DIETING FOR WEIGHT LOSS AMONGST AFRICAN AMERICAN FEMALE COLLEGE STUDENTS: AN APPLICATION OF SOCIAL COGNITIVE THEORY

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK

COLLEGE OF ARTS AND SCIENCES

BY

KAMILAH HASAN B.A.

DENTON, TX

MAY 2014

DEDICATION

For my family Abdul, Margaret, and Karimah Hasan, thank you for all of your love and support.

ACKNOWLEDGMENTS

I would like to extend my greatest appreciation to Dr. Lisa K. Zottarelli. Without her assistance, time, and mentorship I would never have been able to complete this project. I would also like to thank Dr. Jessica Gullion for agreeing to participate in the creation of my thesis, stepping in when it was needed, and for always asking “so how’s your thesis going”? The greatest appreciation goes to Dr. Abigail Tilton. I literally would not have been able to do this without you. To the department of Sociology, thank you for always supplying me with the resources to complete my thesis. I also would not have been able to maintain my sanity during this process if it were not for my wonderful peers Kathleen Ananagwe, Christopher Grimes, Kim Lawson, and Patrice Lockett. Nothing could replace the support, love and encouragement that I received from my best friends Katie Doebler, Brittany Staples, and Jaynie Root. Finally, to the wonderful Texas Woman’s University administration, faculty, and staff, thank you for providing the nurturing environment with which I was able to flourish and develop academically, intellectually, and personally.

ABSTRACT

KAMILAH HASAN

DIETING FOR WEIGHT LOSS AMONGST AFRICAN AMERICAN FEMALE COLLEGE STUDENTS: AN APPLICATION OF SOCIAL COGNITIVE THEORY

MAY 2014

The purpose of this thesis was to examine the weight loss behavior of dieting amongst African American women in higher education in using the Social Cognitive Theory personal, behavioral, and environmental constructs. This research looks to fill the space in the literature about the influences that affect African American women below the age of 30 which may eventually lead to increased levels of being overweight and obese at later ages. Data analysis was limited to African American students from The American College Health Association final National College Health Assessment II. The data was then analyzed using IBM SPSS Statistics version 19, chi square, Fisher's exact, and their respective measures of association were used to analyze the data. The results of this analysis found that several factors associated with the personal, behavioral, and mainly the social aspects of the environmental construct of SCT were statistically significant. In conclusion, SCT was an excellent theoretical perspective to study dieting for weight loss amongst African American college women. The results of this research can be utilized to create and evaluate the effectiveness of holistic health programs at higher education institutions.

TABLE OF CONTENTS

Page

APPENDICES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Health disparities have become prominent topics within race and ethnicity discussions. Attitudes, perceptions, availability, and rates of illness acquisition are among the many issues explored. One trending topic has been that of the rise in obesity rates among adults in the United States. The United States Department of Health and Human Services Center for Disease Control and Prevention (CDC) has noted that there has been an increase in obesity rates during the past twenty years and that "over one third (35.7%) of adults in the United States are obese," (CDC 2013). There are several health risks associated with obesity such as hypertension, adverse lipid concentrations, stroke, heart disease, and type 2 diabetes (CDC 2013). Among those who are obese, the CDC found that between racial categories Non-Hispanic Blacks (36.8%) have the highest rate of obesity. Within the racial category of Non-Hispanic Black, women have the highest rates of obesity (49.6%) overall. The life threatening health risks associated with obesity has brought increased interest as to why non-Hispanic Black women are affected by obesity more than any other group.

Although there have been numerous research studies on African American women, their weight, and factors that affect their health, this research has focused primarily on women aged 30 years and above (Ashley et al 1994, Davis et al 1999, Young et al 2001, Kreuter and Haughton 2006, Bramble et al 2009, Rowe 2010,

Fitzgibbon et al 2011, Sivalingam et al 2011, Weerts and Amoran 2011). Little research has been done on young adult African American women, with even less research having been conducted specifically on African American female college students. Research on this population is needed because it is during the early adult years that the disparity between obesity rates by race and ethnicity begins to appear (Wallace et al 2000, Ryan 2005).

The increase in attention to health, weight, and obesity within the African American population and women, in particular, has prompted the creation of various interventions focused on physical activity and weight loss. African American women are being targeted for engagement in behaviors which promote weight loss, but studies on both healthy and unhealthy weight related behaviors are limited (James 2013). The findings of previous research has suggested that due to social, environmental, and personal factors, healthy weight related behaviors may be difficult to enact for African American women (Lynch et al 2012, James 2013). Research must be done to create a more complete picture of weight related behaviors that are both healthy and unhealthy as well as the factors that lead to the involvement in these behaviors.

The purpose of this thesis is to examine the weight loss behavior of dieting amongst college aged African American women in relation to personal, behavioral, and environmental factors. This thesis includes items such as the intake of fruits and vegetables, to expand the range of health behaviors beyond physical activity. Students who do not participate in any of these behaviors may still engage in healthy diet practices

although not for weight loss. The focus on intentionality of the participation in dieting for weight-loss distinguishes this study form previous research on the topic of African American women and health. The findings of this thesis provide insight into the intentions of participation in healthy weight behaviors which can be used to establish and support intervention programs and promotions geared towards African American women.

This work was limited to Non-Hispanic Black women due to the higher percentage of overweight and obesity rates between this group and all other racial categories. The importance of cultural influences towards weight and identity, encourages a variety of acceptable physical sizes and shapes among this women of color category. An awareness of this factor presses for me to acknowledge the ethnic identity divisions within the group of women of color known are as African American. Therefore, the terms of African American and Black were used in this work interchangeably along with the term Non-Hispanic Black.

CHAPTER OVERVIEWS

This thesis will begin with a literature review of recent academic research spanning from general health within the United States to weight related topics among African American women. This first section of the literature review includes the physical, mental, emotional, and spiritual aspects which have been found to affect women's health. Following this, intersectionality will be briefly outlined in order to shift the focus from women in general to the combined effects of race and gender. This transitions the review of literature to African American women's health eventually focusing on studies

specifically on weight. Here, an extensive summary of the social, physical, behavioral, cultural, and environmental factors will be discussed to provide what has been found on this topic and where this thesis can contribute to this scholarship.

Next, Social Cognitive Theory (SCT) is described as the theoretical framework upon which this thesis was organized. This thesis used SCT as a way to create a standardized system that can translate to each portion of this research process. Describing and establishing the different components of SCT at this juncture allows for a consistent organizational pattern to be formulated. After the theoretical framework is outlined in Chapter III, the means by which the data was chosen, obtained, and analyzed will occur in the methods section. With the statistical method chosen, the analysis was conducted and the results are described following the methods section in Chapter IV. Finally, this thesis will conclude with a discussion of the findings from the analysis of the factors in relation to dieting for weight-loss amongst African American women across SCT. This chapter will include a brief summary of the limitations and recommendations for future research.

CHAPTER II

REVIEW OF LITERATURE

America has been involved in an intense health crisis that has brought to the forefront several factors such as cardiovascular disease, cholesterol, and diabetes. Diet, health, and eating practices have become a subject of intense interest due to the association of excess weight with diseases. While Americans in general are disproportionally overweight or obese, more women are overweight, or have a BMI greater than 24 or obese with a BMI greater than 29, compared to men. Recent findings from the Center of Disease Control (CDC) noted that for 2009-2010 the difference in levels of obesity between women and men have been on the decline and most recently this disparity has seemed to level off (CDC 2012). This may be a result of the increase in attention given to women and their high rates of obesity which may have fueled increased weight loss intervention programs and behavior amongst women. Overall though, women still have higher, even if only slightly, rates of obesity in comparison to men.

WOMEN'S HEALTH AND WEIGHT

Women's health has been found to be a complex subject that incorporates several dimensions such as physical, mental, emotional, and spiritual aspects. Social research on health for women in regards to weight have focused on perceptions of weight including self-concept and societal influences, such as the environment and media, to understand difference that exist amongst women (Agarwal, Slining, and Yaemsiri 2011, Duncan et al

2011, Hendley et al 2011, Grotta and Zied 2010, Mishner 2013). Each of these factors assumes a role in the subject of health resulting in a need to discuss each aspect in its own right. More specifically, in reference to these factors and the multifaceted concept of weight, studies have found that one's perceived weight status holds a significant role in the participation in weight loss behaviors. For instance, Duncan et al (2011) found that "women who misperceived their weight were 26% less likely to meet activity recommendations," meaning that they were much less physically active (3). Weight category perceptions are influential motivators for actual participation in physical activity and weight loss actions for individuals. If one does not think that they are overweight or obese then there may be no need from their perspective to participate in behaviors to maintain their weight or lose weight (Agarwal et al 2011).

Social aspects that are affected by weight for women can range from attraction to societal norms of beauty. Nancy Etcoff (1999) addressed beauty norms related to weight arguing that the most attractive weight is of an average size which is neither very large nor very thin. This is in great contrast to the proposed current physical ideal of a slender figure with exaggerated hip and chest proportions and a miniscule waist (Wolf 1992). Modern day beauty ideals call for facial features that are predominately Western European. Western European facial features, though have been argued from an evolutionist perception to be universally attractive features. These physical characteristics consists of a thin well-formed bridge nose, wide eyes, long eyelashes, long straight hair, plump but not large lips and high cheekbones (Etcoff 1992). Weight remains a

predominate factor for health and attraction discussions especially for intimate relationships. Williams and Mertens' (2013) recent work on weight perceptions and intimate relationships found that weight was reported as a barrier between sexual, marital and dating relationships amongst heterosexual women. The importance of weight in relationships, self-perceptions of attractiveness and beauty standards results in an increase of activities geared towards weight maintenance and weight loss practices.

Despite the multimillion dollar diet and exercise industries, a high percentage of American women remain overweight and, at the extreme, obese. Large food portions, more sedentary lifestyles, and food supplies that are manufactured with artificial hormones and preservatives are some of the factors cited as contributing to the increase in the average weight of Americans (Anderson and Libonati 2012, Etcoff 1999, Wolf 1987). One form of recent intervention strategies includes web based health information and weight loss programs. Internet based programs have garnered increased attention as alternative ways to combat obesity because the internet serves as a more modern subject of analysis. Notably, it has been found that web based information seekers on health and weight are reported as having increased participation in unhealthy weight loss behaviors such as diet pills, skipping meals, and laxatives (Laz and Berenson 2011). The variety of topics in reference to weight, weight-loss, and women are vast and diverse as evidenced above. These studies though seldom yield conclusive results on how to approach obesity due to the complex nature of weight gain, loss, and maintenance.

Intersectionality and Weight

Examining weight from the monolithic category of simply 'women' disguises nuances that prevail between racial categories. The interaction of multiple identity attributes has been termed intersectionality and is first attributed to Kimberly Crenshaw in 1989 (Brah and Phoenix 2004, Phoenix and Pattynama 2006). The concept has been used as a theoretical framework and methodology initially in black feminist work but has been utilized in a of areas such as marketing (Brah and Phoenix 2004, Gopaldas 2013, Pheonix and Pattynama 2006). Intersectionality has posited that attributes such as race, gender, economic status, and sexuality function in tandem, regardless of whether these identity characteristics have a complementary or conflicting interaction, effecting the lived experience of individuals and groups (Brah and Pheonix 2004, Golpaldas 2013, Phoenix and Pattynama 2006). From an embodied intersectionality perspective, the actual body that is located in particular locations is examined with the understanding the identity attributes displayed by that body are "lived and read through frames that reflect these dimensions" of power and influence (Brown-Glaude 2011).

For this thesis, race and gender are studied together to confront the multiple hierarchies of privilege that affect the raced, sexed, and embodied, Black female body in relation to weight. There is a significant difference in the proportion of overweight and obese European or Non-Hispanic White women compared to African American women (CDC 2013). Before the discussion on African American women and obesity is provided,

African American women's health in general will be explored due to the link between health issues and being overweight or obese.

AFRICAN AMERICAN WOMEN'S HEALTH

A topic that has received increased attention in research is that of the precarious position of African American women's state of health. A search for articles on February 25, 2013 in the University of North Texas's online library catalog beta article search program for the key term 'African American women's health' from 1990-2000 brought up 10,343 results, 35,882 from 2000 to 2010, and already 17,799 results from 2010 to the present date of December 13, 2013. These results show that the interest in this area is clear.

According to CDC (2013), African American women stand at the forefront of prevalence rates in cervical cancer, asthma, diabetes, high blood pressure, and being overweight or obese. Black women, therefore, are often the target population of research because of their high rates of health issues. Studies then attempt to understand and explain the circumstances such as the social, economic, personal and institutional factors that affect health and why these issues are so highly clustered within this population. Diabetes and high blood pressure can all be complications brought on by being overweight and obese.

Weight

The rise in the number of individuals labeled as overweight and obese has brought further attention to African American women because of their higher rates of obesity.

Research has found several factors that affect weight including social, environment, mental, physical and cultural (Agarwal et al 2011, Bandura 2004, Beauboeuf-Lafontant 2003, Duncan et al 2011, James 2013, Leivadi 1993, Masheb and White 2012, Rowe 2010, Young et al 2001). African American women face unique situations in regard to these factors due to their dual identity status as sex and racial minorities. The factors of social, physical/behavioral, cultural, and environmental in relation to African American women and weight will be explored to reveal the current work and status of this area in academic literature today.

Social

Previous work has determined that the influence of others plays an important role in the way in which you view your weight and how you decide, or if you decide to do anything about it (Williams and Merten 2013). Family and peers play a significant role influencing individuals in ideas about their weight along with the media and overall societal expectations and norms (Capers, Baughman, and Logue 2011). Socially, African American women have been noted as receiving less support from their friends and family in regards to weight loss practices (Capers et al 2011). African American women were more often found to be single mothers, and that could influence their ability to be able to participate in physical activity specifically for weight. Caper's et al (2011) concluded in their work that an increase in emphasis of the importance of family and peer support would help African American women's to commence and continue with weight loss related behaviors (141).

In regards to the media, African American females are bombarded with images of what women and African American's should be and how they behave. Numerous studies have been conducted on the subject of the media and African American women, ranging in topics from self-esteem, identity, sexuality, and phenotype standardization (Shelton 1997; Gordan 2008; Guy-Sheftall (2002); Russell, Mitchell, and Hall 1992). Gordan (2008) makes some strong inferences that women in general in the media are often pictured as either strictly sexual objects or in its lesser form as a beautiful object to be admired. The media portrays women as "young, thin, white and portrayed in traditional roles that suggest female inferiority" (Gordan 2008). Black women, on the other hand, are often depicted as hypersexualized beings that reflect many negative stereotypes and are often seen as a sexual object to be desired by males or as asexual "mammies" who lend their life knowledge, time, and energy to the caring of their white family (Gordan 2008, Russell et al 1999). Media as an institution is a broad term thus work has been done on separate portions of media such as television viewing.

Botta (2000) found that television viewing can be an influence to in how individuals view their body image, enthusiastically endorsing the thin ideal and putting pressure on females to want to achieve this image. According to the cultivation theory since more African American children watch more television then white children they should be affected more by the media images and yet studies show that the contrary is true (Botta 2000). According to social comparison theory, if the television characters featured resemble the viewer, the viewer may then compare themselves to that character

(Botta 2000). If the viewer does not match up to the character, the viewer will then work to eliminate the physical resemblance gap (Botta 2000). The results showed that for those that watch a large amount of television, race played a significant role in engaging in eating disorders whereas idealizing the characters on the television was not significant (Botta 2000). As was found in most other studies African American females used their ethnic identity to filter the images presented to them (Botta 2000). Although as inclusion of African American and ethnic women increases in the media, and particularly in weight loss intervention advertisements, the question arises if ethnic identity will still be able to deter the effects of media influence. The more participants identified with media characters the more these individuals placed an emphasis on physical appearance (Shelton 1997). This is exemplified by Patton's (2006) remark that the ideal female figure is impossible to obtain and yet is pushed throughout the media onto young women. African American women in particular are hit hard by these images in that they not only do not fit the ideal body stereotype but also do not fit the "beauty" stereotype at all physically in their natural state. Interpersonal relationships and the media are not the only institutions that impact behavior and personal attitudes towards weight.

Physical/Behavioral

Physical makeup and behaviors compose a portion of the multifaceted area of health for weight and obesity. For African American women the shape and contours of their bodies has played a significant role in how they are viewed and often condemned in society. Hinton-Johnson analyzed how African American women are displayed in novels

concluding that young woman's bodies are used often as ways to counteract the image that is put out in society (2003). There is only a small reference to African American women rejecting Western images of beauty since it would not reflect them. Johnson and Stake (2009) also found that it was the European American women who had the most dissatisfaction with their racial features such as the size and shape of their lips or skin color. It seems to make it even more significant that the issues that are supposedly seen amongst the African American population about their physical appearance may be socially perpetrated by non-African Americans who do not care for their personal features.

Having natural figures that are often perceived as outside of the beauty standard presented by society has also led to African American women's bodies being viewed as objects to be "discovered," resulting in the misuse of their bodies. This exact situation was discussed in a moving portion taken from Kimberly Wallace-Sanders (2002) anthology *Skin Deep: Spirit Strong: The Black Female Body in American Culture,* which chronicled the experimental exploration of the female medical field of gynecology. Historical scientific abuse framed as research can create a distrusting attitude and relationship with medical and government institutions. Interventions from these agencies may be viewed suspiciously resulting in less participation.

The actual physical shape and makeup of one's body can both impede and enhance behavior and response of the body to activities related to weight. BMI has been used as the medical standard for the categorization of physical bodies for quite some

time. Although BMI has been criticized for its lack of variability in acknowledgement of diverse body sizes and being created based on the physical make up of adult white males, BMI still can be an effective standard to utilize because it does provide a basis for a field that has few recognized alternatives. BMI has been used to examine a variety of subjects such as physical attraction, weight related health issues (Davis, Clance, and Gailis 1999, Hendley et al 2011, James 2012, Jefferson and Stake 2009, Lynch et al 2012, Ma et al 2012, Mastin et al 2011, Cozier et al 2009, Weerts and Amoran 2011). Jefferson and Stake (2009) added the inclusion of BMI to their work and distinguished between how important appearance is to the subject and what that subject finds to be more attractive. Black overweight and obese women have engaged in weight loss strategies but obese women were more likely to use unhealthy weight loss means such as skipping meals and using diet pills to lose weight (James 2012).

There has been little research that has found a correlation between biological make-up, race, weight and eating habits (Lynch et al 2012). A study by Lynch et al (2012) found a relationship between a genetic predisposition for a preference to foods high in sugar and fat amongst African American women. The authors argued that this finding suggests that these foods may provide more sensory activation of the taste buds causing for foods high in sugar and fat to be desired more (Lynch et al 2012). Foods high in fat and sugar are also associated with higher body percentages of fat as well (Lynch et al 2012).

Behavior affects one's weight as well. African American women have been found to exhibit lower levels of physical activity such as recreational activities or exercise in comparison to other racial groups (Casagrande et al 2009, James 2012). In D. C. S. James (2012) recent study on African American women, BMI, and weight loss behaviors, fewer than half of the women reported working out for more than 1-2 days a week (74). African American women rarely meet the physical activity level requirements recommended by health care professionals and associations (James 2012). Physical activity can assist with weight management and weight loss. The activity levels of African American women are important to note when examining weight and obesity along with other factors such as diet.

Cultural

Cultural influences on the weight of African American women center on the diet and lifestyle often thought of as unique to Black culture. Food choice plays a vital role in weight management. Studies have shown that for African American women their choice in types of food in which they find to be appealing are often centered on what is available and what they find to be appealing in taste (Lynch et al 2012). Also, in regards to the perceptions of the food, healthier dishes were labeled as being less appealing because they did not contain foods that were viewed as tasting good (Lynch et al 2012). All of these factors may lead to choosing foods based on taste and desire as opposed to whether they are healthy choices. Food choice can also be influenced by the amount of food nutrition knowledge that Black women have. In one study, if food was found to cause

weight gain it was regarded as unhealthy illustrating what the authors felt was a lack of accurate food nutrition knowledge (Lynch et al 2012). Food choice though is also culturally sensitive to the assumed traditional diet of African American's also known as Soul Food.

The eating style and practices of Black Americans features an array of dishes most commonly referred to Soul Food. These meals consist of fried foods such as chicken, catfish, and okra. While vegetables are often the foundation of Soul Food, the styles in which the dishes are prepared such as saturating the vegetables in butter, salt, and other oils take away from their nutritional value. This can be seen in the preparation of collard greens, green beans, and mashed potatoes. As with many cultures, celebrations and family gatherings occur around the dinner table. For African American's this becomes most evident in the tradition of Sunday dinner in which several of the above mentioned dishes are prepared and served. Events such as this not only add to the dynamic of the family but play important roles in maintaining family ties and creating safe spaces.

Preparing meals though also allows for another important factor to be evaluated, that of caring for the family. Here, Black women are noted as having used meal preparation and time as a sign of care for their family and friends. Taking time out of busy schedules that often include working full time jobs or attending school is symbolic of how important that person finds you to be. Unfortunately, expounding to much energy to care for others can also be detrimental to the health of an individual when they are

trying to meet the demands of managing both work and home. This in the responsibility of carrying so much psychological weight, becoming more than that person can handle. Thus the introduction of quick convenient fast food alternatives or pre-made meals add to the amount of fried or less healthy alternatives that are available for the families, as well as for the African American women, to partake in.

The final cultural factor to be discussed is the media which can function as an institutional influence on groups. The link between the influences of the media in perpetuating the Eurocentric standard of beauty also has a heavy effect on other psychological facets of African American women such as their body satisfaction. The Eurocentric standard of beauty relies on perceptions of the ideal woman as slim, and light in aspects of hair, skin, and eye color. The predominant image that many refer to is the thin, long, blonde haired, blue eyed, woman. Studies (Blair and Shaldon 2005, Botta 2000, Shelton 1997) have found that African American women have been found to have heavier body weights yet exhibit higher levels of body satisfaction whereas Caucasian females have been found to be usually very dissatisfied with their bodies. Shelton (1997) though noted that when SES was controlled in research the differences between the races vanished so the earlier results then may have reflected class differences as opposed to racial differences. Bross and her fellow authors (2001), worked to determine what factors may lead to eating disorders in African American women may be. Their results in their study found that the African American women's drive to be thin did have an effect on their body dissatisfaction. Falconer and Neville (2000), Gilbert et al (2009) concluded

that the more that African American women identified with mainstream Caucasian population the higher their body dissatisfaction.

Environmental

Environmental factors are more than just the actual locality of where one is situated but can be all outside influences which affect groups and individuals. Studies have assessed that environmental factors such as stress, safety, and the availability of places where one can exercise have heavy effects on the ability of women to be able to exercise (Casagrande 2009, Eugeni et al 2011, James 2013, Lee et al 2012, Mastin et al 2012). Environmental components that affect diet and exercise for African American women shed light on the intricacies of research on weight and obesity. An examination of each of these factors will provide a more in depth understanding of the complexity and the importance of the environment for weight starting with stress.

Stress has been linked medically to a rise in levels of cortisol which then causes the body to react by wanting to save energy. Stress can result from many different reasons such as feeling overwhelmed by responsibilities, work, commute, family issues, health issues, financial, mental, and many other situations. The relationship between stress and an increase in eating was studied by Catherine G. Greeno and Rena R. Wing. The authors found that stress was linked to psychological components such as perceived intensity of stress, self-efficacy in regards to stressors, and the duration of the stressor (Greeno and Wing 1994). With women being found to report more instances of stress fueled eating of high fat and sugar foods, conceptions of a relationship between weight,

obesity, and stress are not farfetched (Groesz et al 2012). African American women encounter higher levels of stress due to the many responsibilities partnered with having to cope with the dualism of being both a racial and gendered minority (Cozier et al 2009, Watts-Jones 1990). Self-perceptions of racism were linked to weight gain in African American women (Cozier et al 2009). Stress may function as a strong component of what one eats, when one eats, and one's weight.

An area that may not be readily associated with the environment and health is that of safety. Perceptions of safety can greatly affect whether one feels that it would be beneficial for them to partake in physical activities that require for them to leave their home and spend time outside in the surrounding environment. High rates of crime may be the first conclusion of why one may not feel that their environment is safe but that is not the only area of safety to be evaluated (Casagrande et al 2009). Issues such as sidewalks where women can safely walk around their neighborhood and crosswalks so that they can cross the street can both effect whether one would want to participate in outdoor physical activity because it may just be more beneficial to stay indoors (Casagrande et al 2009). Lastly, availability of centers or recreational areas where one can exercise, whether aerobic, cardio, or strength training, may play a role for African American women. Many times these centers are not available, are not near their place of residence, are not within their budget or are viewed as an unnecessary expense (Mastin et al 2012). Limited access to centers and recreational areas discourage involvement in physical activities to promote healthy weight loss and maintenance.

Conclusion

Previous research has shown that for college aged women physical activity decreases (Wallace et al 2000, Ajibabe 2011). Also the Center for Disease Control notes that it is in adults aged 20 and above with whom obesity rates are most prevalent (2013). Yet most studies have been found to focus on age groups of 30-40 and above (Beauboeuf-Lafontant 2003, Capers et al 2011, Eugeni et al 2011, Hendley et al 2011, Rowe 2010). The question then persists is, what are the factors that influence healthy and unhealthy weight loss related behaviors amongst college aged or young adult African American women. Therefore this research looks to fill this space in the literature towards the influences that affect African American women below the age of 30 which may eventually lead to increased levels of being overweight and obese at later ages.

CHAPTER III

THEORETICAL FRAMEWORK

Theories of behavioral analysis and perception range from the focus on the individual to that of the entire community. The theoretical foundation of Social Cognitive Theory developed under Social Learning theory. This theoretical framework originated within behavioral psychology, an area which attempts to explain the behaviors of organisms within society (Stone 1998). Social Cognitive Theory (SCT) was developed by Albert Bandura in 1986, and "proposes that one's behavior is interdependently influenced by individual behavior, thoughts and emotions, and environment," (Mastin et al 2012). Cognitive functions interact actively with understanding of how our actions and what one thinks the results, whether as consequences or rewards, will be. Bandura (1989) stated that the "causal" basis of SCT relies on a reciprocal relationship between the person, the environment, cognition, and behavior, otherwise known as Triadactic Reciprocal Determinism (TRD). TRD acknowledges the constant influence of behavioral, personal and environmental factors while incorporating the ability of certain factors to carry more influence than others dependent upon the circumstances of the individual (Bandura 1989). These three factors are dynamic in nature and strictly interrelated so that any change in one affects the others with a variable amount of strength in influence (Bandura 1989, Redding et al 2000).

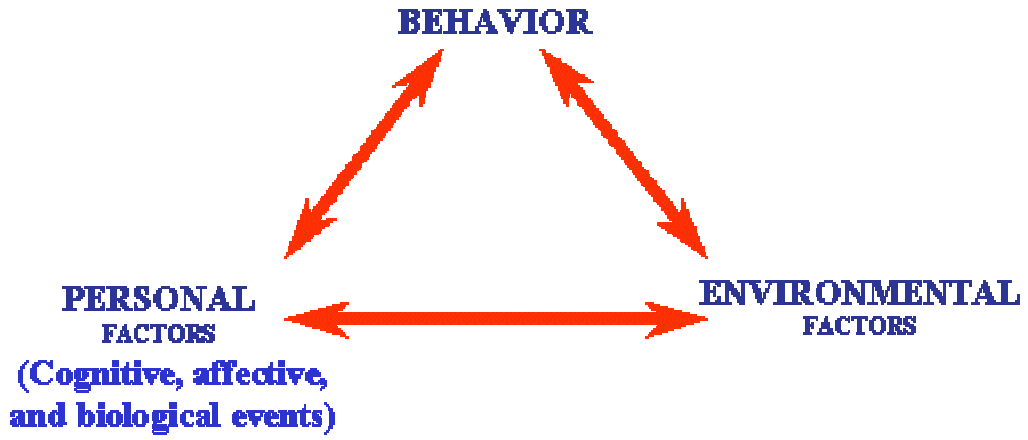

Figure 1. Triadactic Reciprocal Determinism Model

Source: (http://130.18.140.19/persuasion/eff.html)

The portion between the Personal (P) and Environmental (E), according to Bandura (1989), consists of the "human expectations, beliefs, emotional bents, and cognitive competencies are developed and modified by social influences that convey information and activate emotional reactions trough modeling instruction and social persuasion" (3). Bandura (1989) argues that our physical (body) and social characteristics (status, roles) impact our interactions with the environment. Our physical attributes of race, sex, gender performance and age can influence the space in which one occupies changing the responses of that environment from our presence.

The Behavioral (B) and Environmental (E) segment represents the interactive relationship between behavior and the physical and/or social environment (Bandura 1989). The environment does not exist as an independent entity according to TRD, but is constantly influenced by behavior just as "people are products and produced by their

environment (Bandura, 3, 1989). People are active in choosing their environment to an extent. Research has shown that people choose environments that correspond with their "preferences" and personal attributes or personalities (Bandura 1989). Type A or controlling individuals then tend to find themselves in situations in which they are able to exert personal control through gravitating towards these circumstances and an avoidance of situations where control would not seem to be apparent. Our actions and behaviors are either further developed or encouraged by the environment or deterred while how the environment exists is influenced by our behaviors (Bandura 1989).

Lastly, there is the Personal (P) and the Behavioral (B). The Personal consists of the "expectations, beliefs, self-perceptions, goals and intentions" that influence people's behavior along with the "biological properties of the organism (Bandura 3 1989). People's cognitive understandings as well as the biological make-up of the "sensory systems and brain structures," are shaped through behavior (Bandura 3 1989). In accordance to the reciprocal relationship between P and B, behavior is also affected by our internal processes both cognitively and biologically, resulting in actions (Bandura 1989).

The Personal, Behavioral, and Environmental categories unite to create a unique perspective of understanding health behaviors such as exercise, eating practices and diet that acknowledges that people play an active role in creating their future but do not have complete control over exactly what will happen. The uncertainty of future occurrences leaves open the room for growth and change. To describe the process by which change

occurs, SCT features several constructs under the larger frames of personal, behavioral and environment. Although the constructs which can overlap in their location of influence, here, they will be described separately.

Firstly there are the constructs associated with the person themselves. These are behavioral capability, self-efficacy, expectations, and expectancies. The Sociocultural factors such as socioeconomic status, family structure, psychological, culture and education are also examined under this sector. Self-Efficacy plays a very large role in SCT (Bandura 2001, 2002, 2004, Redding et al 2000). Belief in one's ability to be able to achieve a goal or perform an action has been found to be a vital component to understanding behavioral outcomes (Bandura 2001, 2002, 2004). If one cannot expect that they can perform an action there is less motivation to initiate change (Bandura 2001, 2002, 2004). Next, the behavioral constructs of self-control, observational learning, reinforcements, and emotional coping responses will be outlined. In social cognitive theory, knowledge, outcome expectations, goals, and perceived facilitators are all components that are analyzed to determine the factors that influence the participation in a certain behavior.

Finally, the combined effects of the environment on the predispositions of the physiological body are determined. The environmental construct assesses possible contributors to the health issue located outside of the body (Redding et al 2000). This could range from their actual physical living residence to the overall state of the community. The environment as a construct relates to that of situation. Situation moves

more toward assessing the subject's perceptions of the world around them or their environment (Redding et al 2000). Factors such as feelings about the amount of air, water, and land pollution may be included along with perceptions of safety towards the community and surrounding area.

SCT has been incorporated into health practices as a theoretical perspective to evaluate and create intervention programs (Ince 2008; Taymoori et al 2010). Current research in SCT has included testing the usefulness of the theory in being able to accurately predict the cognitive measures that instigate success and failure of participants as per their behavioral changes in relation to intervention strategies. James J. Annesi and Ann C. Whitaker's (2009) tested whether psychological SCT factors were discriminative between those who were successful or unsuccessful at achieving weight loss. Using the modified Baker and Brownell version of SCT, which includes self-efficacy, body satisfaction and mood, Annesi and Whitaker (2009) attempted to provide clarity to the direct and indirect link between SCT factors and weight loss. SCT has been used in intervention programs targeted for Cancer patients and in an increasing field of research on web/technology based programs (Roger et al 2005, Magoc, Tomaka, and Bridges-Arzaga 2011).

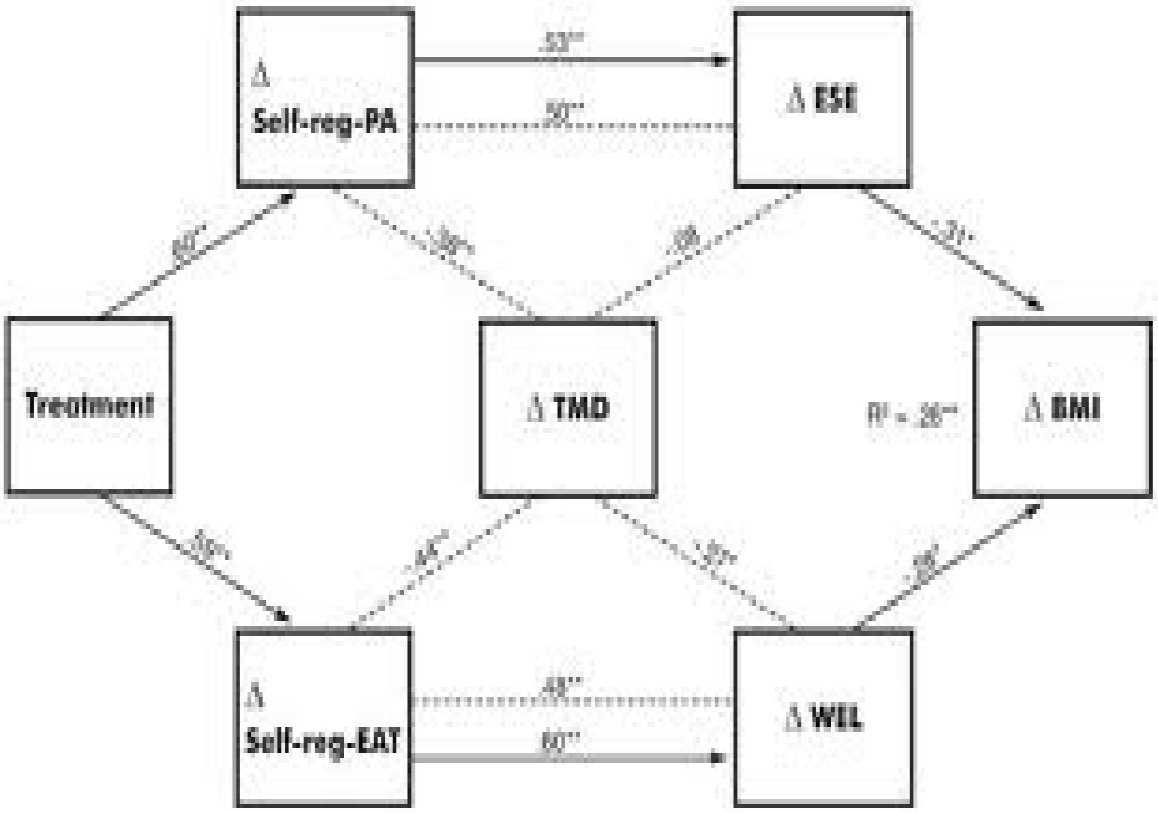

Figure 2 Application of Social Cognitive Theory towards Self-Regulation and Self-Efficacy for Exercise, Eating and BMI Change by Amnesi and Gojala 2010. (http://www.readcube.com/articles/10.1186/1751-0759-4-10)

SCT has also been used in physical activity research. In this case the components of SCT are again evaluated along intervention programs but center on the modification of SCT. One version of SCT, by C.W. Baker and K.D. Brownell, has been termed as Coach Approach (Annesi et al 2011). The coach approach takes self-efficacy from SCT and introduces “mood, perceptions of the body and relations of improvements in those

psychological factors with weight loss," due to perceived usefulness of those factors in predicting weight loss (Annesi et al 2011). SCT has also been combined with other theories such as Personal Investment and the Stages of Change Model Theory to examine exercise and predict how to increase participation in physical activities (Wallace et al 2000, Leivdai 1993). While SCT has been recognized as a useful theoretical framework in health research, particularly for weight, exercise, and physical activity, it appears that researchers have felt the need to modify and attempt to create more comprehensive models from which to work.

SCT has served as a functional theoretical framework for actively implementing intervention programs but before programs can be created the process of how behaviors can be changed must be determined. One of the most important factors affecting perceptions of ability to change behavior has been self-efficacy. The role of self-efficacy has been singled out as an essential construct within the SCT theorem. Research (White et al 2012) has evaluated the use of self-efficacy in determining subject's belief that they could make goals and achieve them, learn new skills, implement them and then maintain the behavior. This has been applied to weight loss, exercise and physical activity (Netz et al 2004, Rogers et al 2005, Martin and McCaughtry 2008, Martin et al 2011).

PRESENT THEORETICAL APPLICATION

This thesis used SCT in the manner similar to that of previous research that used various components of SCT as a theoretical foundation (Mastin et al, Taymoori et al 2010). Where earlier research has used SCT to predict and change components of health

behavior related to weight based solely on physical activity, I utilized SCT to understand and evaluate the engagement in healthy behaviors for weight loss which includes diet and eating practices. Few studies have included other forms of activities related to weight within their analysis focusing instead on what triggers physical activity and exercise. This thesis moved beyond limited understandings of weight loss habits to include healthy and unhealthy measures. I took the constructs of SCT and used them to guide and organize how the lifestyle behaviors of African American college female students related to and effected their engagement in healthy weight loss behaviors. The constructs which were included were environment, situation, behavior capability, expectations, expectancies, self-control and self-efficacy. Figure 2 illustrates the interactive relationship between the personal, behavioral and environment broken down into the current constructs which house the independent variables, resulting in reciprocal determinism or the dependent variable.

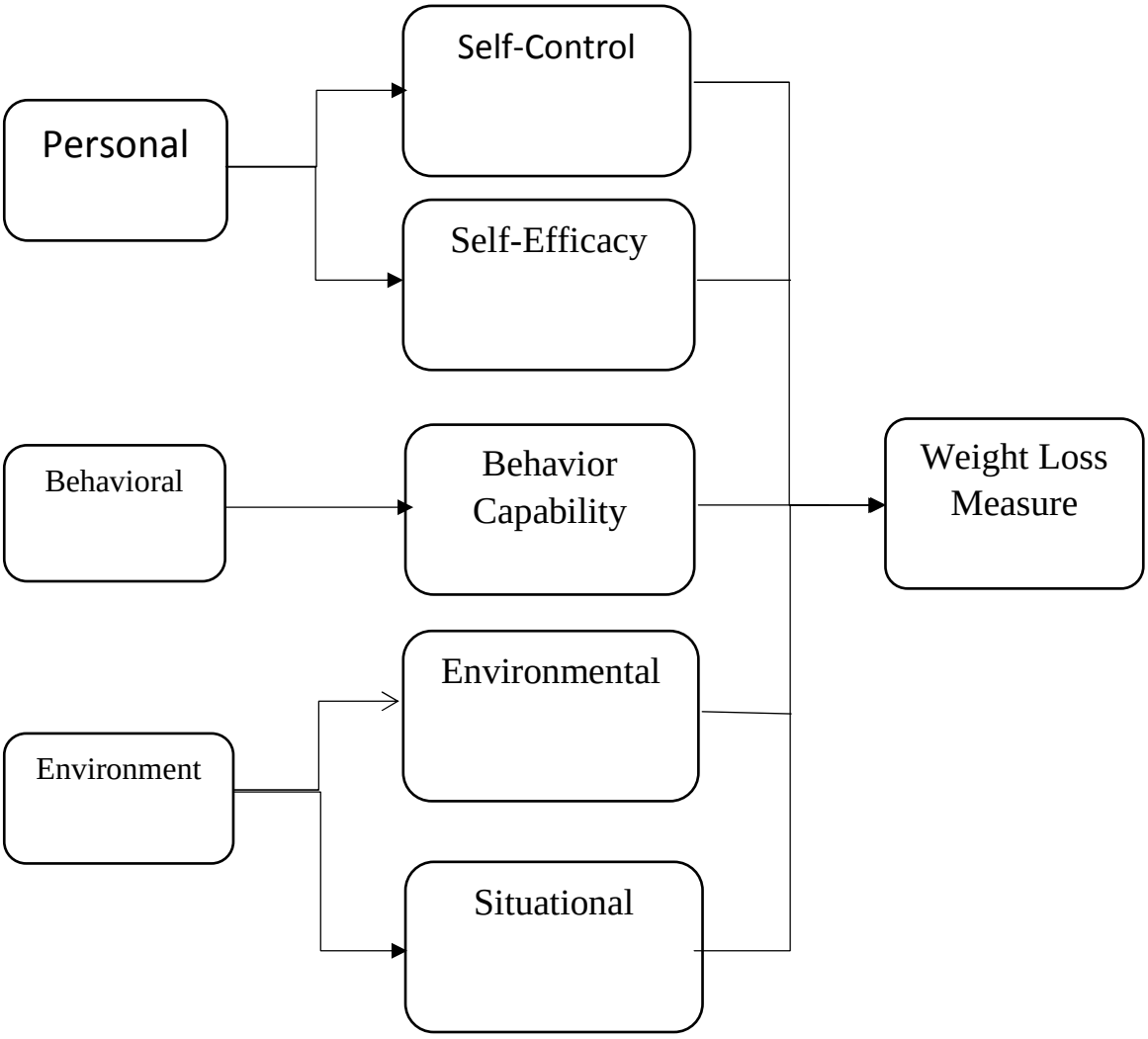

Figure 3. Social Cognitive Theory in Relation to Weight Loss Behavior

Self-control pertains to one's understanding that they are in control of their actions and behaviors (Redding et al 2000). How one perceives their weight along with whether decisions on taking action about their weight function as opportunities to exhibit

self-control through goal setting (Redding et al 2000). Maintenance or deciding to do nothing about one's weight signifies a form of self-monitoring (Redding et al 2000).

Self-efficacy stands as the personal belief that one has the ability to achieve the goals that they set for themselves (Bandura 2002, 2004; Redding et al 2000). When one feels that they can accomplish aspirations this helps them to commit to the goals that they make because they believe that the ends are attainable (Bandura 2002, 2004). There are a multitude of ways to assess self-efficacy including that of the bodily perception of feelings and emotions otherwise known as stress (Bandura 2002). If one feels that they are unable to deal with life stressors such as personal health issues pertaining to weight or personal appearance, then they may also engage in exercise or weight loss but for alternative reasons such as control or power (Bandura 2002, 2004, Redding et al 2000). Self-efficacy will be examined through items that measure stress in student's lives.

Without knowledge of how to live a healthy lifestyle it would be difficult to do so. Behavior capability thus includes whether knowledge and skills are available, known and utilized to achieve the expected behavior (Bandura 2001, Redding 2000). Here, items such as whether health knowledge was provided by the student's school was used to assess whether health knowledge has an active role in the engagement in healthy or unhealthy weight related behaviors. Diet and physical activity habits represented the skills associated with healthy lifestyle behaviors.

The environment consists of perceptions of the surroundings outside of the physical body of the individual (Redding et al 2000). As has been mentioned, these can

consist of physical and social entities (Redding et al 2000). One's home, neighborhood, community or University campuses are examples of physical environments while family, friends, and peers are example of social environments. Items from the featured questionnaire included residency (on campus/off campus), participation in social sororities and marital status.

Situation has been described in relation to the environment as whether one feels that the area in which they are presently located is conducive to encouraging achievement of behavioral change (Redding et al 2000). In this case the focus was on perceptions of safety. Safety via situation is an important construct to evaluate because it has been noted that perceptions of safety greatly effect willingness to participate in activities associated with weight loss and management (Casagrande 2009, James 2013, Lee et al 2012, Mastin et al 2012). If one does not feel an area is safe it is less likely that physical activities will be performed in this area. Items from the questionnaire which represented situation included, How safe do you feel: On this campus (daytime/nighttime), Perceptions of campus safety (day/nighttime), and Perceptions of safety in community or areas surrounding campus (day/nighttime)

HYPOTHESIS

The constructs of SCT provide the structure for the development and testing of the hypothesis for this thesis. Figure one provides a visual representation of the first hypothesis that BMI is related to dieting for weight-loss. For the personal construct, weight perception, actions taken towards weight, and students' self-perception of their

stress levels were hypothesized to be related to dieting for weight loss. Next, the behavior construct variables of having received information on nutrition, daily intake amount of vegetables and fruit, daily count of moderate, vigorous, and strength training exercises were all hypothesized to be associated with dieting for weight loss. While not having received information on physical activity, as represented in figure 2, was hypothesized to not be related to dieting for weight loss. Lastly, residency, involvement in a social sorority, relationship status, marital status, and student's perceptions of safety on campus or in the community and surrounding areas both during the day and nighttime were hypothesized to be related to dieting for weight loss as shown in figure 3.

CONCLUSION

These hypotheses have been divided into personal, behavioral, and environmental sections to facilitate ease in the organization of testing the relationship between dieting for weight-loss and a variety of factors. Social Cognitive Theory allows for a systematic evaluation of the desired testing items of this work. A living theory, this overview of SCT provides the origins and recent applications of SCT in scholarly work as well as my intentions towards further expansion of the theory to weight-loss behaviors amongst African American college aged women. Now that a foundation has been laid for how I will organize this analysis of weight-loss behavior the means by why I went about conducting my study will follow.

CHAPTER IV

METHODOLOGY

To evaluate the possible relationship between dieting for weight-loss and SCT it was necessary to obtain data which would reflect the three constructs of SCT as well as weight-loss behaviors. Ideally this data set would include items for every construct within SCT such as questions that gather data on self-efficacy, observational learning, self-control, self-regulation, and reinforcements. Previously collected data was used in order to complete the analysis and achieve the purpose of this thesis. The use of secondary data allowed for this thesis to be feasible and timely while still providing relevant data on the topic of dieting for weight-loss. The following methodology section will outline the steps which had to be completed in order to conduct this research. These steps included how the data would be chosen and obtained, a description of the data, determining the actual research population, choosing the specific questionnaire items, organizing the items along SCT, and deciding upon the statistical analysis to be used.

DESIGN

The American College Health Association-National College Health Assessment II (ACHA-NCHA II) is an annual survey which collects information on health and behavior practices among college students by higher education institutions voluntarily. Public and private two or four year colleges and universities under their own volition must first decide what their primary purpose is in collecting the data (ACHA-NCHA 2013). This will guide the rest of the decisions in whom, when, and how data is collected. Second, the

target population they wish to obtain data about must be picked. This could be the entire student population or simply specific classifications, disciplines or groups. The time length is then chosen by deciding to either distribute the surveys during the fall where questions will be framed as “last 12 months” or spring where questions are phrased as “the last school year” (ACHA-NCHA 2013). Lastly, the format under which students will receive the survey is decided based upon the chosen sampling technique of either paper or web which are administered when surveying the entire student population or randomly selected students or only paper when surveying in actual classrooms.

Once these decisions have been made, the college or university must complete the mandatory student demographic survey, survey order form, and submit the required payment amount. The order is then placed with ACHA-NCHA for the appropriate survey instrument which would fit above said needs. According to the ACHA-NCHA (2013), if the desired survey is web based then a spreadsheet of the chosen population’s email addresses, letter of consent, subject line, participation reminder letter, and respective institutional IRB approval letter must also be submitted. For paper surveys an IRB approval letter must be sent in first. Then the surveys are shipped to the institution and administered via the institutions chosen method. Completed surveys are collected and shipped back to ACHA-NCHA where the surveys are scanned to create an electronic document. Both web and paper data is scanned into SPSS to create a dataset and codebook which will be returned to the institution on a CD. Institutional Executive Summary and data reports, which consist of frequency tables and charts of demographic

information, are also included in the final packets given to the college or university upon completion of the surveys (ACHA-NCHA 2013).

Due to the variety in data acquisition purposes, methods, and populations, ACHA-NCHA II data is not generalizable to the overall United States college and university student population. It is merely reflective of the institutions who participated. This current study aspired to determine only the nature of the relationship between behavior, socio-cultural, and environmental factors thus the information gathered by ACHA-NCHA II is appropriate for us in this thesis. Limiting the factors to these areas was beneficial in this study because the instrument enabled the evaluation of factors associated with health practices of African American college aged women to be possible. Further research will follow dependent upon the results which will move to present generalizable data.

To obtain the data for this thesis an official request was made to ACHA-NCHA through electronic mail. Upon communication with ACHA-NCHA, the official Data Use Request Form along with the codebooks for the fall and spring version of the survey were acquired. The request form was then completed and sent to the appropriate contact as designated by the ACHA-NCHA. Once the data request had been received and approved, the data was provided for use for this thesis.

PARTICIPANTS

A sample was gathered from the previously collected data of those who self-identified as Black females as was designated as the population of interest for this thesis. All age groups were included in this study to allow for generational differences to be

evaluated. Previous research has focused on adult Black women aged 40 and above, therefore excluding the behaviors of young adults. By not narrowing the focus of the analysis to just traditionally college aged or young adult Black females, factors that vary between the age groups can be assessed. The constants in this study are race and sex. Race will be limited to Black or African American students and was determined through the use of a self-descriptive measure that asked "How do you describe yourself?" The answer options for this question were White, Black or African American, Hispanic or Latino/, Asian or Pacific Islander, American Indian, Alaskan Native, or Native Hawaiian, Biracial or Multiracial, and lastly Other. Sex is limited to only those who self-described themselves as female.

VARIABLES

The dependent variable for this study centered on behaviors associated with weight loss with the item stating "within the last 30 days, did you do any of the following: exercise to lose weight, diet to lose weight, vomit or take laxatives to lose weight, or take diet pills to lose weight". This thesis focused specifically on the item 'diet to lose weight' to narrow the focus of the analysis. A binominal variable, no or yes were the only two responses. This item was a behavior listed in reference to weight loss in particular but also allowed insight into understanding of eating practices. The diet habits among African American young adult women are an area that has received limited attention within Social Cognitive Theory. Focusing on this particular response item added variety to the populations examined through SCT about diet.

Body mass index (BMI) was used to reflect the state of the physical body of the students as an independent variable. Body mass index is "a number calculated to by a person's height and weight," (CDC 2013). BMI was calculated for the subjects by the ACHA-NCHA. This calculation was achieved by dividing their self-indicated weight in pounds by their height in inches squared. The resulting figure was then multiplied by 703, a pre-calculated conversion factor (CDC 2013). BMI was used as a measure to categorize individuals as either underweight (BMI of 18.5 or lower), normal weight (BMI of between 18.5-24.9), overweight (BMI of between 25.0-29.9), class I obesity (BMI of 30.0-34.9), class II obesity (BMI of 35.0-39.9), or class III obesity (BMI of $\geq$ 40.0). The independent demographic variables included in this study were age, classification, enrollment status, and perception of overall status of health.

The other independent variables were divided by the three primary categories of SCT personal, behavioral, and environmental. The independent variables that are included in the personal construct are weight self-perceptions, actions taken towards weight, and stress perceptions which include emotional states such as felt things were hopeless, exhausted or overwhelming anxiety, and life occurrences too difficult to handle: family/friends health, personal appearance, and personal health. The behavioral independent variables included information received about nutrition and physical activity from the university, intake of fruits and vegetables, and daily participation in: moderate-intensity cardio/aerobic exercise, vigorous-intensity exercise, and strength training exercise. Environmental independent variables consisted of the students current

residence, member of sorority, international student status, relationship status, marital status and perceptions of safety on campus (day/night), and in the community surrounding their school (day/night)

Sociodemographics

Age was collected as a continuous variable by asking "how old are you?" where the students then wrote in their age. University/college standing measures included "what is your year in school?" The participants could be 1st-5th year undergraduate, graduate or professional, not seeking a degree, or other. Enrollment status was established by the item "What is your enrollment status and answers consisted of full-time, part-time or other. The overall status of health per individual was indicated by the response to "how would you describe your general health," with possible responses of excellent, very good, good, fair poor, or don't know.

Personal Construct Independent Variables

The explanation of the variables begins with the personal construct. The variables for self-control and self-efficacy are outlined next.

Self-Control. Weight perceptions and actions taken towards weight were included in the sub-area of self-control. These areas assess whether the students understanding of their present physical state and whether they should do anything about their weight.

Weight Perceptions: Data was then analyzed on the individual's perception of their weight through the inquiry "how do you describe your weight?" Responses included very underweight, slightly underweight, about the right weight, slightly overweight, and very overweight.

Weight Action Perceptions: Whether the individuals then felt that action was needed to be taken about their weight by the question "are you trying to do any of the following about your weight?" in which respondents could reply with "I am not trying to do anything about my weight", "stay the same weight", "lose weight or gain weight". *Self-Efficacy.* Stress factors act as a means by which self-efficacy can be measured amongst the participants in this study through several items within the ACHA-NCHA II. These items consisted of feelings of being hopeless, overwhelmed, exhausted, or having experienced overwhelming anxiety. Following that two additional items were included to assess how the students felt that they handled factors related to their family's health, the students' appearance, and their own personal health.

Stress: Many factors contribute to stress such as feelings of being overwhelmed. Here stress will be assessed through two items. The first will be "have you ever: felt things were hopeless, felt overwhelmed by all you had to do, felt exhausted not from physical activity, or felt overwhelming anxiety". The answer options included "no, never", "no, not in last 12 months", "yes, in the last 2 weeks", "yes, in the last 30 days" and "yes, in the last 12 months". The second question is "within the last 12 months, have any of the following been traumatic or very difficult for you to handle?" Students could

respond with either yes or no to the following options: “health problem of a family member or partner”, “personal appearance” or “personal health issue”.

Behavior Construct Independent Variables

Within the behavior construct, there were six areas tested. These six hypothesis all were within the behavioral capability subsection which included knowledge, nutrition, and physical activity.

Behavioral Capability. Behavior encompasses the two categories under the sub-area of behavioral capability of information which would guide one’s behavior and the actual behavior that one exhibits. Knowledge, nutrition, and physical activity assessment items are included in this section.

Knowledge: Amount and access to information from the college or university on knowledge health aspects was obtained through the question “have you received information on the following topics from your college or university?” This thesis will focus on the answer options of nutrition, and physical activity information because these responses most closely reflect the main topic of this thesis. The possible answer responses were yes and no.

Nutrition: Food intake was assessed through the item “how many servings of fruits and vegetables do you usually have per day?” Serving sizes were featured in the instrument with “1 serving= 1 medium piece of fruit; ½ fresh, frozen, or canned fruits/vegetables; ¾ cut fruit/vegetable juice, 1 cup salad greens; or ¼ cup dried fruit,”.

Responses included 0 serving per day, 1-2 servings per day, 3-4 servings per day, 5 or more servings per day."

Physical Activity: Physical activity was obtained through the question "On how many of the past 7 days did you: do moderate-intensity cardio or aerobic exercise (caused a noticeable increase in heart rate, such as a brisk walk) for at least 30 minutes, do vigorous-intensity cardio or aerobic exercise (caused large increases in breathing or heart rate, such as jogging for at least 20 minutes, do 8-12 strength training exercises (such as resistance weight machines) for 8-12 repetitions each? Respondents may indicate from 0 to 7 days what activity they participated in for each option.

Environmental Construct Independent Variables

Lastly, the items included in the environment construct will follow. The subsections included for this construct were environmental, social, and situational.

Environmental: Within the environment construct there are two sets of items. These include items that concern the built and social environments of the featured participants.

Residence: All participants being college students the location of their full time residence is of vital importance in regards of their relationship towards the environment that affects the participants the most. Thus current living residence were ascertained. Here, participants were provided with a variety of response options which were campus residence hall, Fraternity or sorority house, other college/university housing, Parent/guardian's home, other off-campus housing, or other in response.

Social: Participation in weight loss behaviors through dieting can be affected by who one socializes with. Outside school organization participation through a social fraternity or sorority status was obtained with a dichotomous nominal variable of yes or no. Lastly, intimate partner relationship influence was explored through two items. First, what is your relationship status, in which the students could reply either: not in a relationship, in a relationship but not living together or in a relationship and living together. The second intimate interpersonal relationship involvement question was what is your marital status? The answer options consisted of single, married/partnered, separated, divorced, and other.

Situational

The environmental portion of Social Cognitive Theory also includes a portion entitled situational. How one relates to their environment effects their learning ability. In this case the physical environment may either create a productive or nonproductive situation. Here the perceptions of safety will be used to gauge the association between dieting for weight loss and African American female college students in their immediate physical environment.

Safety: A matrix of questions addressed perceptions of safety by assessing "How safe do you feel: "on this campus (daytime)", "on this campus (nighttime)", "in the community surrounding this school (daytime)", and "in the community surrounding this school (nighttime)". Answers included from not safe at all, somewhat unsafe, somewhat safe, and very safe.

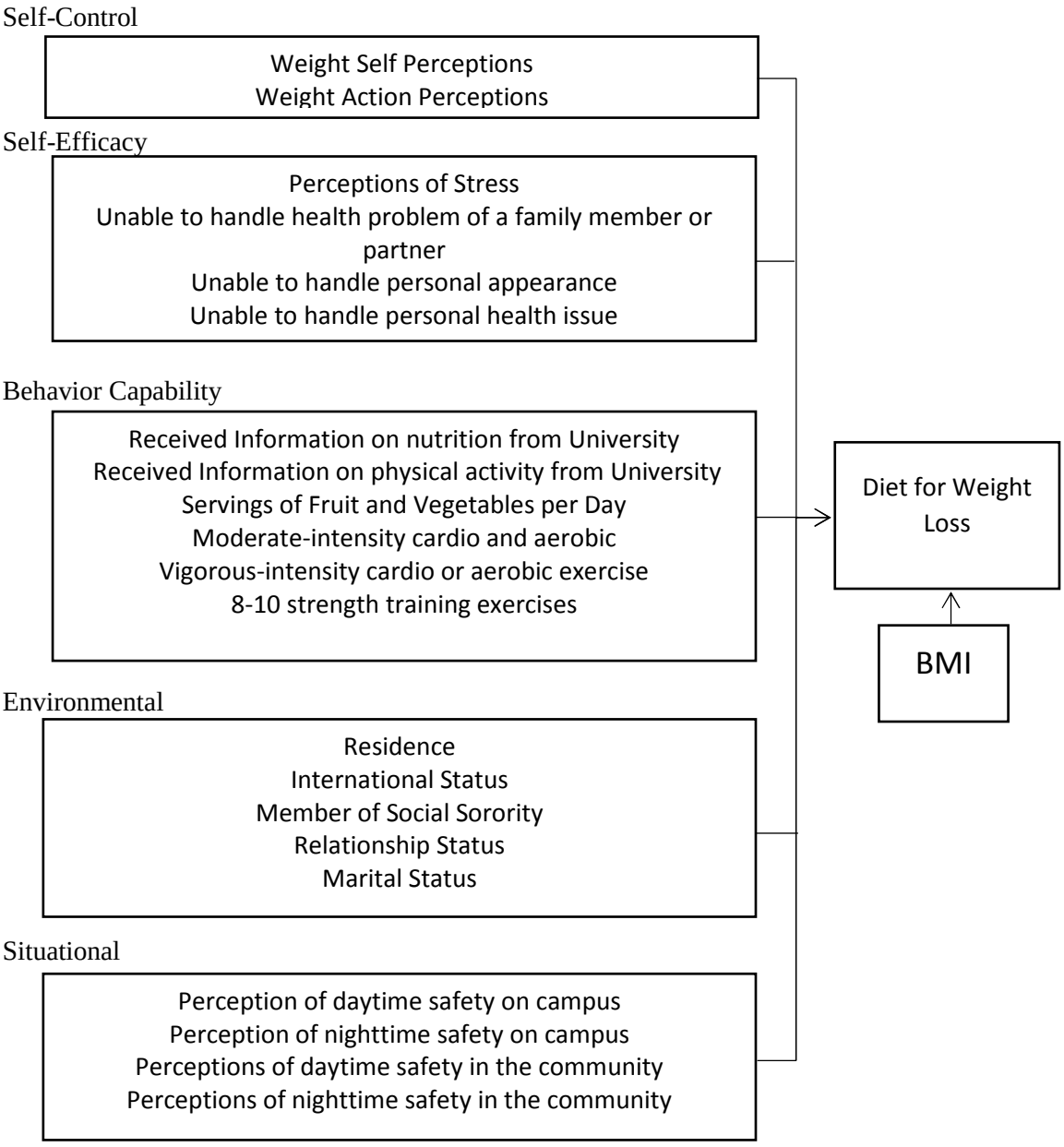

Figure 4. Conceptual Framework with Indication of Hypothesis Direction.

DATA ANALYSIS

Cross sectional data was used to determine the effect of environmental, socio-cultural and behavioral factors of weight loss through dieting among Black female college students. The data was computed using IBM SPSS Statistics version 19. Chi square testing was used due to the categorical character of the dependent variable 'within the last 30 days did you do any of the following: diet to lose weight (yes or no) across personal, behavioral, and environmental independent factors nominal and ordinal items including BMI. Fisher's exact was used for the independent variables which were dichotomous, resulting in a 2x2 table. Lastly, Contingency coefficient's, Cramer's V, and other measures of association as are appropriate, were used to assess the strength of associations.

CONCLUSION

To conclude, ACHA-NCHA data was chosen because the items within the instrument were an adequate fit through which weight-loss behavior amongst college aged Black women could be studied through SCT. With dieting for weight-loss as the dependent variable, the remaining variables were distributed across the personal, behavioral, and environmental constructs establishing the final conceptual framework. This framework was analyzed using chi square and Fisher'exact. The results of these tests are described in the next chapter.

CHAPTER V

RESULTS

Previously the design for this thesis was presented in order to provide a map to guide this study. The results of the analysis will be discussed next, beginning with descriptions of the variables including the sample size, percentages, and means when appropriate. Once the descriptive statistics have been reviewed, the findings of the chi-square and fisher's exact analysis will follow.

DESCRIPTIVE STATISTICS

Table 4 provides the sample size and percentage of all of the dependent and independent demographic variable in this thesis. To determine the factors that affected diet behaviors the item "In the Last 30 days: Diet to Lose Weight" was used as the dependent variable. Approximately 39.5% or 1655 of the respondents in the sample stated that they had been dieting for weight loss within the last 30 days.

Demographics

The subjects consisted of all African American females in the data set and was limited to those that responded to the question that they dieted to lose weight within the last 30 days. The mean age of the sample was 22.9 from a range of 49 with a mode of 19. The maximum age being 67 and the minimum 18. This sample featured a small majority (24.4 %) of students who were in their first year of school. The second and third year students were almost equal in their representation for this sample as 19.0 percent and 19.4

percent respectively. A similar situation occurred between the fourth year undergraduates at 15 percent of the sample and those seeking graduate or professional degrees who occupied 15.3 percent of the respondents. The vast majority (90.2%) of the sample were full-time students with only 9.1 percent acting as part-time students and 0.7 percent were classified as other. Most of the students (81.2%) were not transfer students.

The descriptive statistics of the independent variables will follow the formula previously outlined starting with BMI and then continually according to the SCT categories. I included the variable of actual BMI measurements to compare against the perceptions of students weight category. The majority (48.8%) of the sample were at a normal or desired weight. The number of students who were overweight or obese was almost equal to the number who were considered to be of the desired weight with approximately 49% of the sample. The largest grouping were those that were overweight at 24.3% of the sample. The subsequent divisions were within the increasing categories of obesity with 12.2% being Class I, 5.9% were Class II, and 5.2 percent were Class III. The last 3.6% or 149 students were found to be underweight.

The personal construct was analyzed first and those variables included self-control and self- efficacy. The self-control variables included weight self-perceptions and weight action perceptions. To begin, the majority (48.1%) of the sample self-described their weight as being about the right which was closely followed by the 35.4 percent who felt that they were slightly overweight. The remainder (10.1%) felt that they were very overweight leaving 0.4% who felt that they were very underweight. Whether these

students were trying to do anything about their weight was the next variable to be analyzed. Here over half (61.9%) of the students responded that they were trying to lose weight with a total of 2,614 respondents. Approximately 20 percent or 830 respondents wrote that they were trying to stay the same weight. Those that were not trying to do anything about their weight was a considerably smaller group of 12.6%. Finally the minority (5.8%) of the sample were trying to gain weight.

The next set of variables covered deal with the self-efficacy portion of the theory and include the stress items and those that ascertain whether one felt that they could handle various issues that they encountered. Stress will be covered by a single variable which had several items within it. The first item assessed whether the respondents ever felt that things were hopeless. A slight majority (33.8% n=1,418) indicated that they had never had that feeling. Eight hundred and eighty-four participants reported they had felt things were hopeless in the last 12 months followed closely by the 19.3% or 810 respondents that had those feelings in the last 2 weeks. A small percentage of 9.2% had felt that things were hopeless in the last 30 days. Next, feelings of being overwhelmed were felt by the majority (49.1%) of the respondents reporting having this feeling in the last 2 weeks. In the last 12 months and within the last 30 days were relatively close in their percent of responses, with 19.3% and 17.7% of the sample having had feelings of being overwhelmed respectively. Four point nine percent of the respondents indicated that they had never not felt overwhelmed in the last 12 months. About 48.0% noted that they had experienced feelings of exhaustion in the last 2 weeks. Within the last 30 days,

in the last 12 months and never had response rates of 16.8%, 16.4% and 12.7% respectively. Five point nine percent or 249 students reported not feeling exhausted in the last 12 months. When feelings of overwhelming anxiety where assessed 38% reported having never had these feelings. Eight percent of the rest of the respondents fell into the categories of feelings of overwhelming anxiety in the last 2 weeks or in the last year. Only 14.1% did not experience feeling overwhelming anxiety in the last 12 months and 11.8% admitted to having these feelings in the last 30 days.

Next, the variables of the behavioral construct are described. More than half (60.8%) of the students reported having received information on nutrition from their university. Similarly, more than half (62%) of the respondents stated that they had also received information on physical activity from the university that they attend. When examining eating behaviors, most of the students (67%) stated that they ate 1-2 servings of fruits and vegetables per day. While only 20.9 percent reported that they consumed 3-4 servings of fruits and vegetables per day. Eight point three percent did not report eating any fruits or vegetables per day and the final 158 respondents of the sample ate 5 or more servings of fruits and vegetables per day. The median amount of fruits and vegetables eaten were between 1 to 2 servings of vegetables a day.

The students actively participated in exercise behaviors, particularly in moderate exercise that occurred for at least 20 minutes in the last 7 days. The largest number of students (n=1405) reported that they had not participated in moderate exercise at all in the past week. The average amount of days per week spent exercising moderately was around

2 days with 14.4% having exercised for 1 day, 16.4% exercised about 2 days in the past week and 14. 8% exercised moderately for 3 days. Approximately 21.0% responded that they had exercised more than four days in the last week. The remaining 280 respondents reported working out for 4 days, 314 exercised for 5 days, 104 exercised for 6 days and a total of 176 students reported having exercised moderately every day for the last 7 days.

A majority of the respondents (53.0%) reported having not participated in vigorous exercise for at least 20 minutes in the past 7 days. Students averaged about one day of vigorous exercise overall, but the response that occurred the most often was that of not having worked out vigorously in the past 7 days. The percentage of students who participated in vigorous exercise decreased as the amount of days increased. Students that reported working out vigorously for one day consisted of a reported 14.0%, 2 days was 11.0%, 3 days was 9.0% of the sample. In keeping with this decreasing trend, only 4.5% worked out for 4 days in the last week, 4.0% did so for five days, and 1.9% exercised at this level for 6 days out of the past week. Slightly more than one percent reported having worked out vigorously for at least 20 minutes each day in the past 7 days every day. Lastly, 2,737 students (65.6%) reported 0 days of having done strength exercises in the last 7 days. Again, the occurrence of this workout decreased as the amount of days spent strength training increased. About 10.0% of students did strength training for either 1 or 2 days, with 416 students having done so for 1 day, and 397 for 2 days. For 3 days, 7.8% of the sample did strength training in the past 7 days, decreasing to 2.9% and 2.6% for 4 or 5 days. Participants who exercised through strength training their muscles for 6 days out

of last week amounted to 30 students or 0.7% of the sample. Thirty-six students or 0.9% strength trained every day for the past 7 days.

The environmental construct variables are divided by environment and situational categories. The majority of the students lived on campus (54.4%) in either campus residence halls, other campus housing, or in a sorority house. Most of the students (44.1%) lived in campus housing with only a portion (0.3%) residing in sorority housing. The next largest group (33.2%) lived in off campus housing. Twelve point three percent lived at home with their parent or their guardian.

Perceptions of safety was measured through four items. The first item found that the greatest number of students 3190 felt very safe while on campus during the day time with feelings of safety diminishing from there as 949 (24.2%) felt somewhat safe, 54 felt somewhat unsafe and 17 (0.4%) did not feel safe at all on campus during the day. Forty nine point five percent of the students only felt somewhat safe on campus at nighttime. Approximately twenty-six percent of the students felt very safe on campus at night and 19.2% felt unsafe on campus at night. About six percent of the students reported not feeling at all safe on campus at night. Safety perceptions of the surrounding community around campus found that for those who felt somewhat safe and very safe these were the feelings of the majority of the students at 43.9% and 49.9% respectively. A small number of students did not feel safe in the community around their campus during the day, with 6.5% feeling somewhat unsafe and 1.5% not feeling safe at all.

Finally, feelings of safety in the surrounding community at night were much more closely clustered around affirmation of safety in that area with the majority (41.9%) of respondents feeling somewhat safe and 17.0% feeling very safe. At night, about 27% of the students felt somewhat unsafe in the community around campus and 13.4% did not feel safe at all in the community around campus.

Social relations also play a part in the behaviors of individuals as such the subjects of membership in a sorority, relationship and marital status. The number of students that lived in sorority housing was 8.9% or 371 students. Approximately fifty-six percent of the students were not in a relationship, about 32% were in relationships but not living together, and 11.4% lived with their significant other. Lastly, 97.9% of the students in this sample were not married while the other 2.1% was made up of 127 students who were currently married, 31 who were separated, 56 that were divorced and 92 who classified their status as other.

STATISTICAL ANALYSIS

The results of the chi-square statistical analysis will start with the general health item of BMI and then follow the same SCT model of personal, behavioral, and environmental categories. Starting with BMI, the relationship between dieting for weight loss and BMI was statistically significant (χ^2=487.42, p<0.001). The relationship between BMI and dieting for weight loss was a moderately weak association with a Cramer's V of 0.34. Based on this finding I reject the null hypothesis and tentatively accept the research hypothesis that BMI is related to dieting for weight loss.

Moving on to the personal construct, the relationship between dieting for weight loss and students' self-described weight perceptions was statistically significance (χ^2=583.55, p<0.001), although the association of the relationship was moderately weak with a Cramer's V of 0.37. I reject the null hypothesis and tentatively accept the research hypothesis that there is a relationship between dieting for weight loss and students weight perceptions. Actions taken towards weight was also statistically significant (χ^2=1130.99, p<0.01). Again, I reject the null hypothesis and tentatively accept the research hypothesis that there is a relationship between actions taken towards one's weight and dieting for weight loss with a moderately strong relationship of 0.52. Moving on to perceptions of stress, some of the items were related while others were not. Having felt overwhelmed in the last 30 days had a statistically significant (χ^2=12.70, p<0.01) very weak (Cramer's V=0.08) relationship to dieting for weight loss. I reject the null hypothesis and tentatively accept the research hypothesis that there is a relationship between feeling overwhelmed and dieting for weight loss. A weak (Cramer's V=0.05) relationship between experiencing exhaustion not from physical activity and dieting for weight loss was statistically significant (χ^2=9.77, p<0.05). I reject the null hypothesis and tentatively accept the research hypothesis that there is a relationship between exhaustion not from physical activity and dieting for weight loss. Feeling overwhelmed by anxiety also resulted in a significant relationship (χ^2=26.04, p<0.001) with a weak association of 0.08. The null hypothesis was rejected that there is no relationship between these two factors

and I tentatively accept the research hypothesis that there is a relationship between feelings of overwhelmed anxiety and dieting for weight loss.

Fisher's exact and Phi was used to determine whether there was a relationship between stress analysis independent variables and dieting for weight loss and the strength of this relationship if applicable. Table 6 provides the Fisher's Exact findings illustrating that there were statistically significant relationships between all of the items under whether in the last 12 months it was or was not difficult to handle situations that occurred and dieting for weight loss. I reject the null hypothesis and tentatively accept the research hypothesis that there is an association between students finding it too difficult to handle the health problems of family member or partner, personal appearance and personal health issue and engaging in dieting for weight loss. The strength of these relationships were all weak, finding it very difficult to handle health problem of a family member or partner being the weakest (Phi=0.06), followed by personal health issue (Phi=0.11), and personal appearance (0.20).

The results for the variables listed under the behavioral construct include various items on the frequency of physical behaviors. I reject the null hypothesis and tentatively accept the research hypothesis that there is a statistically significant relationship (χ^2=117.33, $p<0.01$) between the daily intake amount of fruits and vegetables and dieting for weight loss. There was a weak (Cramer's V=0.16) relationship between these two variables. As for students' level of physical exercise, there was a significant relationship at the (χ^2=132.90, $p<0.01$) with a weak association (Cramer's V=0.17) between the

amount of moderate exercise done in the past 7 days for at least 30 minutes and dieting for weight loss. I reject the null hypothesis and tentatively accept the research hypothesis that students who report higher levels of daily exercise will not engage in dieting for weight loss. There was a weak (Cramer's V=0.175) association and a statistically significant relationship (χ^2=127.43, p<0.01) between exercising vigorously for at least 20 minutes in the past 7 days and dieting for weight loss, I accept the null hypothesis and reject the research hypothesis since the direction of the relationship was opposite of my hypothesis.. Lastly, there was a statistically significant (χ^2=128.306, p<.01) with a strong (Cramer's V=.176) association between students who exercised to strengthen muscles 8-12 repetitions in the past 7 days and dieting for weight loss. I accept the null hypothesis.

The results of the analysis of the environmental construct under the social category had a statistically significant (χ^2=22.68, p<0.001) but weak (Cramer's V=0.08) association between residence and dieting for weight loss leading to a rejection of the null hypothesis and a tentative acceptance of the research hypothesis that a relationship did exist between the two variables. Membership in a sorority and dieting for weight loss had a statistically significant (χ^2=3.93 p<0.05) weak (Cramer's V= 0.03) relationship. I reject the null hypothesis that there is no relationship between membership in a sorority and tentatively accept the research hypothesis. The variable of relationship status to dieting for weight loss was statistically significant (χ^2=9.03 p<0.05) although this relationship was weak (Cramer's V=0.02). I reject the null hypothesis and tentatively accept the

research hypothesis that there is a relationship between relationship status and dieting for weight loss.

CONCLUSION

To conclude, the descriptive statistics of the independent variables for this study provide an illustration the distribution of students across the answer options for each variable. The chi square and fisher's exact tests suggested that there was a relationship between several of the independent variables and dieting for weight-loss. To delve further into these findings this thesis will close with a discussion of the intricacies of which independent variables were and were not related to dieting for weight-loss and why.

CHAPTER VI

DISCUSSION

My thesis developed from a desire to better understand weight-loss behaviors amongst African American women because of their status as being the most overweight and obese population. I wanted to understand what factors were active in relation to weight-loss behaviors. First, I had to narrow the dependent variable to focus specifically on the weight-loss behavior of dieting. Then I chose the theoretical framework of SCT because this was one of the few medical models that included multiple factors where I could study the complexity of the experience of weight-loss. Next, I needed to locate a database that included items in their survey on weight-loss and health behaviors while also including items which could be fitted into the SCT framework. I located ACHA-NCHA II, and I requested the use of the data. Upon receipt of the data, I performed the statistical analysis, wrote up the results and moved forward to creating the conclusion of my thesis. In this final section of my thesis I will discuss the results of my analysis to provide a detailed explanation and description of the findings according to the SCT constructs. Then I will list the limitations and recommendations for future research.

Starting with the personal construct, for the self-perception of weight, among those who were not dieting to lose weight the largest group felt that they were about the right weight. Two hundred and thirty-three students were not dieting but also felt they were underweight. This is a surprising outcome as research has consistently found that

African American women have traditionally perceived themselves to be of the weight that they should be (Beauboeuf-Lafontant 2003, Capers et al 2011, Eugeni et al 2011, Hendley et al 2011, Rowe 2010). On the other end of the spectrum, 651 of the respondents felt that they were slightly overweight but were also not dieting for weight-loss. This result suggests that although these individuals believed that they weighed more than what they should they still were not dieting for weight-loss. Perhaps though these women were dieting but were doing so for other reasons then weight-loss such as overall health. As could be expected, the largest amount of students who were dieting for weight-loss felt that they were slightly overweight. Yet, 21 students who perceived themselves to be slightly underweight and very underweight were also dieting for weight-loss. This is indicative of the existence of a desire to diet with the intention to lose weight even though one perceives themselves to already weight less than what they should. Lastly, the majority of the women felt that they were their desired weight and most of those women were not dieting for weight-loss. It would be beneficial to compare weight self- perceptions against actual weight classifications. The activity level and diet of those who felt they were their desired weight would also provide information that could be utilized towards the creation of a health program that would involve forms of exercise and diet that have been found to be used by those who find themselves to be of their desired weight.

Although 47.7% of the students were not dieting for weight-loss they were participating in the action of trying to lose weight. On the other hand, the largest amount

of students who were trying to lose weight were using the action of dieting to accomplish their weight loss goal. There were students though, who indicated that they were trying to stay the same weight but were still dieting for weight-loss. Similarly, there were 18 students who were not trying to do anything about their weight but were also dieting to lose weight. These results are contradictory since if there is no desire to change their weight or more specifically lose weight there should be no need to diet to lose weight. The correlation exists though and calls for explanation. Those women who were trying to gain weight also presented an interesting relationship, as two of the respondents who were dieting to lose weight marked that they were trying to gain weight. Two hundred and forty of the women who were not dieting for weight-loss were trying to gain weight as well. There were more African American women from this sample who were not dieting for weight loss but were trying to gain weight than those who were dieting for weight-loss and trying to stay the weight or not doing anything about their weight combined. Overall, most of the respondents were trying to lose weight.

The stress factors of feeling overwhelmed and exhausted also yielded notable results. The number of students who were and were not dieting for weight-loss was almost the same across having experienced exhaustion. Although there was a relationship between dieting for weight-loss and feelings of being overwhelmed, in all of the categories, more women who were not dieting reported feeling overwhelmed then those who were dieting. As for handling issues of trauma, for both those who were and were not dieting for weight-loss, fewer students reported finding it too difficult to handle the

health problem of a family member or partner, personal health issue, and personal appearance. For the trauma variables in the personal construct, the largest number of students were not dieting for weight-loss and felt that they could handle the health factors of those around them.

Behaviorally there were more respondents that reported eating 1-2 servings of fruits and vegetables who were not dieting for weight-loss then those who were. But as the amount of servings increased there were consistently more women who were dieting for weight-loss which participated in this this behavior. The lowest serving of fruits and vegetables was zero, but 89 respondents were dieting to lose weight but also reported consuming zero servings of fruits and vegetables in the last 7 days. Perhaps, dieting for these women included other adjustments outside of the plant-based foods that they were consuming.

Physical activity behaviors were all related to dieting for weight-loss. The women who were dieting for weight loss, more women indicated that they did not exercise at all during the last week than any other frequency amount. There were more women dieting to lose weight that exercised for 5 days out of the past 7 then those who exercised for 4 days. A similar occurrence was found to exist amongst those who were not dieting for weight loss. The findings of the variable participating in vigorous exercise for at least 20 minutes for both those who were and were not dieting for weight-loss, 0 days was reported most often. In this thesis though, after having exercised at this level for more than 3 days, there were more respondents who were dieting for weight-loss for each

increase in daily participation. More women who were dieting for weight-loss participated in higher frequencies of vigorous exercise over those not dieting for weight-loss in opposition to the results that occurred for moderate exercise. Lastly, for exercise to strengthen muscles, more women who were dieting for weight loss reported this action as opposed to those who were not dieting for weight-loss. The indication of these findings are that dieting for weight-loss amongst African American college or university women has a complicated relationship with behavior capability. At times some who are dieting exercise, sometimes not. Alternatively, women who were not dieting for weight loss also consistently reported participating in moderate exercise for at least 30 minutes as the frequency of days worked out at this level increased. As these individuals are not dieting for weight loss the higher frequency of exercising may indicate that these women may have not dieted because they exercised more often or that they exercised more in lieu of dieting.

Lastly in the environmental construct variables, the residence variable had proportionately more respondents that lived off campus but not with their parents or guardians who were dieting for weight-loss than those who were not dieting for weight loss. Residence and relationship status are similar because where one physically resides corresponds with who one spends time with. This becomes apparent with the results that percentage wise there were more women who were dieting for weight-loss in relationships who did live with their partners then those who were not dieting for weight-loss. It was very surprising that none of the situational environmental variables were

related to dieting for weight-loss. Yet, this result may be easily understandable because the situational items focused specifically on feelings of safety on and around the campus that the students attended. Even though a great portion of the students did reside on campus many of the students lived off campus and not with their parents.

LIMITATIONS

There were several limitations to my thesis. First, using chi-square analysis does not let one determine causation, only the existence and strength of a relationship. Additionally chi-square is sensitive to sample size. Another limitation would be the items available for analysis. Since I employed the use of a previously collected dataset, it was impossible to ensure that all of the areas that should have been covered such as perceptions of environment away from the attended institution and questions that have face validity for stress variables. Primary data collection would increase the ability to assess all of the constructs of SCT equally. Another limitation was that the social environment items used within this thesis were limited to those that only addressed romantic relationship status. It would be beneficial to include relationships other than those that are romantic such a platonic friendships, work, and family. I believe that there is a more complex relationship between weight-loss behaviors and social relationships then what could be studied in my thesis given the available survey items. Lastly, economic status was not a factor included in this analysis. Current, previous, parents, and partners employment status along with the fact that the participants were all enrolled in colleges or universities, could all have some effect on the other areas studied within this

thesis. Again, though, due to time constraints economic status was not included in this thesis.

FUTURE RECOMMENDATIONS

There are many areas which these results indicate are in need of further research. First, from the personal construct, more research is needed to understand the finding of underweight African American women still participating in dieting for weight loss to determine if there are possible disordered eating habits amongst African American college and university aged women. Research should also be conducted on whether African American women may have or may not have been participating in other ways to lose weight outside of dieting. This raises the question of what other forms of weight-loss are being used outside of dieting? My future research will assess the use of dieting pills and exercise in opposition to dieting

As per behavior habits, a weight loss program that used different exercise frequencies to assess if there was a significant relationship between the likelihood of working out for different amounts of days may prove beneficial in explaining this result. From here we need to explore the possibility of programs public- health that address this. I would like to perform a causal statistical analysis to determine whether exercise has a causal influence on the action of dieting for weight-loss. It appears that there are several nuances that are a part of this interaction between these two different actions where wanting to achieve weight-loss may not necessarily include the need to eat more fruits and vegetables or participate in exercise.

Finally, I would recommend that further research be conducted using several different environmental dependent variables to explore further how this construct may relate to weight-loss behaviors. Such as with the item relationship status. Since this item includes location as a part of the variable, more research should be conducted to evaluate the effect being in a relationship and living with the partner against those that did not. A greater range of locations must be examined to truly see if there is a relationship between dieting for weight-loss and situational environmental factors.

CONCLUSION

My thesis was an exercise in determining the factors that would be related with dieting for weight-loss. The results of my thesis provided data that for weight loss behaviors examined through SCT, there are several statistically significant relationships to be found in the personal and behavioral constructs. However, the items chosen to represent the environmental construct had few variables which were found to be related to dieting for weight-loss. The traidactic reciprocal determination principle of SCT states that it is the interaction between the personal, behavioral and environmental constructs that results in the overall participation in particular behaviors. In this case, the African American college or university women's self-control (weight-perceptions, actions), self-efficacy (ability to deal with stress), behavioral capability (eating habits, exercise), physical (residence), and social (relationship status) interacted when one is dieting for weight-loss. Overall, SCT has served as an excellent theoretical framework to understand and study weight-loss behaviors amongst African American college aged women.

REFERENCES

Figure 1. Triadactic Reciprocal Determinism (http://130.18.140.19/persuasion/eff.html)

Figure 1.2 Application of Social Cognitive Theory Towards Self-Regulation and Self Efficacy for Exercise, Eating and BMI Change by Amnesi and Gojala 2010. (http://www.readcube.com/articles/10.1186/1751-0759-4-10)

Ajibade, Phoebe B. 2011. "Physical Activity Patterns by Campus Housing Status among African American Female College Students." Journal of Black Studies 42(4):548.

Anderson, Darrin W. and Joseph R. Libonati. 2012. "Physical Activity and Body Mass Perception." *Clinical Nursing Research* 21(3):252-267.

Annesi, James J. and Ann C. Whitaker 2010. "Changes in Theory-Based Psychological Factors Predict Weight Loss in Women with Class III Obesity Initiating Supported Exercise." *Journal of Obesity* 17:168-175.

Annesi, James J., Jennifer L. Unruh, C. N. Marti, Srinivasa Gorjala, and Gisele Tennant. 2011. "Effects of the Coach Approach Intervention on Adherence to Exercise in Obese Women: Assessing Mediation of Social Cognitive Theory Factors." *Research Quarterly for Exercise and Sport* 82(1):99-108

Agarwal, S. K., M. M. Slining, and Y. Yaemsiri. 2011. "Perceived Weight Status, Overweight Diagnosis, and Weight Control among US Adults: The NHANES 2003-2008 Study." *International Journal of Obesity* 35.8:1063-1079.

Bandura, Albert. 1989. "Social Cognitive Theory." *Annuals of Child Development: Six Theories of Child Development* 6:1-60.

Bandura, Albert. 2001. “Social Cognitive Theory: An Agentic Perspective.” *Annual Review of Psychology* 52:1-26.

Bandura, Albert. 2002. “Social Cognitive Theory in Cultural Context.” *Applied Psychology: An International Review*. 51(2):269-290.

Bandura, Albert. 2004. **“**Health Promotion by Social Cognitive Means.” *Health Education Behavior* 31:143-164.

Beauboeuf-Lafontant, Tamara. 2003. “Strong and Large Black Women?: Exploring Relationships between Deviant Womanhood and Weight.*”* *Gender and Society* 17:111-121.

Blair, Lorrie and Maya Shalmon, 2005. “Cosmetic Surgery and the Cultural Construction of Beauty.” *Art Education* 7: 14-18.

Botta, Renee A. 2000. “The Mirror Of Television: A Comparison of Black and White Adolescents’’ Body Image.” *Journal of Communication* 50(3): 144-159.

Brah, Avtar and Ann Phoenix. 2004. “Ain’t I A Woman? Revisiting Intersectionality.” *Journal of International Women’s Studies* 5(3):75-86.

Bross, Andrea L., Kimberly A. James, Leadelle Phelps. 2001. “Body Dissatisfaction, Drive for Thinness, and Self-Esteem in African American College Females.” *Psychology of the Schools* 38(6):491-496.

Brown-Glaude, Winnifred. 2011. *Higglers in Kingston: Women’s Informal Work in Jamaica*. Nashville, TN: Vanderbilt University Press.

Caldwell, Paulette M. 2003. “A Hair Piece: Perspective on the Intersection of Race and Gender.” Pp. 309-316 in *Critical Race Feminism: A Reader Second Edition*, edited by A. K. Wing. New York, NY & London: New York University Press.

Capers, Cynthia F. Kristin Baughman and Everett Logue. 2011. “Behaviors and Characteristics of African American and European American Females that Impact Weight Management.” *Journal of Nursing Scholarship* 43(2):133-144.

Casagrande, Sarah S., Melicia C. Whitt-Glover, Kristie J. Lancaster, Angela M Odoms-Young, and Tiffany L. Gary. 2009. “Built Environment and Health Behaviors Among African Americans: A Systematic Review.” *American Journal of Preventative Medicine* 36(2):174-181.

Centers for Disease Control and Prevention 2013 “Overweight and Obesity.” Website: http://www.cdc.gov/obesity/adult/defining.html. Retrieved August 23, 2013.

Cozier, Yvette C., Lauren A. Wise, Julie R. Palmer, and Lynn Rosenberg. 2009. “Perceived Racism in Relation to Weight Change in the Black Women’s Health Study.” *Annuals of Epidemiology* 19(6):379-387.

Davis, Nancy L. Pauline R. Clance, and Andra T. Gailis. 1999. “Treatment Approaches For Obese and Overweight African American Women: A Consideration of Cultural Dimensions.” *Psychotherapy* 36(1):27-35.

Duncan, Dustin T., Kathleen Y. Wolin, Melissa Scharoun-Lee, Eric L. Ding, Erica T. Warner, and Gary G. Bennett. 2011. “Does Perception Equal Reality? Weight Misperception in Relation to Weight Related Attitudes and Behaviors among

Overweight and Obese US Adults." *International Journal of Behavioral Nutrition* 8:20-26.

Etcoff, Nancy. 1999. *Survival of the Prettiest: The Science of Beauty*. Double Day Publishing, New York, NY.

Eugeni, Michelle L., Meggin Baxter, Scherezade K. Mama, and Rebecca E. Lee. 2011. "Disconnections of African American Public Housing Residents: Connections to Physical Activity, Dietary Habits and Obesity." *American Journal of Community Psychology* 47:264-276.

Falconer, Jameca W. and Helen A. Neville. 2000. "African American College Women's Body-Image: An Examination of Body Mass, African Self-Consciousness, and Skin Color Satisfaction." *Psychology of Women Quarterly*: 24:236-243

Fitzgibbon, M. L., L. M. Tussing-Humphreys, J. S. Porter, I. K. Martin, A. Odoms Young and L.K. Sharp. 2012. "Weight Loss and African-American Women: A Systematic Review of the Behavioral Weight Loss Intervention Literature." *Obesity Reviews*. 193-213.

Gilbert, Stefanie C., Stacey Crump, Serge Madhere, and William Schutz. 2009. "Internalization of the Thin Ideal as a Predictor of Body Dissatisfaction and Disordered Eating In African, African American, and Afro-Caribbean Female College Students." *Journal of College Student Psychotherapy* 23:196-21.

Gopaldas, Ahir. 2013. "Intersectionality 101." *Journal of Public Policy and Marketing* 32:1-6.

Gordan, Maya K. 2008. “Media Contributions to African American Girls Focus on Beauty and Appearance: Exploring the consequences of Sexual Objectification.” *Psychology of Women Quarterly* 32:245-256.

Greeno, Catherine G. and Wing, Rena R. 1994. “Stress-Induced Eating.” *Psychology Bulletin* 115:444-464.

Grotta and Zied 2010

Groesz, Lisa M., Shannon McCoy, Jenna Carl, Laura Saslow, Judith Stewart, Nancy Adler, Barbara Laraia, and Elissa Epel. “What is Eating You? Stress and the Drive to Eat.” *Appetite* 58: 717-721.

Guy-Sheftall, Beverly. 2002. “The Body Politic: Black Female Sexuality and the Nineteenth Century Euro-American Imagination.” Pp. 13-31 in *Skin Deep Spirit Strong: The Black Female Body in American Culture*, edited by K. Wallace Sanders. Ann Arbor, MI: The University Of Michigan Press.

Hinton-Johnson, KaaVonia M. 2003. “Expanding the Power of Literature: African American Literary Theory and Young Adult Literature.” PhD dissertation, Department of Educational Theory and Practice, Ohio State University.

Hendley, Yolanda., Liping Zhao, Dorothy L. Coverson, Rebecca Din-Dzietham, Allana Morris, Arshed A. Quyyumi, Gary H. Gibbons, and Viola Vaccarino. 2011. “Differences in Weight Perception among Blacks and Whites.” *Journal of Women’s Health* 20(12):1805-1811.

Ince, Mustafa L. 2008. “Use of a Social cognitive Theory-Based Physical-Activity Intervention on Health-Promoting Behaviors of University Students.” *Perceptual and Motor Skills* 107:833-836.

James D. C. S. (2013) “Weight Loss Strategies Used by African American women: Possible Implications for Tailored Messages.” *Journal of Human Nutrition and Dietetics* 26:71–77 doi:10.1111/j.1365277X.2012.01268.x.

Jefferson, Deana L and Stake, Jayne E. 2009. “Appearance Self-Attitudes of African American and European American Women: Media Comparisons and Internalization of Beauty Ideals,” *Psychology of Women Quarterly* 33. Pp. 396 409.

Kreuter, Matthew W. and Lorna T. Haughton. 2006. “Integrating Culture Into Health Information for African American Women.” *The American Behavioral Scientist* 49(6):794-811.

Laz, Tabassum H. and Abbey B. Berenson. 2011. “Association of Web-Based Weight Loss Information Use with Weight Reduction Behaviors In Adolescent Women.” *Journal of Adolescent Health* 49:446-448.

Lee, R. E., S. K. Mama, A. V. Medina, A. Ho, and H. J. Adamus. 2012. “Neighborhood Factors Influence Physical Activity Among African American and Hispanic or Latina Women.” *Health and Place* 18: 63-70.

Leivadi, Stella. 1993. “Physical Activity Participation: A Comparison of the Predictive Utility of Social Cognitive Theory and the Theory of Personal Investment.” PhD dissertation, Department of Psychology, University of Connecticut.

Lynch, Elizabeth B. Shane Holmes, Kathryn Keim and Sylvia A, Koneman. 2012. “Concepts of Healthful Food among Low-Income African American Women.” *Journal of Nutrition Education and Behavior* 44(2):154-159.

Martin, Jeffery M. and Nate McCaughtry. 2008. “Using Social Cognitive Theory to Predict Physical Activity in Inner-City African American School Children.” *Journal of Sport and Exercise Psychology* 30: 378-391.

Martin, Jeffrey J., Nate McCaughtry, Sara Flory, Anne Murphy, and Kimberlydawn Wisdom. 2011. “Using Social Cognitive Theory to Predict Physical Activity and Fitness in Underserved Middle School Children.” *Research Quarterly for Exercise and Sport* 82(2) 247-255.

Masheb, Robin and Marney A. White. 2012. “Bulimia Nervosa in Overweight and Normal Weight Women.” *Comprehensive Psychiatry* 53:181-186.

Ma. Sai. Kevin D. Frick, Sara Bleich, and Lisa Dubay. 2012. “Racial Disparities in Medical Expenditures within Body Weight Categories.” *Journal of General Internal Medicine* 27(7):780-786.

Mastin, Teresa, Shelly Campo, and Natoshia M Askelson. 2012. “African American Women and Weight Loss: Disregarding Environmental Challenges.” *Journal of Transcultural Nursing* 23(1):38-45.

Magoc, Dejan, Joe Tomaka and Amber Bridges-Arzaga. 2011. “Using the Web to Increase Physical Activity in College Students.” *American Journal of Health Behaviors* 35(2):142-154.

Mishner, Isabelle H. S., Hein T. Van Schie, Daniel H. J. Wigboldus, Rick B. Van Baaren, and Rutger C. M. E. Engels. 2013. “Thinking Big: The Effect of Sexually Objectifying Music Videos on Bodily Self-Perception in Young Women.” *Body Image* 10:26-34.

Mehta, Purvi. Manoj Sharma, and Amy Bernard. 2010. “Social Cognitive Theory as a Predictor of Dietary Behavior and Leisure Time Physical Activity Behavior in Middle-Aged Asian Indian Women Residing in United States.” *International Quarterly of Community Health Education* 30(3):257-269.

Netz, Yael and Shalmith Raviv. 2004. Age Differences in Motivational Orientation toward Physical Activity: An Application of Social-Cognitive Theory.” *The Journal of Psychology* 138(1):35-48.

Patton, Tracey Owens. 2006. “Hey Girl, Am I More Than My Hair?: African American Women and Their Struggles With Beauty, Body Image, and Hair.” *NWSA Journal* 18(2).

Phoenix, Anna and Pamela Pattynama. 2006. Intersectionality an Editorial in *European Journal of Women’s Studies*. 13(3):187-191.

Redding, Colleen A., Joseph S. Rossi, Susan R. Rossi, Wayne F. Velicer, and James O. Prochaska. 2000. “Health Behavior Models.” *The Internal Electronic Journal of Health Education* 3:180-193.

Rogers, Laura Q., Prabodh Shah, Gary Dunnington, Amanda Greive, Anu Shanmagham, Beth Dawson, and Kerry S. Courneya. 2005. “Social Cognitive Theory and Physical Activity during Breast Cancer Treatment.” Oncology Nursing Forum 32(4):807-815.

Rowe, Jill. 2010. “Voice from the Inside: African American Women’s Perspectives on Healthy Lifestyles.” *Health Education and Behavior* 37:789-797.

Russell, Kathy. Wilson, Midge and Ronald Hall. 1992. *The Color Complex: The Politics of Skin Color among African Americans*. Doubleday Publishing. New York, New York.

Ryan, Michael P. 2005. “Physical Activity Levels in Young Adult Hispanics and Whites: Social Cognitive Theory Determinants.” *Psychology and Health* 20(6):709-727.

Shelton, Marla L. 1997 “Can’t Touch This! Representations of the African American Female Body in Urban Rap Videos.” *Popular Music & Society* 21(3).

Taymoori, P. R. E. Rhodes and T. R. Berry. 2010. “Application of a Social Cognitive Model in Explaining Physical Activity in Iranian Female Adolescents.” *Health Education Research* 25(2):257-267.

University of North Texas Library Catalog: Accessed February 25, 2013.

Wallace, Lorraine S. Janet Buckworth, Timothy E. Kirby, and W. Michael Sherman. 2000. “Characteristics of Exercise Behavior among College Students: Application of Social Cognitive Theory to Predicting Stage of Change.” *Preventive Medicine* 31:494-505.

Watts-Jones, Danielle. 1990. “Toward a Stress Scale for African American Women.” *Psychology of Women Quarterly* 14(2):271-275.

Weerts, Sally E. and Alma Amoran. 2011. “Pass the Fruits and Vegetables! A Community University-Industry Partnership Promotes Weight Loss in African American Women.” *Health Promotion Practice* 12:252-260.

Williams, Amanda L. and Michael J. Merten. 2013. “Romantic Relationships among Women Experiencing Obesity: Self-Perception and Weight as Barriers to Intimacy.” *Family and Consumer Sciences Research Journal* 41(3):284-298.

Wolf, Virgina. 1992. *The Beauty Myth.* Doubleday. New York, NY.

White, Siobhan M. Wojcicki, Thomas R. and Edward McAuley. 2012. “Social Cognitive Influence on Physical Activity Behavior in Middle-Aged and Older Adults.” *The Journal of Gerontology* 67(1):18-26.

Yuval-Davis, Nira. 2006. “Intersectionality and Feminist Politics.” *European Journal of Women’s Studies* 13(3):193-209.

Appendix A

Tables

A. Table 1 Hypotheses for BMI and Personal Variables within Social Cognitive Theory

SCT Construct	Sub- area	Hypothesis
General		
	BMI	H1: BMI is related with dieting for weight-loss.
Personal		
	Self-control	H2: Weight perception is associated with dieting for weight loss.
		H3: Actions towards their weight is related with dieting for weight loss.
	Self-efficacy	H4: Students perceptions of their stress levels is related with engaging in dieting for weight loss.

B. Table 2 Hypotheses for Behavior Variables within Social Cognitive Theory

SCT Construct	Sub-area	Hypothesis
Behavior	Behavioral Capability	H5: Having received College or University provided information on nutrition is related to dieting for weight loss.
		H6: Not having received College or University provided information on physical activity is associated with dieting for weight loss.
		H7: Dieting for weight loss is related to daily intake amount of vegetable and fruit.
		H8: There is an association between the daily count of doing moderate-intensity cardio or aerobic exercise and dieting for weight loss.
		H9: There is a relationship between the daily counts of doing vigorous-intensity cardio or aerobic exercises and dieting for weight loss.
		H10: There is an association between the daily counts of doing strength training and dieting for weight loss.

Table 3 Hypotheses for Environment Variables within Social Cognitive Theory

SCT Construct	Sub-Area	Hypothesis
Environment	*Environmental*	H11: Residency is related to dieting for weight loss.
	Social	H12: Involvement in a social sorority is associated with dieting for weight loss.
		H13: Relationship status is associated with dieting for weight loss.
		H14: Marital status is related to dieting for weight loss.
	Situational	H15: Students perceptions of safety on campus during the daytime is associated with dieting for weight loss.
		H16: Students perceptions of safety on campus during the nighttime is associated with dieting for weight loss.
		H17: Students perceptions of safety in the community or surrounding areas of the campus during the day is associated with dieting for weight loss.
		H18: Students perceptions of safety in the community or surrounding areas of the campus during the night is associated with engagement of dieting for weight loss.

Table 4 Descriptive Characteristics of the Demographic Variables

Variable	n	%
Sample Size	4192	
Dependent Variable		
Dieting for Weight-loss (yes)	1655	39.5
Independent Variables		
BMI		
Underweight	149	3.6
Desired Weight	2011	48.8
Overweight	1004	24.3
Class I Obesity	503	12.2
Class II Obesity	243	5.9
Class III Obesity	215	5.2
Age	4192	
University Classification		
1st year undergraduate	1021	24.4
2nd year undergraduate	804	19.2
3rd year undergraduate	821	19.7
4th year undergraduate	633	15.2
5th year undergraduate	208	5.0
Graduate/Professional	647	15.5
Not seeking a Degree	12	0.3
Other	32	0.8

Table 5 Descriptive Statistics for the Personal Construct Variables

	n	%
Personal Construct		
Weight Self Perception		
Underweight	19	0.5
Slightly Underweight	252	6.0
About the Right Weight	2029	48.1
Slightly Overweight	1494	35.4
Very Overweight	427	10.1
Weight Action Perception		
Not trying to do anything	532	12.6
Stay the Same Weight	830	19.7
Lose Weight	2614	61.9
Gain Weight	245	5.8
Perceptions of Stress		
Hopeless		
No Never	1418	33.8
No, Not in Last 12 months	694	16.6
Yes, in the last 2 weeks	810	19.3
Yes, in the last 30 days	384	9.2
Yes, in the last 12 months	884	21.1
Overwhelmed		
No Never	370	8.8
No, Not in Last 12 months	204	4.9
Yes, in the last 2 weeks	2061	49.1
Yes, in the last 30 days	748	17.8
Yes, in the last 12 months	818	19.5
Exhausted		
No, Never	539	12.8
No, Not in Last 12 months	249	5.9
Yes, in the last 2 weeks	1999	47.7
Yes, in the last 30 days	696	16.6
Yes, in the last 12 months	712	17.0
Anxiety		
No, Never	1596	38.0
No, Not in last 12 months	590	14.1
Yes, in the last 2 weeks	752	18.0
Yes, in the last 30 days	492	11.8
Yes, in the last 12 months	758	18.1
Handle Trauma of		
Family member or partner (No)	3321	79.3
Personal Appearance (No)	3318	76.0
Personal Health Issue (No)	3319	79.2

Table 6 Descriptive Characteristics for the Behavior Construct Variables

	n	%
Behavior Construct		
Received Information from University		
Nutrition (No)	1640	38.7
Physical (No)	1594	38.0
Serving of Fruits and Vegetables		
0 Servings per Day	351	8.3
1-2 Servings per Day	2826	67
3-4 Servings per Day	882	20.9
5 or more servings	158	3.7
Physical Activity in Past 7 Days		
0 days	1405	33.5
1 days	602	14.4
2 days	689	16.4
3 days	622	14.8
4 days	280	6.7
5 days	314	7.5
6 days	104	2.5
7 days	176	4.2
Moderate-Intensity 30 Min		
0 days	1405	33.5
1 days	602	14.4
2 days	689	16.4
3 days	622	14.8
4 days	280	6.7
5 days	314	7.5
6 days	104	2.5
7 days	176	4.2
Vigorous-Intensity 20 Minutes		
0 days	2250	53.9
1 days	586	14
2 days	486	11.6
3 days	375	9.0
4 days	187	4.5
5 days	166	4.0
6 days	78	1.9
7 days	48	1.1
Strength Training		
0 days	2732	65.6
1 days	416	10.0
2 days	397	9.5
3 days	326	7.8
4 days	120	2.9
5 days	108	2.6
6 days	30	0.7
7 days	36	0.9

Table 7 Descriptive Statistics for the Environment Construct Variables

	n	%
Environment Construct		
Residence		
Living on Campus	2113	54.4
Living Off Campus	479	12.3
Living With Parents	1290	33.2
Member of Social Sorority (No)	3819	90.2
Relationship Status		
Not in a Relationship	2372	56.2
In Relationship Not living Together	1369	32.4
In Relationship Living Together	478	11.3
Marital Status (Single)	4040	97.9
Safety		
On Campus Daytime		
Not Safe at All	17	0.4
Somewhat Unsafe	54	1.3
Somewhat Safe	949	22.5
Very Safe	3190	75.8
On Campus Nighttime		
Not Safe at All	231	5.5
Somewhat Unsafe	810	19.2
Somewhat Safe	2080	49.5
Very Safe	1086	25.8
In Community Daytime		
Not Safe at All	62	1.5
Somewhat Unsafe	273	6.5
Somewhat Safe	1845	43.9
Very Safe	2021	48.1
In Community Daytime		
Not Safe at All	564	13.4
Somewhat Unsafe	1164	27.7
Somewhat Safe	1762	41.9
Very Safe	714	17.0

Table 8 Chi-Square BMI Results

	Dieting for Weight Loss					
	No		Yes		χ2	P
	N	Percent	N	Percent		
BMI					487.42	0.001
(1) Underweight	139	5.6%	10	0.6%		
(2) Desired weight	1484	60.0%	508	31.4%		
(3) Overweight	484	19.6%	510	31.5%		
(4) Class I Obesity	201	8.1%	298	18.4		
(5) Class II Obesity	86	3.5%	157	9.7%		
(6) Class III Obesity	79	3.2%	135	8.3%		
Total	2473	100.0%	1618	100.0%		

Table 9 Personal Construct Chi-Square Results

	Dieting for Weight Loss					
	No		Yes		χ2	P
	N	Percent	N	Percent		
Self-Described Weight					583.55	0.001
Very Underweight	16	0.6%	3	0.2%		
Slightly Underweight	233	9.2%	18	1.1%		
About the Right Weight	1494	59.0%	514	31.2%		
Slightly Overweight	651	25.7&	828	50.2%		
Very Overweight	139	5.5%	287	17.4%		
Total	2533	100.0%	1650	100.0%		
Actions Taken Towards Weight						
Not Trying to do Anything	510	20.1%	18	1.1%	1130.99	0.001
Stay the Same Weight	727	28.7%	95	5.8%		
Lose Weight	1056	41.7%	1535	93.0%		

Gain Weight		240	9.5%	2	0.1%		
Total		2533	100.0%	1650	100.0%		
Ever Felt Things Were Hopeless							
No, Never		891	35.4%	519	31.7%	8.78	0.005
No, not in Last 12 Months		426	16.9%	263	16.0%		
Yes, in the Last 2 Weeks		471	18.7%	334	20.4%		
Yes, in the Last 30 Days		217	8.6%	160	9.8%		
Yes, in the Last 12 Months		514	20.4%	363	22.1%		
Total		2519	100%	1639	100%		
Ever Felt Overwhelmed							
No, Never		243	9.6%	123	7.5%	12.704	0.013
No, not in Last 12 Months		140	5.5%	64	3.9%		
Yes, in the Last 2 Weeks		1212	47.9%	838	51.0%		
Yes, in the Last 30 Days		447	17.7%	294	17.9%		
Yes, in the Last 12 Months		486	19.2%	325	19.8%		
Total		2528	100.0%	1644	100.0%		
Ever Felt Exhausted Not From Physical Activity							
No, Never		350	13.9%	184	11.2%	9.765,	0.045
No, not in Last 12 Months		161	6.4%	87	5.3%		
Yes, in the Last 2 Weeks		1178	46.7%	810	49.2%		
Yes, in the Last 30 Days		407	16.1%	284	17.3%		
Yes, in the Last 12 Months		425	16.9%	1646	17.1%		
Total		2521	100%	1646	100.0%		
Ever Felt							

Overwhelming Anxiety							
No, Never		1029	40.9%	554	33.7%	26.035	0.001
No, not in Last 12 Months		355	14.1%	230	14.0%		
Yes, in the Last 2 Weeks		417	16.6%	333	20.3%		
Yes, in the Last 30 Days		285	11.3%	199	12.1%		
Yes, in the Last 12 Months		427	17.0%	326	19.9%		
Total		2513	100.0%	1642	100.0%		

Table 10 Fisher's Exact Results across the Stress Variables

		Dieting for Weight Loss					
		No		Yes			
		N	Percent	N	Percent	Fisher's Exact	P
Too Traumatic or Very Difficult for You to Handle: Health Problem of a Family Member/Partner							
No		2042	81.1%	1259	76.5%	12.86	0.001
Yes		476	18.9%	387	23.5%		
Total		2518	100.0%	1646	100.%		
Too Traumatic or Very Difficult for You to Handle: Personal Appearance							
No		2093	83.0%	1079	65.6%	165.78	0.001
Yes		429	17.0%	566	34.4%		
Total		2522	100.0%	1645	100.0%		
Too Traumatic or Very Difficult for You to Handle: Personal Health Issue							
No		2088	82.8%	1210	73.7%	50.39	0.001
Yes		433	17.2%	432	26.3%		
Total		2521	100.0%	1642	100.0%		

Table 11 Behavioral Construct Chi-Square Results

	Dieting for Weight Loss						
		No		Yes			
		N	Percent	N	Percent	χ2	P
Received Nutritional Information from University							
No		980	39.1%	644	39.3%	0.03	0.87
Yes		1529	60.9%	994	60.7%		
Total		2509	100.0%	1638	100.0%		
Received Physical Activity Information from University							
No		949	37.8%	629	38.3%	0.10	0.75
Yes		1529	62.2%	1015	61.7%		
Total		2513	100.0%	1644	100.0%		
How Many Servings of Fruits and Vegetables do You Usually Have Per Day?							
0 Servings per Day		258	10.2%	89	5.4%	117.339	0.001
1-2 Servings per Day		1780	70.4%	1018	61.6%		
3-4 Servings per Day		429	17.0%	451	27.3%		
5 or More Servings per Day		63	2.5%	94	5.7%		
Total		2530	100.0%	1652	100.0%		
On How Many of the Past 7 Days Did You: Do Moderate-Intensity Cardio or Aerobic Exercise for at Least 30 Minutes?							
0 Days		1005	39.9%	389	23.8%	132.908	0.001

1 Day		357	14.2%	235	14.4%		
2 Days		374	14.8%	310	18.9%		
3 Days		313	12.4%	305	18.6%		
4 Days		140	5.6%	139	8.5%		
5 Days		166	6.6%	146	8.9%		
6 Days		61	2.4%	43	2.6%		
7 Days		105	4.2%	70	4.3%		
Total		2521	100.0%	1637	100.0%		
On How Many of the Past 7 Days Did You: Do Vigorous-Intensity Cardio or Aerobic Exercise?							
0 Days		1513	60.4%	719	44.0%	127.437	0.001
1 Day		338	13.5%	241	14.7%		
2 Days		251	10.0%	231	11.6%		
3 Days		181	7.2%	191	9.0%		
4 Days		84	3.4%	100	6.1%		
5 Days		71	2.8%	95	5.8%		
6 Days		43	1.7%	35	2.1%		
7 Days		26	1.0%	22	1.3%		
Total		2507	100.0%	1634	100.0%		
On How Many of the Past 7 Days Did You: Do Strength Training Exercises for 8-12 Repetitions Each?							
0 Days		1803	71.08%	913	56.2%	128.306	0.001
1 Day		221	8.8%	190	11.7%		
2 Days		207	8.2%	186	11.4%		
3 Days		140	5.6%	183	11.3%		
4 Days		61	2.4%	58	3.6%		
5 Days		39	1.6%	69	4.2%		
6 Days		18	.7%	12	.7%		
7 Days		22	.9%	14	.9%		
Total		2511	100.0%	1625	100.0%		

Table 12 Environment Chi-Square Results

Current Residence							
On Campus		1335	56.9%	762	50.9%	22.68	0.001
Off Campus		303	12.9%	172	11.5%		
		710	30.2%	564	37.7%		
Total		2097	100.0%	1274	100.05		
Sorority Member							
No		2306	91.8%	1477	90.0%	3.93	0.05
Yes		206	8.2%	164	10.0%		
Total		2512	100.0%	1641	100.0%		
Relationship Status							
Not in a Relationship		1431	56.9%	923	56.5%	9.035	0.011
In relationship not living together		843	12.9%	509	30.9%		
In Relationship Living Together		258	10.2%	215	13.1%		
Total		2532	100.0%	1647	100.0%		
Marital Status							
No		2421	98.1%	1579	97.6%	1.02	0.31
Yes		48	1.9%	39	2.4%		
Total		2469	100.0%	1618	100.0%		
Feel Safe on Campus-Daytime							
Not Safe at All		10	.4%	7	.4%	1.90	0.60
Somewhat Unsafe		33	1.3%	20	1.2%		
Somewhat Safe		586	23.2%	352	21.4%		

Very Safe		1898	75.1%	1264	76.9%		
Total		2527	100.0%	1643	100.0%		
Feel Safe on Campus-Nighttime							
Not Safe at All		136	5.4%	92	5.6%	2.271	0.518
Somewhat Unsafe		465	18.4%	333	20.2%		
Somewhat Safe		1258	49.9%	801	48.7%		
Very Safe		663	26.3%	420	25.5%		
Total		2522	100.0%	1646	100.0%		
Feel Safe In Community Surrounding School-Daytime							
Not Safe at All		39	1.5%	23	1.4%	0.144	0.986
Somewhat Unsafe		164	6.5%	107	6.5%		
Somewhat Safe		1104	43.8%	720	43.9%		
Very Safe		1213	48.1%	791	48.2%		
Total		2520	100.0%	1641	100.0%		
Feel Safe on Campus-In Community Surrounding School-Nighttime							
Not Safe at All		315	12.5%	243	14.8%	6.017	0.111
Somewhat Unsafe		690	27.3%	460	28.0%		
Somewhat Safe		1085	43.0%	661	40.3%		
Very Safe		434	17.2%	276	16.8%		
Total		2524	100.0%	1640	100.0%		

Table 13 Measures of Association

	□	P	Cramer's V	P
Self-Described Weight			374	.001
Actions Taken Towards Weight	0.52	0.00		
Ever felt things were Hopeless	0.04	0.05		
Ever Felt Overwhelmed	0.05	0.01		
Ever Felt Exhausted Not from Physical Activity	0.048	0.045		
Ever Felt Overwhelming Anxiety	0.079	0.001		
Too Traumatic or Very Difficult for You to Handle: Health Problem of a Family Member/Partner	.056	0.001		
Too Traumatic or Very Difficult for You to Handle: Health Problem of a Family Member/Partner	0.199	0.001		
Too Traumatic or Very Difficult for You to Handle: Health Problem of a Family Member/Partner	0.110	0.001		
Received Nutritional Information	0.00	0.86		
Received Physical Information	0.01	0.75		
How Many Servings of Fruits and Vegetables do You Usually Have Per Day?	0.168	0.001		
On How Many of the Past 7 Days Did You: Do Moderate-Intensity Cardio or Aerobic Exercise for at Least 30 Minutes?	0.179	0.001		
On How Many of the Past 7 Days Did You: Do Vigorous-Intensity Cardio or Aerobic Exercise?	0.175	0.001		
On How Many of the Past 7 Days Did You: Do Strength Training Exercises for 8-12 Repetitions Each?	0.176	0.001		
Current Residence	0.077	0.001		
Sorority Member	0.03	0.05		

Relationship Status	9.035,	0.011		
Marital Status	0.03	0.31		
Feeling Safe on Campus During the Day	0.02	0.60		
Feeling Safe on Campus During the Night	0.02	0.52		
Feeling Safe in Community Surrounding the School -Daytime	0.01	0.99		
Feeling Safe in Community Surrounding the School-Night time	0.04	0.11		