. Based on the codes, one of the themes that best fit the objectives of the project were "BMI is irrelevant". Codes that built this theme were "importance", "bias" and "doctor".
4. Reviewing the themes. This is a process that helped to 'shape' my analysis of the data. With my research questions in mind, my analysis of the data was driven by the building of themes. It was not until I decided on these themes, that I understood the analytical significance of this project as a researcher.

5. Defining and naming themes is the phase where I built my analytic narrative. The analytic narrative is my interpretation of the data and explains the significance of the findings.
6. Writing up the thematic analysis consists of re-engaging with relevant literature and highlighting continuities and discontinuities. By re-engaging the literature that I previously introduced in the Substantive Literature Review and introducing new literature, I further substantiate the significance of my findings and illustrate how my research contributes to the fields of PCS and public health.

Although these phases are not linear and may blur into one another, they are integral to the analysis of participant understandings. Thematic analysis is ideal for answering research questions that involve experiences, understandings and perceptions, and construction of identity and because of this, it is also appropriate for identifying patterns (Clarke and Braun, 2016). As my research questions are concerned with perception and understanding, thematic analysis helps to analyze overt meanings along with exposing underlying discourses as well (Clarke and Braun, 2016).

Positionality Statement

In my time as a graduate student in the Kinesiology department at the University of Maryland (UMD) in College Park, I have found that a primary objective of the Department of Kinesiology is to educate people about the dangers of obesity and the benefits of exercise as a tool for obesity reversal and prevention. I find this focus alienating due to the inherent devaluation of fat bodies and the assumption that often follows that poor lifestyle choices are the primary cause of obesity. This focus on obesity is arguably racialized as scientific institutions frame obesity as a disease which immoderately effects black people—black women in

particular—in the United States (Hales et al., 2017). Representation matters, and it is important that black women produce knowledge that focuses on black women. This has led me to pursue research that focuses on black women's understandings of obesity and one of the main measures of obesity, body mass index (BMI), as existing knowledge on this topic is primarily produced through the viewpoint of white researchers.

It is the goal of sociology of sport practitioners to expose and challenge biases within sport and physical activity with a goal of creating a more just and equitable physical culture. Since I am a black woman *and* a health professional (personal trainer), not only do I have the potential to recognize the linkage between black women, obesity, and health, but I may also give voice to those who are often silenced in academic inquiry. To this point, I acknowledge that my identity may allow me to serve as an 'insider' as I also self-identify as an obese black woman who is regularly physically active. As it is imperative that social researchers examine the link between the construction of their subjectivities and their analytical and theoretical assumptions (Pringle and Thorpe, 2017), I recognize how my aim for this project is rooted in my own lived experience. Though not a limitation to this study, my lived experience further helps to comprehend and illustrate the voices of the participants.

To this point, my position effects how I gained access to my participants and how I interpreted the data. Not only am I a black women who "looks like them" as I am also overweight, but I am also familiar with the references and language they used to answer the interview questions. This is a reflection of my 'middle class blackness. For instance, when the participant referred to her doctor as "greek", I knew that she did not mean that he was a man from Greece, instead, he was a black man who is part of a collegiate fraternity. Fraternities and sororities are integral to collegiate black culture, and since I also attend University (another nod

to my class status) it is a concept that heavily influences my perception of blackness. Although one does not have to be middle class or black to understand this reference, I acknowledge that my position allowed me to deeply engage in dialogue with participants as they did not have to stop during the interview to further explain their statements.

Findings

Overview of Findings

In this section, I share three key findings regarding participant perceptions and beliefs about BMI, obesity, health, body size, and physical activity. These findings are: *The Irrelevance of BMI; Lack of Exercise, Functionality, and Family as Indicators of Health*; and *Working Out and Working Through Cultural Norms.* With regard to the first finding, project participants expressed the sentiment that BMI is an irrelevant measurement of health for black women. Reasons for disregarding the BMI include: the perception that the BMI is modelled after white bodies, believing that the obesity category was constructed for bodies not fitting into the "normal" range— and that black bodies are more likely to be categorized as such— and being skeptical of who is calculating their BMI.

For the second finding, participants indicated that being healthy is important to them, but that they use other indicators to evaluate health including mobility/functionality, lack of physical activity, and family member experiences with ill health. However, obesity is not perceived as the cause or contributor of declining health; instead, participants view physical inactivity as the source of ill-health. Participants believe fitness and physical activity can improve health regardless of body size, but at the same time, they are concerned about their weight and mention weight-loss as being a motive as to why they engage in regular exercise.

For the third finding, participants explained that although weight loss is their objective, the weight loss is to specific areas of their bodies with participants expressing that it is culturally acceptable and expected for black women to carry fat in particular places (thighs, hips, and buttocks). Participants refer to this cultural expectation as the "curvy" and the "thick" body, and describe this body as the ideal black female body. They distance the ideal "curvy" body from

what they believe to be negative stigmas that align with the term obesity, and promote the "curvy" body as a key signifier of what it means to be a black woman.

The Irrelevance of BMI:- "That chart ain't for us. That's for them"

Participants report various understandings of the BMI. Some participants stated that BMI is an indicator of health, and others stated it is an indicator of fitness; however, all participants associate BMI with obesity. For example, when asked to explain what the BMI is Karen stated, "I know that it factors into how much you weigh and when you're looking at losing weight." When Tina was asked to explain what the BMI is she stated, "I guess my comprehension of [BMI] is that BMI has to do with your weight, um, relative to your muscle mass. Based on your age and body frame you should be a certain weight, and if you fall beyond that weight then that increases your body mass index." Sharon also described the BMI as, "a calculation based on height, weight, and age." The only participant who most closely echoed the scientific definition of BMI is Sandy who described it as, "a ratio of height to weight that is used to predict whether one is obese or not obese."

Although there is a mix of understandings about what the BMI directly measures, all of the participants stated that the index is not useful and unimportant. When asked to explain why they think the BMI is irrelevant, participants responded in a way that is best represented by Lisa's response:

> I know that chart, where they have different people should weigh this size at this height. I know African Americans, we off the chart. That chart ain't for us. That's for them. We don't have a chart.

Lisa's response avers to a conversation she had with her doctor, who pointed to the BMI chart that hung in her clinic. Lisa's doctor used the chart to explain why Lisa was obese and how much weight she should lose to be in the normal BMI range. Lisa was dissatisfied with her doctor's advice, and placed emphasis on her doctor's race (white) as she explained why she disagreed with her doctor: "I had one doctor who called me and all my children obese. This was years ago and that's when we weren't. But she was white and Jewish. […] You know she was a person who would project her attitude on other people […] But I always thought that was just her opinion." More specifically, it appears that Lisa believes that her doctor's opinion on BMI differs from Lisa's opinion because they each have different interpretations of the BMI based on their cultural and racial background, including the importance that they attach to the BMI as a diagnostic tool.

Lisa is resistant to her doctor's counsel on BMI since she believes that it's based on her perceptions as a white woman. In addition to being resistant to her doctor's counsel, Lisa is also unwilling to receive information regarding BMI because she believes that her body would not fit within BMI's normal range due to her shape and where she carries her weight. Moreover, she believes that her body is not unique in the sense that other black women also have bodies that would not align with 'normal' as per the BMI classification system. To illustrate, Lisa states that she knows of a black woman who is also physically active and healthy and does not meet BMI's 'normal' standard: " …people are different you know like I said I see a black woman who's 220 lbs do yoga. Ok. Don't eat fat, has a vegetarian diet, but the girl is thick. Ok. And she's healthy. So the standard of having to be a size 10 doesn't fit for us, but for the majority of them."

Like Lisa, many of the participants stated that the BMI is not developed for black women, and that it therefore unfairly places black women in the overweight and obese categories.

Sydney, for example, also hinted at BMI's origins as she states, "I feel like it's biased. Like it's built on Caucasian and European models." Without my prompting, Sydney explained her perception that the BMI is a standard developed from the modelling of white bodies. She further commented that, "I feel like obesity is a category for black people." With regard to the latter comment, it appears that Sydney perceives that the normal weight category is based on a standard white body, and that 'obese' is a category in which black bodies are more likely to fall as they deviate from the (white) standard. To this point, Sydney's perception that the BMI is "based on Caucasian and European models" is corroborated by prior research (see Caponi, 2013 and Jahoda, 2015). However, it is unlikely that the participants are aware of the history of the BMI's development, which leads to the question as to why the participants regard the BMI as "not for them" to which I now turn.

Participant conversations provide evidence which suggests that they approach BMI and it's 'obese' category through visual and social discourse, or as Guthman (2014) terms the "eye-ball test". Even though obesity requires a medical diagnosis, as it is the medicalization of fatness, society promotes ways of assessing obesity through the gaze of others. The result is colloquialisms, such as the 'beer belly', the 'thigh gap' and 'double chin', as well as caricatures such as 'Fat Albert' that are used to compare and assess fatness without the need of medical or professional interference (Guthman, 2014). In regard to the present study, it appears that participants are using the "eye-ball test" to challenge the medical discourse, and have determined that the BMI is exclusive as it does not account for *their* fat.

For example, Brandy believes that white women are less likely to have bigger posteriors, thighs, and hips, and therefore, are more likely to be within BMI's normal range. "I tend to think white women carry weight differently than black women. I think they carry their weight more so,

if they don't have enhanced breast, between the breast and midriff. I think black women carry more weight in their hips, thighs, and buttocks." By looking at white women, Brandy perceives that they carry the majority of their weight in their abdominal area, and if white women do have a large chest then they are likely to be enhanced. Brandy's perception challenges the medical discourse as she argues that black and white women carry weight differently, and the BMI does not consider where fat is located. Tina agrees with Brandy as she also states that she believes black women carry weight differently than white women. When asked to elaborate she stated, "Beyoncé. She's curvy. She has hips, she has a butt, and she has breast. Her curves are more defined than the average white woman. I see them [white women] as pretty much slender. Like straight up and down." Both of these observations not only indicate that the participant's acknowledge that the BMI does not consider where fat is located, but also highlights how participants use the "eye-ball test" to affirm their perception of bodily differences between white and black women.

Along with perceiving location of fat as a weakness of BMI, Rachel also regards lack of consideration of body structure as a limitation of BMI. Rachel spoke of a doctor who told her she would never be within BMI's normal range because of her stature:

> He was greek [black]. He was the first doctor that did my physical for work, and he told me like when he was reviewing my paperwork that he had to report BMI because it a required for work, but that I should not read too much into it because of my body frame… that I was never going to be within the weight that was prescribed for me. And the example he used, he said that from shoulder to shoulder that I was too broad… even the distance from my shoulder to my elbow… I was never going to fit in that category

and that I shouldn't overly concern myself about it and to focus on being healthy. I've never forgotten that.

Rachel is the only participant whose doctor acknowledged the limitations of BMI. As explained in the literature review, there are several well documented limitations of BMI (Evans and Colls, 2009; Gard and Wright, 2005; Lupton, 2012), but the consensus within the dominant medical literature is that though it is flawed, BMI remains the most efficient measurement tool of the relationship between bodyweight and health (CDC, 2017). Rachel's doctor, unlike Lisa's doctor, emphasized the flaws of BMI, and explained why she would never 'measure up' to the BMI that is suggested for her height. Rachel perceives that her doctor told her of BMI's limitations because they both share the same cultural understanding of body size. Rachel, like Lisa, emphasizes her doctor's race when explaining her doctor's counsel about her weight. Though this point is limited to two participants, it is critical because it calls attention to how participants perceive themselves as they are being viewed by others.

Lack of Exercise, Functionality, and Family as Indicators of Health

Although participants state that the BMI was unimportant for various reasons, they indicate that they value and strive for health, and have ways other than BMI to assess health. More specifically, they draw on such concepts as mobility/functionality, physical activity, and the observation of ill-health in family members. Moreover, just as they are skeptical of BMI, participants' conversations suggest that they are skeptical of obesity as a sole indicator of ill-health. This does not mean that the participants are not concerned with ill-health, but they evaluated health in a way that runs counter to the dominant obesity discourse.

Participants indicated various understandings of health and it became apparent that perceptions of health and ill-health is different for each woman. For some participants, obesity is an issue if it affected one's mobility. For instance, Tina stated,

> [Physical activity] is important. Because if you don't move it you lose it. I'm 57 years old now and I got to keep it going. Whatever I'm doing I'll keep doing because after seeing my classmates at that class reunion 2 weeks ago, I saw them 10 years ago an some of them I was like… you know? What happened? You know? We the same age? I felt like I had been a lot more active. You can see what happens when people sit around, they got canes and stuff and they 57. They were heave in high school and they huge now. So I think I dodged a bullet.

In Tina's case, being overweight or obese is negative if it leads to needing a cane or walker at the age of 57. Although she is overweight, she believes her weight is not a problem because she is able to move without assistance at her age; therefore, she believes she is healthy and others like her are healthy, as well. In her experience, many people she knows are overweight, but only some rely on assistance for movement. By seeing her peers rely on canes, Tina compares the state of her health to their health, and attributes her ability to move without assistance to her daily engagement in physical activity—regardless of her obesity.

Another example is Karen who mentioned that being overweight may be a problem if actions such as tying your shoes becomes difficult. In her experience with exercise and weight loss, Karen feels that she should continue to work-out daily because it gives her more energy to take the stairs at work or take a walk during lunch.

> I think physically um, your weight contributes to the degree in which you can move, your mobility it factors in on the movement you're able to have and how much of something

you can do. I've seen the difference in myself. Tying my shoes or going up the stairs to get something and coming back, you know um, yeah I can, just the loss of a few pounds has made a tremendous difference so I know that matters.

Karen also viewed mobility as an indicator of risk of ill-health, but unlike Tina, Karen perceives that weighing less will improve her ability to obtain greater mobility and function. Though Karen is more aligned with the dominant discourse which places weight loss and increased functionality and energy in the same vein (Gard and Wright, 2005), she still stresses the importance of exercise as vital in the prevention of ill-health, with less emphasis on weight loss on its own.

Both Tina and Karen echo the mantra of the Health at Every Size (HAES) movement which advocates that an individual can be obese *and* healthy (Bacon Aphramor, 2014). The HAES movement works to disprove the dominant public health discourse which assumes that the only way to prevent ill- health in obese individuals is to lose weight, and shifts the focus of the dominant paradigm from weight management to health promotion (Bacon and Aphramor, 2011). HAES investigators highlight exercise as a lifestyle change that has a positive influence on health even if an individual does not lose weight (Bacon et al, 2005). For example, reductions in blood pressure and improvements in insulin sensitivity and blood lipids, as a result of aerobic exercise, have been documented even in overweight individuals who have *gained* body fat during the program (Bacon and Aphramor, 2011; Lamarche et al., 1992).

While some participants discuss limited mobility and function as prominent markers of ill-health, other participants mention risk factors, such as hypertension and high cholesterol, and diseases such as diabetes, as important indicators of ill-health, especially when such conditions are experienced by family members. When probed to explain what measures of health were

important, Sharon stated, “Not the BMI. I think blood pressure and cholesterol. My blood pressure is good. My blood work is good.” Sharon often mentioned her blood pressure and cholesterol throughout the interview and drew on her family’s history of declining health due to having high blood pressure and high cholesterol. She was educated on issues of hypertension and stressed the importance of using exercise to maintain the numerically standard blood pressure. In Sharon’s case, the numerical standards of blood pressure and cholesterol were appropriate for black women because she experienced how being outside of the normal range for those standards impacted the lives of members of her family. However, she did not mention obesity as being a contributor to high blood pressure or high cholesterol. For her, lack of exercise was a contributor to high blood pressure and cholesterol.

Similarly, Rachel also specifies that disease runs in her family and that exercise can slow their decline in health.

> I’ve seen some things in my family that led me to believe that exercise is crucial. Diabetes, dementia, um hardening of the arteries. The decline in health in my family on both mom and dad’s side…I’ve seen where exercise would have altered the decline of their health.

In this case, Rachel experienced watching her family members succumb to diabetes, dementia, and atherosclerosis which is a type of heart disease (WHO, 2017) and stresses their lack of exercise as a central contributor to their diseases— not their obesity. Like Sharon, Rachel speaks of the effects of exercise on the cardiovascular system and insulin sensitivity and believes that numerical indicators for diabetes and atherosclerosis are appropriate and important indictors of health for black women. This is due to the first-hand encounters that she has with the diseases,

diabetes, high cholesterol, and high blood pressure, and her perception that those conditions are ongoing 'norms' which, as she explains "blacks are accustomed to".

Based on our conversation, it appears that Rachel believes chronic diseases, such as diabetes, are very common to the black community because they are the diseases that manifest in most black families in her experience. She perceives these diseases to be "black diseases", as they are primarily depicted as problems of black culture. She states that blacks are "accustomed" to the issue of chronic disease, and explains that the experience of preventing chronic disease or caring for an individual suffering from chronic disease is also part of black culture. It is her belief that exercise can positively impact chronic health conditions that many in her family experience.

Working Out and Working Through Cultural Norms

The impact of cultural understandings and customs on bodies and, in particular, the ideal black female body, was a common theme in the interview data. More specifically, participants expressed which bodies and bodily behaviors are culturally acceptable within the black community. As stated in the previous theme, obese bodies are unacceptable if they suffer from chronic diseases such as diabetes and hypertension, or if they manifest limited mobility/ functionality. Avoiding these problems contribute to participant motivation to engage in physical activity. However, participants also mentioned that there is a type of fatness, which they refer to as "curvy body" and "thick body, which is attractive, desirable, and culturally acceptable.

In addition to maintaining health, another reason for undertaking regular exercise is weight loss. Participants explained wanting to lose weight in order to obtain the "curvy body", even though the "curvy body" may still be overweight or obese as diagnosed by the BMI. The "curvy body" is achieved by having less fat in the abdomen and fatter thighs, hips, and buttocks.

This finding is corroborated by previous scholarship (Shaw, 2005) which suggests that the attainment of the ideal "curvy body" is an important marker of feminine identity within black culture. Participants indicate that the "curvy body" is not only necessary for attracting black men, but that it is a contributor to and signifier of what it means to be a black woman.

Participants convey that larger female bodies are common and acceptable within the black community because they believe that black men desire larger women. When asked why larger bodies are acceptable, Karen stated, "It's something that's engrained. I don't know. It's something that's supposed to be sexy and that what's supposed to get the men." This statement aligns with the documented discourse on how black women perceive their bodies as a result of the persistence of the fat 'Mammy' and the sexualized 'Jezebel' stereotypes (Ray, 2014; Shaw, 2005; Strings, 2015). In this case, Karen aligns a "sexy" black female body with that of the stereotypical black Jezebel which, as she explains, has been constructed as something necessary to attract a man.

The Jezebel is best described as a black woman with a small waist, and big hips, thighs, and buttocks, who black men seek for sexual relations (Ray, 2014). Contrarily, the 'Mammy' is a very fat black woman who has large breast capable of feeding children, but is also depicted as asexual and without a husband because of her unattractive appearance (Shaw, 2005). As Ray (2014) explains, 'Mammy' is best seen as Minnie from *The Help,* who is the fat, ugly, undesirable single mother who is known for cooking delicious meals as she cares for white children as a housekeeper.

My findings and prior research suggest that many black women reject the Fat Mammy narrative (Ray, 2014; Shaw, 2005), and therefore, turn to the sexualized 'Jezebel' who is also frequently represented in mainstream media. Lisa mentioned her take on the modern 'Mammy'

as she explained how the portrayal of an obese black woman on television made her feel uncomfortable:

> This one particular show with an obese black women, and obese black man, and I just think somebody should get them some help that the Payne's [Television Show]. Because the women she can't be that much older than me, you know, and you see her struggle on the show. You see her struggle just being that size you know.

Tyler Perry's, *House of Payne,* is a black comedy series that is broadcasted on the Black Entertainment Television Channel. Lisa believes that the black woman on the show is portrayed as obese because she is a mother, and the show is a comedy. The woman's character is the comedic relief and breaks tension in the show by bringing other characters together around the kitchen table with meals that are often praised as delicious. This type of character, the 'Mammy', is repeatedly represented within black media (Ray, 2014; Shaw, 2005), and participants stated that they perceive the 'Mammy' to be a negative representation of obese black women.

For instance, Rachel mentions, "Black females are portrayed negatively period, but obese black women are portrayed typically as angry, lonely, mad, sad. Along with the normal things like lazy you know, and, or they are the comedians of the crew maybe even the butt of the joke, but they're never the love interest, they're never the desirable." It is interesting to note that when Rachel refers to large black bodies depicted in a negative way, she refers to those bodies as obese. In this instance, Rachel is not referring to the attractive "curvy bodies" that are acceptable within the black community, but the ones that are portrayed as undesirable as a result of their weight. Similarly, Sharon stated that obese black women are represented as undesirable due to how their clothes fit when on television.

> I think that for one when I see it, our clothes are too tight, our bodies look like they are spilling out of what we are wearing. You know which then based on that makes you look bigger than you really are if you didn't wear something that fit you so snuggly, you probably wouldn't look that way. We're portrayed with tighter clothing on, like we're too big for our clothes.

This form of representation aligns with previous mentions of perceived attractiveness and desirability. Participants explain that obese black women are undesirable because of the negative ways they are portrayed in the media, however, even though participants in the study identified as obese, many did not align themselves with the 'Mammy' stereotype. Instead, they perceive that their bodies align with that of the Jezebel due to where their fat was located, and exercised daily with the goal of the ideal "curvy" body in mind.

As stated previously, the sexy 'Jezebel' is frequently depicted as having a small waist, large buttocks, hips, and thighs (Ray, 2014; Shaw, 2005). Many participants reiterated this cultural stereotype by explaining that it could not only be seen in media representations but also in the broader black community as a symbol of black feminine identity. For instance, Karen explained: "If you are black that means you have to have hips and thighs and butt. If I don't have any hips and thighs I think it would impact who I am. So am I still African? Everyone in my family has it. I'm pretty sure I'd be teased. As the lady that has 'no butt no ass'." In this case, having enough fat around the hips, thighs, and buttocks, is a cultural marker of belonging for Karen. It is a part of who she is and how she identifies with the other women in her family. Though Karen explained that she exercises in order to lose weight and to maintain her health, she does not want to lose fat in certain areas because that would threaten her black feminine identity.

Sydney also reported ideas which align black femininity with having fat in certain areas: "I say [black women] appreciate thickness more. I guess if you look at the ideal body for African American women they want the thick thighs they want the nice size slim waist." Sydney, along with several other participants, explains that black women ideally want bodies which have less abdominal fat and fatter lower extremities, and that this body type is culturally accepted and expected. She also perceives that many black women exercise in order to obtain the body that black women are expected to have, and mentions that her own reason for engaging in exercise is to also obtain the ideal black body.

To this end, participants frequently spoke of attaining the "curvy" body which is considered a cultural expectation within the black community, and more importantly, a marker of black female identity. Though this "curvy" body requires having fat in certain areas, participants also suggest that exercise is necessary to attain this ideal body type in addition to maintaining their general health. As participant subjectivities are formed around the marker of black female identity (the "curvy" body)—in addition to being informed by their various lived experiences—it appears that they contest certain 'norms' while simultaneously consenting to others.

Discussion

Through my work I found that while the women resisted some biopolitical 'norms' of the medical establishment, subjectivities were concurrently shaped by 'norms' that permeate other influential networks. This contested nature of black women's bodies provides an explicit example of how scientific and social knowledge constructs the black female obese body. In what follows, I utilize a Foucauldian approach to analyze how power is exercised as related to notions of the body and fatness. I use a governmental framework, and draw on post-Foucauldian ideas pertaining to risk as a technology of governance (see Lupton, 2013; Rose, 2001). I also build upon the concepts of governmentality and biopower with a black feminist approach as the intersection of race and gender is essential to understanding the perceptions of black women.

***Key Point 1*:** Participants rejected the biomedical 'norm' of the BMI.

Finding: Participants expressed that BMI was inconsequential because they perceived that it was a standard that was modelled after white bodies not black ones. Participants frequently spoke of how they believed the BMI was not a system that was developed with black bodies in mind, and used terms such as bias and exclusivity in reference to BMI. Prior research supports that BMI is an index which was not built upon black bodies, and in addition to race, investigators also support that BMI was never intended to consider age, sex, or fatness (Jahoda, 2015; Caponi, 2013). Participants did not state that they were familiar with BMI's origins and specific limitations, but they perceived the BMI to be irrelevant for black women because it is not a system intended for black bodies to be positioned as 'normal' or 'average'; rather, the system is for the classification of white bodies. In my research of previous literature, this is not a finding that I have come across. As scholarship on how black women perceive the BMI is scarce, this finding in particular is significant as it is a step toward understanding how black women

view BMI. As the BMI is a normalizing biopolitical tool intended to standardize bodies, it may be seen that this finding highlights that participants are aware of this governing technique, and refuse to acquiesce to bodily standards that they perceive to be for white bodies.

In addition to acknowledging BMI's "normal" category as a standard not relevant to thei bodies, participants viewed BMI as trivial due to their observations of the differences between white female bodies and black female bodies. As the social discourse on obesity is rooted in bodily appearance (Guthman, 2014), participants perceive that many black women are diagnosed as "obese" instead of "normal" by the BMI because of how black women carry their weight as opposed to white women. This notion of differing bodily features (re) produces the idea that there is a determined biological difference between races (McWhorter, 2010), and is a product of the socially constructed Western concept of race which is rooted in 'biological features' (McWhorter, 2017). It is imperative to emphasize that the Western concept of race—also referred to as modern race— is theorized by Foucault as an ideological construction rooted in political control over biological processes, and that race, as an invented biomedical and political category, is a relatively recent construction that has evolved over time (Taylor, 2011). As the biological concept of race is a deeply embedded norm within U.S. society (Foucault, 2003a; McWhorter, 2010), it is unsurprising that the participants perceived that white women and black women 'naturally' carry weight differently. Although participants are resistant to the biopolitical norm of BMI, they appear to be subjugated by the biological concept of race through the perception that black women are 'naturally' fatter in the lower extremities than white women.

This specific concept that black women are 'naturally' fatter, or that their bodies adhere to a 'natural' shape or 'curve', it aligns with the practice if bio-essentializing. I turn to Bret St.

Louis (2003)—who does not explicitly use the term bio-essentializing and uses sport as his vehicle to explore this concept— to elaborate on this concept. He argues:

> Even though phenotype is understood as an external indicator of the socially constructed form of race, it is taken for granted as an 'obvious objective fact when it is in fact a highly socially constructed one'. This present phenotypical variation is a universal and 'timeless concept' that provides a 'relatively culture- free biological base line' and grounds the neutrality of the disinterested analyst of the relationship between race, nature, and culture. The very notion that biology and culture are separate entities that might be objectively articulated and then disconnected) within a biocultural perspective on race ignores the extent and meaning of their intimate historical and conceptual entanglement (pg. 88).

This is all to say that the concept of phenotypical/ biological racial difference—no matter how scientific knowledge tries to establish phenotype, strength, and intelligence as genetic— has been conflated over time in order to reinforce European civilization and culture as superior (Louis, 2003), and solidify the racial hierarchy and thus, disparities, that are in place (Hatch, 2016). However, what Louis (2003) argues, and what my findings show, are that racial characteristics become pathologically embodied and contributes to the social discourse that constructs how we see ourselves and others.

Social discourse on race also influenced how one of the participants interpreted her doctor's counsel on BMI. She believed that white women prefer smaller bodies and that black women prefer larger bodies, and that her doctor was basing her counsel on her individual preference for how big or small a body should be. Therefore, the participant in this sample believed there to be a cultural/ racial disconnect when discussing BMI and obesity with her white

doctor, and resisted her counsel based on those notions. As the participant rejected her doctors counsel on BMI *and* believed BMI to be trivial, this finding highlights the complex network through which biopower is resisted.

***Key Point 2*:** Though participants resisted BMI's biomedical 'norm' and thought it trivial, other 'norms' such as mobility/functionality, and family member's experiences, were believed to be vital indicators of health and reasons to engage in physical activity.

Finding: BMI's "obesity" categorization did not indicate (signify) risk of ill-health for participants. Findings show that risk materialized differently for participants, and participants believed that risk of ill-health was determined by lack of physical activity, not obesity as prescribed by the BMI. Participants frequently spoke about the importance of maintaining health and it was mentioned as a primary reason they engage in daily exercise. However, this finding suggests that there is no universal or general claim to 'health' and the definition of 'health' differs based on the individual. As participants do not view risk of ill-health through the dominant obesity discourse—namely that BMI is a relevant measure of health and that obesity necessarily signifies ill-health— this finding may be best corroborated by the scholarship on risk theory.

As it regards risk of obesity specifically, the 'norm' is the standard 'lean' or 'muscular' body that is often depicted in media campaigns and diet commercials, whose ideas originate from health campaigns and thus the medical establishment (Puhl, Peterson, and Luedicke, 2013; Thompson, 2015). These corporeal 'norms' are constructs European epidemiological (Peterson and Lupton, 1996; Shaw, 2005) political strategies which dominate the body politic on obesity and fatness. The dominant body politic positions the white thin female body as the emblem of health, purity, normality and absent of sexuality as the white women's beauty is in the face;

contrarily, black women are framed as 'sexually deviant' and unhealthy due to their grotesquely large hips and buttocks (Hobson, 2003). This narrative promotes the white female body as the corporeal norm and the ideal that all females should aspire to (Hobson, 2003; Shaw, 2005) and has influenced the discursive effect around how 'norms' are understood within obesity discourse (Strings, 2015). Though the dominate body politic works to manage and mediate risk by defining the 'normal' and 'abnormal', it also operates on the notion that individuals perceive the 'norm' as universal truth. However, my findings suggest that the concept of heath is cannot be defined by the one universal claim nor represented by one 'standard' body. As findings suggest that health is a concept based on individual perception, 'risk' of health may also be a notion that cannot be congealed by the medical authority.

This finding illustrates how participants negotiated 'risk' and norms. Participants gave norms around mobility and functionality primacy due to their individual lived experience. That is not to say that their perceptions of mobility and functionality are not products of biopolitical discourse; rather participant's perceptions of ill-health appear to rely on their *individual* understandings of risk, and less on the dominant rhetoric put forth by obesity "shame campaigns" which target those believed to be burdens to public health (see Campos et al., 2005 and Puhl, Peterson, and Luedicke, 2013). Along with mobility and functionality, participants looked to their relative's health and activity levels to determine what is 'risky' and how risk manifests. Although participants are resisting norms pertaining to BMI, their subjectivities are still constructed by the power of expert knowledge (Lupton, 2013). Subjectification occurs whether the individual is resistant or docile, productive or deviant, and it is through this process that participants come to understand their health.

To this end, findings suggest that participants did not identify as being 'at-risk' of ill health because of obesity. That is to say, though they considered themselves overweight/ obese, they did not perceive their obesity as a risk factor of ill health because they were physically active. Participants believed that though they were overweight/ obese, that they were still healthy and fit, and would not succumb to issues of mobility/ functionality or disease. Though participants reinforce the 'will to health' ideology which places importance on an individual's resolve to maintain a life of health and fitness (Lupton, 1999; Rose, 2001), they resist the notion that a diagnosis of obesity equates to ill health and/or being at risk of health; instead, they interpret obesity-related risk through their own lived experience. Participants do not regard the dominant risk discourse which directly positively correlates obesity and morbidity as unproblematic fact (see Rail, 2012), instead they understand risk through social and cultural processes which differ from that of the 'expert'.

***Key Point 3*:** While simultaneously rejecting BMI and embracing other 'norms' participants reify healthist neoliberal discourse.

Finding: Socio-cultural processes were central to how participants viewed their bodies.

Though participants expressed that they exercised to maintain their health, they also stated that they wanted to lose weight. They distinguished weight loss from fat loss as they mentioned that they did not want to lose certain areas of fat. Rather, they were adamant about keeping areas of fat, such as their thighs, hips, and buttocks, due to cultural expectations within the black community. For example, participants stated that having a "curvy" body is an objective that is engrained in the black community, and that it is the ideal body for black women. Participants revealed a connection between this ideal body and black feminine identity, which participants indicated as a reason for engaging in daily exercise. Maintaining or attaining this body type not

only drove conversations on the importance of physical activity, but also highlighted cultural bodily expectations that participants perceived to be principal to their understanding of self.

Examining the processes through which women understand themselves are the aims of many feminist scholars, and feminist scholars adopt Foucault and use his concept of disciplinary power to approach the construction of the female subjectivity according to patriarchal standards (Deveaux, 1994). However, disciplinary forms of power were never overt, but subtle and minimalist in its approach of bodily control (Foucault, 1977). There is no longer a need for arms and physical violence; a simple gaze is enough to enforce discipline as it through this gaze that bodies will discipline themselves (Foucault, 1977). This notion of self- surveillance is argued to be central to why women acquiesce to patriarchal standards of femininity (Deveaux, 1994).

However, if we take a black feminist approach to the standard of femininity, we see that the dominant power is resisted as black women overtly reject white patriarchal standards of femininity (Hill Collins, 2009; Shaw, 2005). Hill Collins argues that the rejection of this dominant power is the result of "embracing an alternative vision of power based on humanist vision of self-actualization, self-definition, and self-determination" (Hill Collins, 2009). Hill Collin's Foucauldian approach highlights black women's connection between agency and self-understanding. Though mainstream second-wave feminism worked to resist patriarchal agents of power, the exclusion and lack of acknowledgement of racial oppression as an equal issue, led to a black feminist movement which constructed an identity for black women which juxtaposed that of the mainstream woman (Roth, 2004). The black feminist movement redefined the role of black women, and constructed a new ideal for black women to aspire.

This is not to say that black women wholly reject white patriarchal standards of femininity. In fact, my findings suggest that though participants resisted dominant biomedical

'norms' on health (BMI), their "curvy" body objective still (re) produced dominate healthist neoliberal narratives. Participants were health conscious citizens and engaged in self-constituting practices, such as daily exercise, in order to improve their own health (Markula and Pringle, 2006). This is key to the context of neoliberalism as "social control is neither coercive nor forceful, but instead operates on the individual willingness to regulate themselves in the best interest of the state" (Ayo, 2012 pg 100). Neoliberal healthism works under the rationale that everyone should work and live to maximize their own health (Peterson and Lupton, 1996), but also underscores morality in its philosophy as individuals who do not care for their health are socially shamed (Ayo, 2012; Puhl, Peterson and Luedicke, 2013).

As participants were health conscious citizens, they were vulnerable to the negative representations of obese black women in media, and used the term 'obese', as it is dominantly used, to describe the body which was undesirable to them. Participants agreed with the 'norm' that the 'Mammy' representation of black female obesity was negative and unhealthy, and distanced their bodies from this portrayal by using terms such as "curvy" or "thick" to identify themselves. The 'curvy' body, which required a small waist and most fat residing in the lower extremities, was described by participants as desirable, attractive, and healthy. Again, health is not universal truth, instead it is a subjective claim open to interpretation (Peterson and Lupton, 1996).

Though healthism works to serve the interest of the state, my findings suggest that individuals can (re)produce healthist notions *and* resist dominant health discourse simultaneously. Through this contested and complex relationship of networks it may be concluded that the "curvy" body is the manifested corporeal expression of the overt rejection of some biopolitical 'norms' and the permeation of various socio-cultural experiences. Participant

reasons for engaging in exercise and resisting the BMI varied based on individual lived experiences, but the aim of solidifying their identity through the attainment of the “curvy” body was consistent for all participants.

Conclusion

This project was undertaken in response to the dominant obesity discourse in contemporary Western society that negatively situates black women. My aim was to challenge the validity of the BMI as an 'objective' measure of obesity, and examine how the BMI subtly operates as a tool of modern scientific racism as its 'normal' category is a standard based on white bodies (Jahoda, 2015). In addition, my objective was to capture black women's understandings of the BMI, health, and physical activity, as their perceptions were not analyzed by previous scholarship. For my investigation, I implemented Foucault's concepts of biopower, biopolitics, and racism, and Lupton's theory of risk, to examine how BMI operates as a biopolitical mechanism in Western society. Foucault (2003a) argues that race and racism are inherently implicated by biopolitical strategies in Western society, as racism is a way of controlling the threat to the *bios* of the nation. As BMI is a normalizing biopolitical strategy meant to regulate the population (Evans and Colls, 2009), it may operate as a subtle form of racism as it is generated from data in which white bodies are the 'norm' and other bodies of color are constructed as 'abnormal' and at greater 'risk'. BMI classifies black women as most 'at-risk' for obesity related diseases as 57% of black women are considered obese via BMI (Ogden and NCHS, 2015); therefore, this project not only provides insight into how participants understood BMI, but it also shed light on how they understood risk of ill-health.

Participants viewed BMI as trivial; without being told, participants believed BMI to be a standard based on white bodies and were resistant to this measurement of health. Since it is the aim of institutions (such as the CDC and WHO) using the BMI to normalize bodies to the classification system, my findings suggest that black women endure to resist this particular governing strategy because it forces them to conform to the 'white ideal' body.

Although participants resisted BMI, they assessed their health in ways that were subjective to their own personal experience. This finding shows that health is not a universal concept that can be objectively learned, instead it is a construct of our individual lived experiences. In addition to assessing their health in various ways, participants also perceived risk of ill-health differently than the dominant obesity discourse. Participants did not perceive obesity as a risk factor of morbidity; rather, participants believed physical inactivity to be a primary cause of ill-health.

Participants placed emphasis on physical activity as not only being a precursor of health, but a necessary activity to attain the ideal black female body. The ideal black female body—referred to as the 'curvy body'—is integral to the black female identity as it is the complex and entangled product of the rejection of power and the highlighting of self-agency (Hill Collins, 2009). By examining this relation of power, this project further exposes how obese active black female bodies become disciplined and represented within society. This corroborates the aim of PCS which is to "generate and circulate the type of knowledge that will enable individuals and groups to discern, challenge, and potentially transform existing power structures and relations as they are manifest within and experienced through, the complex field of physical culture" (Andrews and Silk, 2017, pg. 87). This project suggests that the obese black female perception of BMI and physical activity is not simply a compilation of barriers (such as time constraints, soul food, and lack of green spaces); rather, it is a multifactorial entangled rendition of historical and contemporary structures of power that may produce regularly active obese black women.

Implications

This thesis adds to growing work in PCS and critical obesity scholarship. As it regards PCS, this thesis informs our understandings of how black obese female bodies are constructed in

society, and how that construction influences their identity and behavior. PCS may use this thesis as a grounds to further current discussions around sport, race, and bio-essentialism (Louis, 2003); and the empirical data may be used to start conversations around the intersection of race, gender, obesity, and biopolitical 'norms'(such as BMI) as physical cultural issues.

This thesis contributes to critical obesity scholarship as it provides a Foucauldian analysis black women's perceptions of BMI—which may further inform the fields current critiques of the measurement. In addition, the empirical data may be used to inform public health campaigns and obesity interventions as they are less effective for this population (Foley et al., 2012; Kumanyika et al., 2007).

Limitations

Limitations of this study that I would like to address in future iterations of this project, is the socio-economic status, geographic location, education level of my population, and having a variety of bodies (such as normal and underweight). Although these elements were not assessed in this project, they may have influenced participant's perceptions of BMI, health, and physical activity. Previous scholarship (D'Alonzo and Fishetti, 2008; Mohamad et al., 2013; Ray, 2014; Webb et al., 2016) consider these factors in their analysis of black women' attitudes and my project does not. The gym that I recruited my participants from is situated in a high-income majority black County in the United States (Anacker, Carr, and Pradhan, 2012), and this point may further encourage participants to engage in physical activity as other scholars report that black women do not go to the gym because no one "looks like them" (D'Alonzo and Fishetti, 2008).

As it regards having a variety of bodies, this study exclusively focused on women who self- identified as black and obese; therefore it may be said that participants would naturally

resist the BMI because the system positions them as obese. To this point, participants may express negative bias towards the classification system. In the future, this study will benefit from comparing the perceptions of black women that self-identify as "obese", "normal" weight, and "underweight".

Future Directions

In the future, I will not only work to publish this thesis in two parts (one being the tracing of BMI as an operator of modern scientific racism, and the other being the empirical data), but I will continue to challenge the "way we know" black women, and other women of color, within public health and the medical establishment. As epidemiological data persists to show black women as the most 'at risk' population of obesity, diabetes, cardiovascular disease, cancer, and infant mortality (Asiedu et al., 2015) I will use this thesis as grounds to be critical of the 'standards' that the medical establishment is using to determine risk. This is not to say that these disparities are not real, but we should question standards (such as BMI) that may be conflated and exaggerated as they may situate the 'norm' or the average based on white 'ideals'.

Appendix A: Interview Questions

Part 1: Basic demographic questions

1. When did you begin being physically active?
2. What type of physical activity did you engage in?
3. Why did you start doing those sports or activities?
4. How have your physical activity practices fluctuated or changed over the years?

Part 2: Physical Activity Questions:

1. Explain your main reason for engaging in physical activity now?
    a. Weight loss? Stress relief? Health concerns?
2. How do you determine what you are going to do?
3. How do you gauge your physical activity intensity? For example, do you wear a fitness tracker or do you utilize the intensity markers on the gym equipment?
    a. If so, how important are these markers to your physical activity goals?
4. Describe who you see when you are exercising?
    a. Do you see other obese or overweight black women while you are exercising?
    b. If so, explain the type of exercises that they are doing?

Part 3: Algorithmic questions:

1. Have you heard of the term BMI, and if so, where did you first encounter the term?
2. How important is BMI,to you?
    a. Does this number encourage you to workout at a harder intensity? If not, why not?
3. Has your doctor ever discussed BMI with you?
    a. If so, what does s/he say?
        i. Are you aware of which BMI category that you are in?
    b. What did you do with that information, if anything?
    c. How did it make you feel?
        i. Does that impact how you see yourself or understand yourself?
4. Do you have friends or family that are also in the same BMI category as you? If not, which category are they in?
5. Does knowing which category you are influence your physical activity?
6. Have you ever made changes to your diet or workout routine based on your BMI category?

Part 4: Race intersection:

1. What words come to mind when I say “overweight” or “obese”?
    a. Do these terms accurately describe you?
    b. If not, why not?
    c. Do these terms accurately describe black women? Explain.
2. Should there be a standard ‘weight’ or ‘body’ ideal that everyone should strive for?
    a. If so, what should that body look like? If not, why not?
3. Give me a pop culture image. Who has that ideal body type and why?
4. What are your thoughts on obese black bodies and how they are portrayed in the media?
5. Stats show that 60% of black women are overweight. What are your thoughts on this?
    a. Is this a concern to you? If not, why not?
6. Does obesity influence what it means to be a black woman? If so, how?

7. Does the term 'fat' influence what it means to be a black woman? If so, how?
    a. Explain the difference between the terms 'obesity' and 'fat'.
8. Pretend you are a health professional in charge of a public health campaign. The purpose of the campaign is to promote healthy habits in a black community. Explain how you would grab the attention of black women?
    a. How would you ensure long-term success?

Appendix B: Consent Form

Institutional Review Board
irb@umd.edu

IRBNet Package: 1303768-1

1204 Marie Mount Hall ● 7814 Regents Drive ● College Park, MD 20742 ● 301-405-4212

Project Title	Is BMI Colorblind?: An examination of black women's understandings of the relationship between BMI, health, and physical activity
Purpose of the Study	This research is being conducted by Tori Thompson at the University of Maryland, College Park. I am inviting you to participate in this research project because you are a black woman who has been classified as 'overweight' or 'obese' by the BMI. The purpose of this research project is to understand the relationship between black women, Body Mass Index (BMI), physical activity and the BMI's effects on black women's identities.
Procedures	The procedures involve open ended interview questions that will ask you about your thoughts, experiences and ideas surrounding BMI and physical activity. The interview should take 30-90 minutes to complete. The participant may choose to conduct the interview at a local coffee shop, at their local fitness center, on the University of Maryland campus, or their home. With your consent the interview will be tape recorded to ensure accuracy. Once this is transcribed the recording will be destroyed, a full transcript will be made available to you as soon as the transcription is completed.
Potential Risks and Discomforts	There are minimal risks related to this study, due to the nature of questions regarding personal experiences. Participants are encouraged to discontinue the interview if they feel discomfort in answering the interviewer's questions.
Potential Benefits	There are no direct benefits from participating in this research. However, we hope that, this research will discourage negative connotations that may surround black women who are labeled 'overweight' or 'obese' by the BMI .

Confidentiality	Any potential loss of confidentiality will be minimized through the interview design; no demographic information will be collected. Quotations will only be used within the thesis with the explicit consent of the participant. In lieu of focus on direct quotes data will be coded and organized into themes within the results section of the thesis. All data will be stored on a password protected computer in a locked office that only the principal investigator will have access to. The interviews will be stored on a digital voice recorder and will be erased after transcription by the principal investigator. Only the principal investigator will have access to the recorded interview, and will transcribe the recorded interview. If I write a report or article about this research project, your identity will be protected to the maximum extent possible. The participant's information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.

Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. If you are an employee or student at UMD, your grades, standing or employability at UMD will not be positively or negatively affected by your decision to participate in the study If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: *Tori Thompson* *School of Public Health, Room 1223* torialex@umd.edu *(202) 507-1348*	
Participant Rights	*If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:* University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678 This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.	
Statement of Consent	*By checking this box and entering your name you certify that you have read and understood the above rationale and procedures for the study. It indicates that you are at least 18 years of age; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study.* *You will receive a hard copy of this consent form for your own records.* *If you agree to participate, please enter your name and check the box below.*	
Signature and Date	NAME OF PARTICIPANT [Please Print]	
Signature and Date	SIGNATURE	

I Consent to participate in this interview	DATE	
	NAME OF PARTICIPANT [Please Print]	
I Consent to have this interview audio-recorded	SIGNATURE	
	DATE	
	NAME OF PARTICIPANT [Please Print]	

IRBNet Package: 1303768-1

Appendix C: IRB Approval

UNIVERSITY OF MARYLAND

1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212 FAX 301.314.1475 irb@umd.edu
www.umresearch.umd.edu/IRB
INSTITUTIONAL REVIEW BOARD

DATE:	August 31, 2018
TO:	Tori Thompson
FROM:	University of Maryland College Park (UMCP) IRB
PROJECT TITLE:	[1303768-1] Is BMI Colorblind?: An examination of black women's understandings of the relationship between BMI, health, and physical activity
REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	August 31, 2018
EXPIRATION DATE:	August 30, 2019
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # *7*

Thank you for your submission of New Project materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to submission to the IRB Office, this project received scientific review from the departmental IRB Liaison.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of August 30, 2019.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Please note that all research records must be retained for a minimum of seven years after the completion of the project.

If you have any questions, please contact the IRB Office at 301-405-4212 or irb@umd.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Maryland College Park (UMCP) IRB's records.

References

Anacker, K. B., Carr, J. H., & Pradhan, A. (2012). Analyzing foreclosures among high-income black/African American and Hispanic/Latino borrowers in Prince George's County, Maryland. *Housing and Society*, *39*(1), 1-28.

Andrews, D. L., & Silk, M. L. (2015). Physical Cultural Studies on Sport. In R. Giulianotti (Ed.), Routledge Handbook of the Sociology of Sport (pp. 83-93). London: Routledge.

Asiedu, G. B., Hayes, S. N., Williams, K. P., Bondaryk, M. R., Halyard, M. Y., Parker, M. W., … Breitkopf, C. R. (2015). Prevalent Health Concerns Among African American Women Belonging to a National Volunteer Service Organization (The Links, Incorporated). *Journal of racial and ethnic health disparities*, *4*(1), 19–24. doi:10.1007/s40615-015-0195-7

Ayo, N. (2012). Understanding health promotion in a neoliberal climate and the making of health conscious citizens. *Critical Public Health, 22*(1), 99-105. doi:10.1080/09581596.2010.520692

Banks, R.R. (2011). Is Marriage for White People? How the African American Marriage Decline Affects Everyone. New York: Penguin.

Bacon, L., Stern, J. S., Van Loan, M. D., & Keim, N. L. (2005). Size acceptance and intuitive eating improve health for obese, female chronic dieters. *Journal of the American Dietetic Association*, *105*(6), 929-936.

Bacon, L., & Aphramor, L. (2011). Weight science: evaluating the evidence for a paradigm shift. *Nutrition journal*, *10*(1), 9.

Bacon, L., & Aphramor, L. (2014). *Body respect: What conventional health books get wrong, leave out, and just plain fail to understand about weight*. BenBella Books, Inc..

Boggs, D. A., Rosenberg, L., Cozier, Y.C., Wise, LA., Coogan, P.F., Ruiz-Naravaez, E.A., & Palmer, J.R. (2011). General and Abdominal Obesity and Risk of Death among Black Women. *The New England Journal of Medicine, 365*(10), 901-908. http://doi.org/10.1056/NEJMoa1104119

Bogin, B., & Varela Silva, M. I. (2012). The body mass index: the good, the bad, and the horrid.

Bombak, A., Mcphail, D., & Ward, P. (2016). Reproducing stigma: Interpreting "overweight" and "obese" women's experiences of weight- based discrimination in reproductive healthcare. Social Science & Medicine, 166, 94-101. Doi:10.1016/j.socscimed.2016.08.015

Campos, P. (2004). *The obesity myth: Why America's obsession with weight is hazardous to your health.* New York: Gotham Press.

Campos, P., Saguy, A., Ernsberger, P., Oliver, E., & Gaesser, G. (2005). "The epidemiology of overweight and obesity: public health crisis or moral panic?." *International journal of epidemiology, 35*(1), 55-60. https://doi.org/10.1093/ije/dyi254

Caponi, Sandra. (2013). Quetelet, the average man and medical knowledge. *História, Ciências, Saúde-Manguinhos*, *20*(3), 830-847. Epub August 14, 2013.https://dx.doi.org/10.1590/S0104-59702013005000011

Carels, R.A., Domoff, S.E., Burmeister, J.M., Koball, A.M., Hinman, N.G., Davis, A.K., …Hoffmann, D.A. (2013). Examining Perceived Stereotype Threat among Overweight/ Obese Adults Using a Multi- Threat Framework. *Obesity Facts, 6*(3), 258-268. http://doi.org/10.1159/000352029

Cauley, J. A., Lui, L. Y., Ensrud, K. E., Zmuda, J. M., Stone, K. L., Hochberg, M. C., & Cummings, S. R. (2005). Bone mineral density and the risk of incident nonspinal fractures in black and white women. *Jama*, *293*(17), 2102-2108.

CENTERS FOR DISEASE CONTROL. 2009. '2009 National Healthcare Quality & Disparities Reports. Table 9_1_2.1.' *National Health and Nutrition Examination Survey*. Retrieved (http://www.ahrq.gov/legacy/qual/qrdr09/9_lifestyle_modification/T9_1_2-1.htm).

CDC. (2017). National Center for Health Statistics. Retrieved from https://www.cdc.gov/nchs/fastats/black-health.htm

CDC. (n.d.). Physical Activity and Health: A Report of the Surgeon General. Retrieved from https://www.cdc.gov/nccdphp/sgr/adults.htm

Clarke, V., & Braun, V. (2016). Thematic Analysis. In E. Lyons, & A. Coyle, *Analysing Qualitative Data in Psychology* (pp. 84-103). SAGE.

Coogan, P.F., L.F. White, S.R. Evans, T.J. Adler, K.M. Hathaway, J.R. Palmer and L. Rosenberg. 2011. 'Longitudinal Assessment of Urban Form and Weight Gain in African American Women.' *American Journal of Preventive Medicine* (40), 411–418.

Cryle, P., & Stephens, E. (2017). *Normality: a critical genealogy*. University of Chicago Press.

D'Alonzo., & Fischetti. (2008). Cultural beliefs and attitudes of black and hispanic college-age women toward exercise. *Journal of Transcultural Nursing : Official Journal of the Trans cultural Nursing Society,19*(2), 175-83. doi:10.1177/1043659607313074

D'Alonzo, K., Stevenson, J., & Davis, S. (2004). Outcomes of a program to enhance exercise self-efficacy and improve fitness in black and hispanic college-age women. *Research in Nursing & Health, 27*(5), 357-369. doi:10.1002/nur.20029

Deveaux, M. (1994). Feminism and Empowerment: A Critical Reading of Foucault. *Feminist Studies, 20*(2), 223-247. doi:10.2307/3178151

Evans, B., & Colls, R. (2009). Measuring fatness, governing bodies: The spatialities of the body mass index (BMI) in anti-Obesity politics. *Antipode, 41*(5), 1051-1083. doi:10.1111/j.1467-8330.2009.00706.x

Flegal, K., Graubard, B., Williamson, D., & Gail, M. (2005). Excess Deaths Associated With Underweight, Overweight, and Obesity. JAMA, 293(15), 1861–1867. doi:10.1001/jama.293.15.1861

Flegal, K. M., Ogden, C. L., Yanovski J. A., Freedman, D. S., Shepherd, J. A., Graubard, B. I. and Borrud, L.G. (2010). High adiposity and high body mass index-for-age in US children and adolescents overall and by race-ethnc group. *American journal of clinical nutrition, 91*(4): 1020-1026.

Foley, P., Levine, E., Askew, S., Puleo, E., Whiteley, J., Batch, B., Heil, D., e al. (2012). Weight gain prevention among black women in the rural community health center setting: the Shape program. BMC public health, 12(1), 305. Doi:10.1186/1471-2458-12-305

Fontaine, K.R., Redden, D.T., Wang, C., Westfall, A. O., & Allison, D.B. (2003). Years of life lost due to obesity. *Jama, 289*(2), 187-193.

Foucault, M. (1972) The Archaeology of Knowledge, (trans. A. M. Sheridan Smith), London: Routledge.

Foucault, M. (1977). *Discipline and punish: the birth of the prison New York*. Random House.

Foucault, M. (1980). 'The history of sexuality', in C. Gordon (ed.), Power/ Knowledge, Brighton: Harvester, pp. 184–191.

Foucault, M., Bertani, M., Fontana, A., Ewald, F., Macey, D., & Ewald, F. (2003a). *Society must be defended : Society must be defended : Lectures at the collège de france, 1975-76 / lectures at the college de france, 1975-76*(1st ed.). New York: Picador.

Foucault, M. (2003b*). Birth of the clinic: An archaeology of medical perception* (translated by A.M. Sheridan). London, England and New York, NY: Routledge.

Gard, M., & Wright, J. (2005). *The Obesity Epidemic : Science, Morality and Ideology*. London: Routledge.

Gard, M. (2008). Friends, Enemies and the Cultural Politics of Critical Obesity Research. In J. Wright, & V. Harwood, *Biopolitics and the 'Obesity Epidemic': Governing Bodies* (pp. 31-44). Taylor and Francis.

Gard, M. (2011). Truth, belief, and the cultural politics of obesity scholarship and public health policy. Critical Public Health, 21(1), 37-48. doi:10.1080/09581596.2010.529421

Garrod J. Z. (2006). A brave old world: an analysis of scientific racism and BiDil. *McGill journal of medicine : MJM : an international forum for the advancement of medical sciences by students*, *9*(1), 54-60.

Giulianotti, R. (2015). Elias on sport: Figurations, civilization and interdependence. *Sport: A critical sociology* (pp.). Cambridge, UK: Polity Press.

Gould S. J (1978) Morton's ranking of races by cranial capacity: unconscious manipulation of data may be a scientific norm. *Science* 200: 503–509.

Gould, S. J. (1996). *The mismeasure of man*. WW Norton & Company.

Grossberg, L. (1986). On postmodernism and articulation: An interview with Stuart Hall. *Journal of communication inquiry, 10*(2), 45-60.

Grundy, S. M., Cleeman, J. I., Daniels, S. R., Donato, K. A., Eckel, R. H., Franklin, B. A., ... & Spertus, J. A. (2005). Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute scientific statement. *Circulation*, *112*(17), 2735-2752.

Guthman, J. (2011). *Weighing in: Obesity, food justice, and the limits of capitalism* (Vol. 32). Univ of California Press.

Guthman, J. (2014). Doing justice to bodies? reflections on food justice, race, and biology. *Antipode, 46*(5), 1153-1171. doi:10.1111/j.1467-8330.2012.01017.x

Hales, C.M., Carroll, M.D., Fryar, C.D., Ogden, C.L. (2017). Prevalence of obesity among adults and youth: United States. *NCHS data brief, 288.* National Center of Health Statistics.

Hall, S. (1997). "The work of representation', in S. Hall (ed.) *Representation: cultural representations and signifying practices.* London: Sage, in association with the Open University.

Hall, S., & King, A. (2005). Old and new identities. *Beyond borders: In thinking critically about global issues*, 167-173

Hallmark Business Connections. (n.d.) Personal growth recognition. Retrieved from https://www.hallmarkbusinessconnections.com/employee-recognition/personal-growth/

Hand, L. (2009, Winter). Employer Health Incentives. *Harvard School of Public Health.* Retrieved from https://www.hsph.harvard.edu/news/magazine/winter09healthincentives/#print.

Harwood, V. (2008). Theorizing Biopedagogies. In J. Wright, & V. Harwood, *Biopolitics and the 'Obesity Epidemic': Governing Bodies* (pp. 15-26). Taylor and Francis.

Hatch, A. R. (2016). Blood sugar: racial pharmacology and food justice in Black America.

Hobson, J. (2003). The "batty" politic: Toward an aesthetic of the black female body. *Hypatia*, *18*(4), 87-105.

Herndon, A. (2005). Collateral; damage from friendly fire?: Race, nation, class and the "War against obesity". *Social Semiotics, 15*(2), 127-141.

Heyes, C. (2006). Foucault goes to weight watchers. *Hypatia, 21*(2), 126-149. Doi:10.1111/j.1527-2001.206.tb01097.x

Hill Collins, P. (2009). *Black feminist thought : Knowledge, consciousness, and the politics of empowerment*([2nd ed.] ed., Routledge classics). New York: Routledge.

Insaf, T.Z., Shaw, B.A., Yucel, R.M. et al. J. Racial and Ethnic Health Disparities (2014) 1: 309. https://doi.org/10.1007/s40615-014-0038-y

Jahoda G. (2015). Quetelet and the emergence of the behavioral sciences. *SpringerPlus*, *4*, 473. doi:10.1186/s40064-015-1261-7

Jette, S., Bhagat, K., & Andrews, D. L. (2016). Governing the child-citizen:'Let's Move!'as national biopedagogy. *Sport, Education and Society*, *21*(8), 1109-1126.

Jette, S., & Vertinsky, P. (2011). 'Exercise is medicine': Understanding the exercise beliefs and practices of older Chinese women immigrants in british Columbia, Canada. *Journal of Aging Studies, 25*(3), 272-284. Doi:10.1016/j.jaaging.2010.10.001

Rodney, P., Barbara, E., Colleen, K., & Joan, E. (2015). Barriers to physical activity among african american women: An integrative review of the literature. *Women & Health, 55*(6), 679-699. doi:10.1080/03630242.2015.1039184

King, S. (2005), Methodological contingencies in sports studies. *Qualitative methods in sports studies,* 21-38.

Knox-Kazimierczuk, F., Geller, K, Sellers, S., Taliaferro Baszile, ., & Smith-Shockely, M

(2018). African- American Women and Obesity Through the Prism of Race. Health Education and Behavior, 45(3), 371-380. Doi:10.1177/1090198117721610

Lamarche, B., Després, J. P., Pouliot, M. C., Moorjani, S., Lupien, P. J., Thériault, G., ... & Bouchard, C. (1992). Is body fat loss a determinant factor in the improvement of carbohydrate and lipid metabolism following aerobic exercise training in obese women?. *Metabolism*, *41*(11), 1249-1256.

Lemke, T. (2002). Foucault, governmentality, and critique. *Rethinking Marxism, 14*(3), 49-64.

Louis, B. S. (2003). Sport, genetics and the "natural athlete": The resurgence of racial science. Body & Society, 9(2), 75-95.

Lupton, D. (2012). *Fat* (Shortcuts). Hoboken: Taylor and Francis.

Lupton, D. (2013). *Risk* (2nd ed., Key ideas). London: Routledge.

Markula, P., & Pringle, R. (2006). Foucault, sport and exercise. *Power, knowledge and transforming the self*

McDermott, L. (2010). Biopolitics and the 'obesity epidemic'. *International Journal of Qualitative Studies in Education, 23*(7), 869-874. Doi:10.1080/09518398.2010.529476

McGannon, K.R. (2017). Critical discourse analysis in sport and exercise: What, why, and how. In B. Smith & A. Sparkes (eds.), *Routledge Handbook of Qualitative Research in Sport and Exercise* (pp. 230-242). London: Routledge.

McWhorter, L (2010). Racism and Biopower.

McWhorter, L. (2017). From Scientific Racism to Neoliberal Biopolitics. In *The Oxford Handbook of Philosophy and Race* (pp. 282-293). New York: Oxford Press

Mills, S. (2003). *Michel Foucault* (Routledge critical thinkers). London: Routledge.

Mohammad, S., Courtney, A., Gopal, K., Melissa, T., Raees, A., & Amy, Y. (2013). Do life style factors and socioeconomic variables explain why black women have a remarkably higher body mass index (bmi) than white women in the united states? findings from the 2010 national health interview survey. *Journal of Health Disparities Research and Practice, 6*(2). (2013).

Moore, J. X., Chaudhary, N., & Akinyemiju, T. (2017). Metabolic Syndrome Prevalence by Race/Ethnicity and Sex in the United States, National Health and Nutrition Examination Survey, 1988-2012. *Preventing chronic disease*, *14*, E24. doi:10.5888/pcd14.160287

Moreno, J. P., Johnston, C. A., Aimadeddine, S., & Wheeler, D.L. (2013). Prevalence of Overweight and Obesity in Asian American Students Using Asian Specific Criteria to Deermine Weight Classification. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 2, No. 5, p.66).

Nutall, Q. (2015). Body Mass Index: Obesity, BMI, and Health: A critical review. Nutrition today, 50(3), 117-128. Doi:10.1097/NT.00000000000092

Ogden, C., National Center for Health Statistics (U.S.), & National Health and Nutrition Examination Survey (U.S.). (2015). *Prevalence of obesity among adults and youth: United states, 2011-2014*(Nchs data brief, no. 219). Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. (2015).

Oksala, J. (2013). From biopower to governmentality. *A Companion to Foucault* (2013), 320336.

O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy* (First edition. Ed.). New York: Crown.

Petersen, A., & Lupton, D. (1996). Epidemiology - Governing by numbers. *The new public health: Health and self in the age of risk*. Sage Publications, Inc..

Poster, M. (1989). Foucault and Poststructuralism in *Critical theory and poststructuralism : In se arch of a context*(Cornell paperbacks). Ithaca: Cornell University Press.

Powell, L. M., Slater, S., Chaloupka, F. J., & Harper, D. (2006). Availability of physical activity–related facilities and neighborhood demographic and socioeconomic characteristics: a national study. *American journal of public health*, *96*(9), 1676-1680.

Pringle, R. & Thorpe, H. (2017). Theory and reflexivity. In M.L. Silk, D.L. Andrews, & H. Thorpe (eds.), *Routledge Handbook of Physical Cultural Studies* (pp. 32-41). New York: Routledge.

Quetelet, A. (1969). *A treatise on man and the development of his faculties: A fascism. reproduction of the english translation of 1842*(History of psychology series). Gainesville, Fla: Scholars' Facsimiles & Reprints.

Rahman, M., & Berenson, A. (2010). Accuracy of Current Body Mass Index Obesity Classification for White, Black, and Hispanic Reproductive- Age Women. Obstetrics and Gynecology, 115(5), 982-988. Doi:10.1097/AOG.0b013e3181da9423

Rail, G., & Lafrance, M. (2009). Confessions of the flesh and biopedagogies: Discursive constructions of obesity on nip/tuck. *Medical Humanities, 35*(2), 76-9. doi:10.1136/jmh.2009.001610

Rail, G. (2012), The birth of the obesity clinic: Confessions of the flesh, biopedagogies and physical culture. *Sociology of Sport Journal, 29*(2), 227-253.

Ray, R. (2014). An intersectional analysis to explaining a lack of physical activity among middle class black women. *Sociology Compass, 8*(6), 780-791. doi:10.1111/soc4.12172

Reeves, R. V., & Guyot, K. (2017, December 08). Black women are earning more college degrees, but that alone won't close race gaps. Retrieved from https://www.brookings.edu/blog/social-mobility-memos/2017/12/04/black-women-areearning-more-college-degrees-but-that-alone-wont-close-race-gaps/

Rubin, L., Fitts, M., & Becker, A. (2003). "Whatever feels good in my soul": Body ethics and aesthetics among african american and latina women. *Culture, Medicine and Psychiatry : An International Journal of Comparative Cross-Cultural Research,27*(1), 49-75. doi:10.1023/A:1023679821086

Saguy, A., & Ward, A. (2011). Coming out as fat: Rethinking stigma. *Social Psychology Quarterly, 74*(1), 53-75.

Saguy., & Riley. (2005). Weighing both sides: Morality, mortality, and framing contests over obesity. *Journal of Health Politics, Policy and Law, 30*(5), 869-921.

Sandoval, E., & Lucadamo, K. (2010, January). Whole Foods to give greater employees discounts to workers with lower BMI, cholesterol- NY Daily News. Retrieved from https://www.google.com/amp/www.nydailynews.com/life-style/health/foods-givegreater-employee-discounts-workers-bmi-cholesterol-article-1.460730?outputType=amp

Selby, J. (2007). Engaging Foucault: Discourse, Liberal Governance and the Limits of Foucauldian IR. *International Relations*, *21*(3), 324–345. https://doi.org/10.1177/0047117807080199

Schiebinger, L. (1999). Medicine in *Has feminism changed science?* Cambridge, Mass.: Harvard University Press.

Shaw, A. (2005). The other side of the looking glass: The marginalization of fatness and blackness in the construction of gender identity. *Social Semiotics, 15*(2), 143-152. doi:10.1080/10350330500154725

Silk, M.L., & Mayoh, J. (2017). Praxis. In M.L. Silk, D.L. Andrews, & H. Thorpe (eds.), Routledge Handbook of Physical Cultural Studies (pp. 61-69). New York: Routledge.

Slack, J. D. (2006). The theory and method of articulation in cultural studies. In *Stuart Hall*. 124140. Routledge

Somers, M. (1994). The narrative constitution of identity: A relational and network approach. *Theory and Society, 23*(5), 605-605.

Strings, S. (2015). Obese black women as "Social dead weight": Reinventing the "Diseased Black Woman". *Signs: Journal of Women in Culture and Society, 41*(1), 107-130. Doi:10.1086/681773

Taylor, C. (2011). Race and racism in Foucault's Collège de France lectures. *Philosophy Compass*, *6*(11), 746-756.

Thompson, C. (2015). Neoliberalism, soul food, and the weight of black women. *Feminist Media Studies, 15*(5), 794-812. doi:10.1080/14680777.2014.1003390

Van Amsterdam, N. (2013). Big fat inequalities, thin privilege: An intersectional perspective on 'body size'. *European Journal of Women's Studies, 20*(2), 155-169. doi:10.1177/1350506812456461

Webb, F., Khubchandani, J., Hannah, L., Doldren, M., & Stanford, J. (2016). The perceived and actual physical activity behaviors of african american women. *Journal of Community Health : The Publication for Health Promotion and Disease Prevention,41*(2), 368-375. doi:10.1007/s10900-015-0106-1

WHO. (2017, May 17). Cardiovascular diseases (CVDs). Retrieved from https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)

Whole Foods Market. (2016). Team member healthy discount incentive program overview [Digital Image].

Wright, J. (2008). Biopower, biopoedagogies and the obesity epidemic. In J. Wright, & V. Harwood, *Biopolitics and the 'Obesity Epidemic': Governing Bodies* (pp. 1-14). Taylor and Francis.