DIGITALCOMMONS
—@WAYNESTATE—

Wayne State University

Wayne State University Dissertations

1-1-2014

Development And Initial Psychometric Testing Of The Perceived Racism Shifting Survey (prss)

Saran Hollier
Wayne State University,

Follow this and additional works at: http://digitalcommons.wayne.edu/oa_dissertations

Part of the Nursing Commons

Recommended Citation

DEVELOPMENT AND INITIAL PSYCHOMETRIC TESTING OF THE PERCEIVED RACISM SHIFTING SURVEY (PRSS)

by

SARAN T. HOLLIER

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2015

MAJOR: NURSING

Approved by:

_____
Advisor   Date

_____

_____

_____

_____

DEDICATION

I dedicate my dissertation to the loving memory of my cousin Brittani McIntosh. You would have been a great nurse. Even though you are gone, you will never be forgotten. I love you.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1 "INTRODUCTION"

Perceived racism is a chronic stressor and may be a contributing factor in health disparities among African Americans (Clark, Anderson, Clark, & Williams, 1999; Mays, Cochran, & Barnes, 2007). Perceived racism refers to an individual's experience of race-based mistreatment. Interpersonal racism refers to race-based discrimination that occurs directly between individuals within the context of their institutional roles or in their private/personal lives (Brondolo, Love, Pencille, Schoenthaler, & Ogedegbe, 2011; Krieger, 1999). Perceived interpersonal racism, the focus of this study, can be experienced between racial groups (intergroup), as well as, between individuals within the same racial group (intragroup). Both forms of racism are a perceived reality for many African Americans (Clark et al., 1999; Hall, Everett, & Hamilton-Mason, 2012). Stress and coping models have been used to explicate the relationship between racism and health, in which coping has been described as a mediating factor (Clark et al., 1999; Outlaw, 1993;Williams, Neighbors, & Jackson, 2003). Although there has been some research investigating racism-specific coping strategies, this area remains understudied.

Due to the fact that perceived racism can be experienced intergroup and intragroup, coping strategies are necessary for African Americans to navigate in both a "Black" and "White" world. Hence, African Americans have to become fluent at "shifting". "Shifting" is a term developed by Jones & Shorter-Gooden (2003), and is described as cognitive, as well as behavioral strategies African Americans use to cope with issues of race, gender, and class. For example, African Americans may modify their speech or alter their appearance in anticipation of discrimination in an effort to cope, and discredit stereotypes associated with being African American. Although "shifting" has been reported to occur as a result of

perceptions of discrimination in general, Jones & Shorter-Gooden (2003) have identified that "shifting" also occurs as a result of perceptions of racism. For the purposes of this study, "shifting" will specifically be considered as a coping strategy in relationship to perceived racism.

"Shifting" has primarily been described among African American women (Hall et al., 2012; C. Jones & Shorter-Gooden, 2003). However, "shifting" was noted among both African American women and men as a racism-specific coping strategy in the author's previous qualitative work (Hollier, 2011 unpublished). Additionally, "shifting" has been reported to have an adverse impact on physical and mental health (Jones & Shorter-Gooden, 2003). Currently, there is very little known about the relationships between "shifting", perceived racism, and health. In an effort to better understand these relationships, an instrument is needed to measure self-reports of "shifting". Therefore, the purpose of this study was to develop and test a culturally-sensitive instrument that assessed "shifting" as a strategy to manage the anticipation of interpersonal racism among African Americans. The aims of the study are:

Aim 1: To develop a culturally relevant instrument to assess African American's self-reports of "shifting" as a response to perceived interpersonal racism.

Aim 2: To perform an initial psychometric evaluation of the newly developed instrument.

Aim 3: To determine sociodemographic factors associated with "shifting."

Statement of the Problem

Currently, African Americans have higher morbidity and mortality rates than any other racial/ethnic group for illnesses such as hypertension, heart disease, diabetes and

stroke (Schiller, Lucus, Ward, & Peregoy, 2012). Research that examines racial disparities and health proposes that stress associated with racism, is a factor leading to a better understanding of why African Americans disproportionately suffer from a variety of chronic illnesses (Bowen-Reid & Harrell, 2002; Merritt, Bennett, Wiliams, & Edwards, 2006). Racism has been defined as "the beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic affiliation" (Clark, Anderson, Clark, & Williams, 1999). By definition racism is insidious in nature, socially constructed and creates real barriers in the lives of individuals.

Racism, which is external to the individual, and resides in the "beliefs, attitudes, and institutional arrangements" of the dominant culture, is different from perceived racism. Perceived racism is subjective and derives from an individual's appraisal of their experience (Clark et al., 1999). Perceived racism can be experienced interpersonally between ethnic groups (intergroup) as well as, between individuals within the same ethnic group (intragroup) (Clark et al., 1999). Perceived interpersonal racism is the focus of this study.

Perceived racism has been conceptualized as a stressor, acute and chronic in nature (Clark et al., 1999; Peters, 2004). Research suggests that perceived encounters with intergroup and intragroup racism are stressful in the lives of African Americans (Clark, 2004; Peters, 2004). African Americans consistently perceive more experiences with racism than other ethnic groups (Pieterse, Carter, Evans, & Walter, 2010; Sanders Thompson, 2006), and view current experiences with racism, as well as, racism over the course of a lifetime as stressful (Dangoff-Burg, Perlow, & Swenson, 2004; Klonoff, Landrine, & Ullman, 1999). Therefore, perceived racism has been identified as a source of chronic stress for many African Americans (Guyll, Matthews & Bromberger, 2001; Merritt, et al., 2006;

Outlaw, 1993; Peters, 2004). The significance of this is that chronic stressors are predictors of disease onset (Cohen, Kessler, & Gordon, 1995).

Perceived Racism and Mental Health

Research aimed to investigate the relationship between perceived racism and health outcomes among African Americans, indicates a relationship between perceived racism and adverse mental health (Broudy et al., 2007; Gee, Spencer, Chen, Yip, & Takeuchi, 2007; Salvatore & Shelton, 2007). Pieterse, Todd, Neville, and Carter, (2012) conducted a meta-analysis investigating the effects of perceived racism on mental health specific to African Americans. The findings suggest that the mental health of African Americans is negatively impacted by exposure to racism; specifically, the more exposure to encounters with racism, the more likely that the individual will report mental distress (e.g. depression, and anxiety). The research has also shown a positive association between perceived racism and substance abuse among African Americans (Bennett, Wolin, Robinson, Fowler & Edwards, 2005; Borrell, Catarina, Williams, Diez-Roux, & Gordon-Larsen, 2006).

Perceived Racism and Cardiovascular Health

Currently, African Americans have higher morbidity and mortality rates than any other racial/ethnic group for illnesses such as cardiovascular disease (Schiller et al., 2012). Cardiovascular illnesses occur younger among African Americans than among Non-Hispanic Whites (Center for Disease Control and Prevention, 2011). Specifically, heart failure, a form of cardiovascular disease is occurring in a much younger group (under age 50) and overwhelmingly among African Americans. Three-fourths of African-Americans who develop heart failure have high blood pressure by age 40 (Center for Disease Control and Prevention, 2011). In an effort to address this disparity, a major portion of the research

conducted on perceived racism and health has focused on aspects of cardiac health, particularly hypertension (Brondolo et al., 2008; Klag, Whelton, Coresh, Grim, & Kuller, 1991; Peters, 2004).

The direct evidence linking perceived racism to a hypertension diagnosis is weak (Brondolo et al., 2011). However, the literature suggests that perceived racism might affect hypertension via stress exposure and reactivity (Brondolo et al., 2011). Ambulatory blood pressure has been investigated to measure blood pressure reactivity in relationship to perceived racism (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Smart, Pek, Pascoe, & Bauer, 2010; Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010). As a result, there is evidence that supports a positive relationship between perceived racism and ambulatory blood pressure among African Americans (Brondolo et al, 2011).

There is also evidence that perceived racism is associated with hypertension-related risk factors such as obesity (Brondolo et al., 2011). Furthermore, non-adherence to blood pressure medication among African Americans has been attributed to perceptions of mistrust and racism in healthcare (Ogedegbe, 2004; Rose, 2000). Non-adherence to medication can contribute to negative health outcomes associated with hypertension such as kidney failure. In an effort to understand the impact of perceived racism on mental health and hypertension among African Americans, the next phase in research has begun to look at mediating factors, specifically racism-related coping.

Coping with Racism

While perceived racism has been conceptualized as a stressor, coping has been described in the literature as a mediating factor on health outcomes (Clark et al., 1999). It

has been proposed that African Americans may use less coping strategies with racial stress than when confronted with general stress (Plummer & Slane, 1996). This implies that racial stress may be more difficult to handle, and suggests a need to determine the effectiveness of racism-specific coping strategies utilized among this population. Due to the fact that perceived racism occurs both intergroup and intragroup, it is necessary to examine the effectiveness of coping specific to both forms of perceived racism. The majority of the literature that examines racism-specific coping on the health outcomes of African Americans focuses on strategies used to mitigate intergroup racism. The health effects of coping strategies used to combat intragroup racism are understudied.

The concept of "shifting" addresses a variety of coping strategies used by African Americans to cope with bias and mistreatment due to race, gender, and class (Jones & Shorter-Gooden, 2003). "Shifting has been noted to occur in response to mistreatment from both inter- and intra group experiences. Most of the shifting literature has focused on discrimination. Currently, there are few studies that investigate "shifting" as it relates to perceived racism. Hence, there is very little known about the relationships between "shifting", perceived racism, and health. In an effort to better understand these relationships, an instrument is needed to measure self-reports of "shifting". To date, no instrument to measure "shifting" was found to exist in the literature.

Statement of Purpose

The purpose of this study was to develop and test a culturally-sensitive instrument to assess self-reports of "shifting" in response to perceived racism among African Americans. The Perceived Racism and "Shifting" Survey (PRSS) provides a means to assess "shifting" as a coping strategy for both inter- and intra-group racism. Coping specific to intragroup

racism is currently understudied. In addition, gender differences in "shifting" are also understudied as previous research on "shifting" has been conducted mostly among African American women. Although Jones and Shorter-Gooden (2003) believe that African American women "shift" more than African American men due to women's gender role in society, the PRSS allows this hypothesis to be tested specific to racism. Hence, the PRSS will assist future researchers in addressing the gaps in the current literature, by creating a means to better understand the relationship between perceived racism, "shifting", and health among African Americans.

Study Overview

The aims of this study were to develop a culturally-relevant instrument to assess self-reports of "shifting" among African Americans, perform initial psychometric evaluation of the instrument, and to determine sociodemographic factors associated with "shifting." The mid-range theory used to guide this study was derived from the stress and coping theory developed by Lazarus (Lazarus,1999; Lazarus & Folkman, 1984). Tran & Aroian's (1999) method for developing a culturally-relevant instrument was used to guide the development of the PRSS. A descriptive correlational design consisting of 145 African American men and women ages 19-77 was completed in an effort to conduct psychometric testing of the PRSS.

Significance

Significance to Health

Eliminating health disparities continues to be a priority for the National Institute of Nursing Research (NINR) (http://www.ninr.nih.gov). Additionally, the current literature suggests that future research move toward measurement, and understanding the mechanisms

by which perceived racism affects health, specifically mediating factors such as "shifting". The significance of this research is that the development of the PRSS will assist with addressing the gaps in the current literature specific to how perceived racism affects health among African Americans. Due to a lack of understanding of racism-related stress and "shifting", clinicians lack the ability to develop appropriate interventions. The development of the PRSS will assist future researchers in the ability to explore interventions that may help mitigate the effects of racism, in an effort to improve health outcomes and eliminate disparities.

Significance to Nursing

The metaparadigm of nursing, the concepts that represent the mission of the discipline, supports research specific to the affects of racism and "shifting" on the health outcomes of African Americans. The nursing metaparadigm concepts (nursing, environment, person, health) have been linked by four relational propositions of which one is particularly salient. "The discipline of nursing is concerned with the patterning of human health experiences within the context of the environment" (Fawcett, 2005, p. 6). This relational statement links the concepts of human beings and environment and forms the basis of support for the study of racism and health by a nurse scientist.

The development of the PRSS will contribute to the discipline of nursing. The discipline of nursing as defined by Donaldson & Crowley (1978) is the body of knowledge that is broader than its science, and broader than knowledge required for clinical practice. This knowledge can be derived from nursing, however, is also inclusive of knowledge from other disciplines (Donaldson & Crowley, 1978). The PRSS will allow investigators to measure "shifting", therefore allowing them to better under the relationship between

perceived racism, coping, and health. The literature has yet to establish nursing's role in the study of perception of racism and health. As recent definitions of the concept of environment have evolved to include sociopolitical and cultural factors, it is important that nurses include these factors, and the means by which individuals perceive, interact, and cope with these factors, in their health assessments. This is important due to nursing's presence in a variety of settings ranging from hospital institutions to the community. Knowledge gained from the use of the PRSS in nursing practice will allow practitioners to begin to develop interventions that will be useful in various settings where nursing care is provided.

CHAPTER 2 "BACKGROUND AND THEORETICAL FRAMEWORK"

Review of the Literature

Healthy people 2020: Health disparities

One of the goals of Healthy People 2020 is to achieve health equity, eliminate disparities, and improve the health of all groups U.S. Department of Health and Human Services (USHHS, 2010). Health disparities are defined as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage" (USHHS, 2010). Health disparities are barriers that have adverse effects on the health of entire populations and are often associated with groups who have traditionally been disadvantaged or treated unfairly. Therefore, health disparities have been noted between racial/ethnic groups, between genders, and various levels of social economic status (SES). Health disparities have negative implications for the health of individuals, as well as, large cost implications for the United States. As a result of the need to eliminate these barriers to health, it has been suggested that research on health disparities go beyond curing illness, and begin to look at the relationships between the environment and other factors that have an impact on the health of specific populations. These factors may include but are not limited to: racism, discrimination, the environment, legislative policies, and accessibility to health care. Health disparities are assessed and evaluated by looking at the rates of morbidity and mortality among a variety of demographic factors, including race.

African Americans and Health Disparities

Currently, African Americans have higher morbidity and mortality rates than any other racial/ethnic group for illnesses such as cardiovascular disease (Schiller et al., 2012). Poverty alone has not been able to explain the health disparities that exist between the

groups. Despite great improvements in the overall health of individuals in the United States in recent years, cardiovascular health disparities remain widespread among African Americans and occur at a younger age than non-Hispanic Whites (Center for Disease Control and Prevention (CDC, 2011). Specifically, heart failure, a form of cardiovascular disease is occurring in a much younger group (under age 50) and overwhelmingly among African Americans. African Americans who develop cardiovascular disease early have at least one of four risk factors: high blood pressure, overweight, chronic kidney disease, or high cholesterol. Three-fourths of African-Americans who develop heart failure have high blood pressure by age 40 (CDC, 2011).

High blood pressure (hypertension) is defined as an average systolic blood pressure (SBP) $\geq$ 140 mmHg or a diastolic blood pressure (DBP) $\geq$ 90 mmHG. In 2010 it has been projected that the cost associated with hypertension is $93.5 billion in health care services, medications, and missed days of work (Heidenreich, Trogdon, Khavjou, Butler, Dracup, Ezekowitz, et al. 2011). More than 40 percent of African Americans have high blood pressure, and the effects of the disease are more severe among African Americans than among Non-Hispanic Whites. African Americans account for 12% of the patients treated for end-stage kidney disease, a condition associated with hypertension (CDC, 2011). Additionally, African-Americans with pre-hypertension (SBP 120-140 mmHG or DBP 80-90 mmHG) develop high blood pressure sooner than non-Hispanic Whites and have a 35 percent greater risk of progressing to high blood pressure (Wagner et al., 2011).

Obesity contributes to hypertension risk and to other cardiovascular illnesses. Obesity is a common health concern among African Americans, particularly for African American women (Gorber, Tremblay, Moher, & Gorber, 2007). African American women

have the highest rates of being overweight or obese compared to other groups in the U.S. In 2010, African Americans were 1.4 times as likely to be obese as Non-Hispanic Whites (National Center for Health Statistics, 2011).

In an effort to meet the Healthy People 2020 objective aiming to eliminate health disparities, many researchers have began to investigate the various factors that affect the cardiac health of African Americans, including racism.

Racism as a Factor in Health Disparities

Racism defined. Research that examines racial disparities and health proposes that stress associated with perceived racism, is a factor that may explain why African Americans disproportionately suffer from a variety of chronic illnesses (Bowen-Reid & Harrell, 2002; Merritt et al., 2006). Racism has been defined as "the beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic affiliation" (Clark et al., 1999). The definition of racism is distinct from discrimination, as discrimination can refer to bias or mistreatment received based on a variety of factors (e.g., gender, class, age). Ethnic discrimination refers to unfair treatment received due to cultural factors such as nationality, language, or beliefs (Contrada, 2000). However, racism refers to individuals/groups who are ostracized and targeted for mistreatment based on phenotypic characteristics (e.g.,skin color, eye color, etc.) (Brondolo et al., 2009).

Additionally, racism is multidimensional and manifests in a variety of ways. Cultural, institutional, and, interpersonal are three forms of racism that have been examined in the literature (Brondolo, 2009). Cultural racism is manifested as the dominant culture assumes authority over language, values, and ideas over the minority members of society

(Jones, 1997). Institutional racism refers to discriminatory practices embedded in the policies of state or non-state institutions (Krieger, 1999). Interpersonal racism is defined as perceived prejudiced or mistreatment experienced directly between individuals (Krieger, 1999). Interpersonal racism can be perceived between members of a different race or ethnicity (intergroup), as well as, among members of the same race or ethnic group (intragroup). It is the *perceived* experiences of racism occurring interpersonally that are the focus of this dissertation work.

Perceived racism: intergroup vs. intragroup. The majority of the research that explores interpersonal racism focuses on intergroup racism (Brondolo et al., 2009) with an emphasis on White racism against Blacks; intragroup racism is currently understudied. The research suggests that intergroup racism and intragroup racism are two separate constructs that cause stress in the lives of African Americans (Clark, 2004; Hollier unpublished, 2011). It has also been noted that perceptions of intergroup racism are higher among African American men compared to African American women (Klonoff & Landrine, 2000; Roberts, Vines, Kaufman, & James, 2008).

Hollier's unpublished (2011) qualitative study aimed to examine both intergroup and intragroup racism. In that study, findings suggest that the experiences of intergroup and intragroup racism are distinct but intersect to cause stress in the lives of African Americans. The issue of intragroup racism was particularly salient in this dissertation study. The participants spoke in detail about their experiences of rejection from other African Americans because of the way they spoke, their level of education, skin tone, and hair texture (Hollier unpublished, 2011).

Historically, both intergroup and intragroup racism have been associated with skin

tone. Both light-skinned and dark-skinned Blacks experience intragroup hostility (Davis, Daniels, & See, 1998). However, due to the fact that culturally, whiteness is often associated with beauty (Harvey, 1995; Johnson & Farrel, 1995), darker-skinned Blacks may be more likely to experience both intergroup and intragroup racism. Specifically, African Americans (intragroup) and Caucasians (intergroup) perceive darker-skinned African Americans more stereotypically than lighter-skinned African Americans (Maddox & Gray, 2002). Darker skinned African Americans also report experiencing higher levels of discrimination compared to their lighter skinned peers (Keith & Herring, 1991; Klonoff & Landrine, 2000). Klag, Whelton, Coresh, Grim, & Kuller (1991) found that darker skinned African Americans of lower socioeconomic status had significantly higher blood pressures; further citing that darker skinned African Americans may be more likely to perceive racial bias.

Overall, the literature is scarce in terms of comparing and contrasting perceptions of intergroup and intragroup racism. However, the research that has been done suggests that the two forms of perceived racism are separate and distinct experiences that affect the lives of African Americans. Furthermore, the literature suggests that both forms of perceived racism may have health implications for African Americans.

Perceived racism as a stressor. There are multiple ways in which perceived interpersonal racism can affect health outcomes. One of the ways in which investigators have explicated this phenomenon is with the use of stress and coping models (Clark et al., 1999; Harrell, 2000; Outlaw, 1993; Williams et al., 2003). Within these models, perceived racism has been conceptualized as a stressor, acute and chronic in nature (Clark et al., 1999). Acute stress is an immediate perceived threat, physical, emotional, or psychological (Baum, Cohen, & Hall, 1993). Chronic stress is defined as persistent negative exposure to

experiences that present threat or excessive demand (Baum et al., 1993). The frequent exposure to acute racist encounters, and the inability to cope with those encounters, is what makes perceived racism chronic in nature. It has been suggested that exposure to chronic stressors, are a predictor of disease onset (Cohen et al., 1995). The literature on perceived racism supports that African Americans view current experiences with racism (acute), as well as, experiences of racism over the course of a lifetime (chronic) as stressful (Danoff-Burg, Prelow, & Swenson, 2004). It is also noted within the literature, that perceived racism may be a contributing factor in the health disparities that exist among African Americans.

Perceived racism and health among African Americans

Mental health and substance abuse. Studies on perceived racism and health have reported a relationship between perceived racism and morbidity rates among African Americans (Krieger, 1999; Williams et al., 2003). Measurements of mental health have frequently been studied in relationship to perceived racism among this population. The majority of this research, with very few exceptions, found that increased perceived racism was linked to decreased mental health among African Americans (Broudy et al., 2007; Gee et al., 2007; Salvatore & Shelton, 2007). A recent meta-analysis investigating the effects of perceived racism on mental health in African Americans found that the more exposure to encounters with racism, the more likely that the individual reports mental distress (depression, anxiety, and trauma related symptoms) (Pieterse et al., 2012).

It is also noted in the literature, that there is a possible link between perceived racism and substance use. Bennett, Wolin, Robinson, Fowler and Edwards (2005) found a positive association between perceived racism and tobacco use among Black college students. A similar result was also noted in a group of adults in the Coronary Artery Risk Development

in Young Adults (CARDIA) study, in which there was an association between perceived racism and marijuana use (Borrell et al., 2006). In the CARDIA study, African Americans who reported experiences of racism had higher odds of using marijuana than African Americans who did not report racism (Borrell, et al., 2006).

Perceived racism & cardiovascular outcomes. Perceived racism has also been linked to other health conditions such as cardiovascular disease and hypertension among African Americans (Brondolo, Beatty, Thompson, Tobin, Cassells, Sweeney, et al., 2008; Lewis-Coles & Constantine, 2006; Peters 2004). The "reactivity hypothesis" proposes that exaggerated blood pressure responses to acute stressors convey risk for cardiovascular disease (Krantz & Manuck, 1984). Therefore, a number of studies have examined the relationship between perceived racism and physiological responses such as blood pressure, and heart rate among African Americans (Brondolo et al., 2008; Peters, 2004). Studies that looked at the relationship between self-reports of racism and cardiovascular outcomes have mixed findings; positive and negative relationships have been noted (Brondolo, 2003 et al.). Some studies have found no relationship between reports of perceived racism and cardiovascular health outcomes among African American subjects (Broman, 1996; Dressler, 1996). However, one study found that African American men who did not report racism were at a greater risk for hypertension than those who did (Roberts et al., 2008). Krieger and Sidney (1996) found a positive relationship between perceived racism and blood pressure among professional African Americans. However, blood pressure was higher among working-class African Americans who did not report racism, than among working class African Americans who had reported racism (Krieger & Sidney, 1996). Other study results suggest that perceived racism was associated with higher and more uncontrolled blood

pressure among African Americans (Boutain, 2001; Bowen-Reid & Harrell, 2002; (Brondolo, Ricardo, Kelly, & Williams, 2003; Peters, 2004). Specifically, the results of these studies reveal that acute encounters with stress resulted in elevated blood pressures. Chae, Lincoln, Adler, & Syme's (2010) study indicated that there may be some moderating factors in relationship to perceived racism and cardiovascular disease. This study found that internalized negative racial group attitudes and lack of reported racism might be potential risks factors for cardiovascular disease among African American men.

Additionally, blood pressure dipping has also been explored in relationship to perceptions of racism among African Americans (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Hill, Kobayashi, & Hughes, 2007; Steffen, McNeilly, Anderson, & Sherwood, 2003). Blood pressure normally decreases during the night (blood pressure dipping). Absence of this phenomenon (non-dipping) is associated with increased cardiovascular risk (Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010). African Americans have been noted to have higher daytime and nocturnal blood pressures compared to Non-Hispanic Whites, and are less likely to exhibit blood pressure dipping (Profant & Dimsdale, 1999). Research examining the relationship of blood pressure dipping and perceived racism have resulted in mixed findings One study found that the incidence of non-dipping increased with reports of perceived racism (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008). However, another study of African American males and females found that perceived racism was associated with higher daytime blood pressures, but was not related to nocturnal blood pressure or blood pressure dipping (Steffen et al., 2003).

Evidence from some experimental studies suggests that African Americans

experience exaggerated cardiac reactivity when they perceive race-related stress (Guyll, Matthews, & Bromberger, 2001; Lepore, Revenson, & Weinberger, 2006; McNeilly, Robinson, Anderson, & Pieper, 1995). For example, Lepore et al (2006) examined reactivity in both Black and White women. When the subjects were asked to discuss a racial stressor and a nonracial stressor, Black women had greater reactivity and slower recovery to the race-related stressor. This was not noted among the White female subjects (Lepore et al., 2006). Guyll et al. (2001) also examined reactivity in both White and Black female participants. Subjects were asked to imagine that they had been accused of shoplifting, and then were asked to prepare a defense for themselves. The results of the study revealed that Black women who had reported more past experiences with discrimination, had attributed the hypothetical event to racism. They also had greater diastolic blood pressure reactivity than those who did not report discrimination.

In summary, the research on perceived racism and health outcomes among African Americans indicates a relationship between perceived racism and adverse mental health. However, the literature on perceived racism and cardiovascular health outcomes among African Americans is mixed. A recent meta-analysis conducted by Brondolo and colleagues (2011) who examined the literature on perceived racism and health, revealed that the evidence of perceived racism being associated with a hypertension diagnosis is weak. They further stated that there is more consistent evidence of a positive relationship between perceived racism, ambulatory blood pressure and nocturnal blood pressure among African Americans. Perceived racism is associated with stress exposure and cardiac reactivity, as well as hypertension-related risk factors such as obesity (Brondolo et al., 2011).

Coping

In an effort to better understand the relationship between racism and health, investigators have begun to examine racism-specific coping. While perceived racism has been conceptualized as a stressor, coping has been described in the literature as a mediating factor on health outcomes (Clark et al., 1999). Coping is the effort an individual uses to decrease stress and re-establish balance. Coping is the process of managing internal and external demands appraised as stressful using cognitive and behavioral strategies (Lazarus & Folkman, 1984).

Categories of coping. There are a variety of coping strategies identified in the literature. Categories have been established to provide structure for the various coping strategies. The following section will address some of the categories identified in the research.

Lazarus and Folkman. Lazarus and Folkman's (1984) problem-focused and emotion focused coping is most commonly used to categorize coping strategies. Problem-focused coping results in efforts to regulate the identified stressor, and may be directed toward self or the environment. Problem-focused efforts are often directed at identifying the problem, establishing potential solutions, weighing the potential solutions in relationship to their cost or benefit, choosing among the solutions, and acting on the solutions.

Emotion-focused coping refers to efforts that an individual uses to address the emotional reaction to the stressor. Conversely to problem focused coping, emotion-focused coping are likely to occur when it has been appraised that there is no solution that will modify the harm, threat, or challenge of the environmental condition. Forms of emotion-focused coping include processes directed at decreasing emotional distress (e.g. minimizing

or distancing), cognitive reappraisal (changing the meaning of a situation), or deliberately increasing emotional distress to force mobilization toward action.

Carver, Weintraub & Scheier (1989). Carver et al. (1989) contend that the two coping categories (problem and emotion focused) identified by Lazarus and Folkman (1984), are too limiting for categorizing coping strategies. For example, problem focused coping may consist of a variety of responses that are distinctly different from one another, therefore may have different implications for coping effectiveness. Thus, the author's suggested that in an effort to study the diversity of responses, the responses must be measured separately. As a result, they developed the COPE scale and four factors of coping were identified: active coping, social support seeking, denial or disengagement, and positive reinterpretation (Carver et al., 1989). Active coping is the process of taking steps to remove or avoid a stressor or ameliorate its effects. Seeking social support includes seeking support for instrumental reasons and emotional reasons. Seeking social support for instrumental reasons includes seeking advice, assistance, or information. Carver and colleagues describe this as an aspect of problem-focused coping. Seeking social support for emotional reasons is an aspect of emotion-focused coping and includes obtaining moral support. Disengagement can be mental or behavioral. Mental disengagement consists of a variety of activities that serve as distracters aimed to take the focus away from the goal with which the stressor is interfering. Behavioral disengagement refers to reducing one's effort to manage the stressor. Lastly, positive reinterpretation involves reconstructing a stressful encounter, so that it is viewed positively.

Active and passive coping. Active and passive coping are two other common categories that have been used to categorize coping strategies (Clark, 2004; Feagin, 1991;

Landrine & Klonoff; 1996; Plummer & Slane, 1996). Active coping are responses that involve attempts to change the nature of a situation (e.g. confrontation). Passive coping are associated with coping strategies such as withdrawal.

General vs. situation-specific. Coping strategies have also been categorized as general (Jones, 1997; McNeilly et al., 1996) and situation-specific (Clark et al., 1999; Krieger, 1990; Krieger & Sidney, 1996; Shorter-Gooden, 2004). General coping responses refer to strategies that are used to deal with stressful encounters, regardless of the nature of the encounter (Clark et al., 1999). Situation-specific coping refers to strategies that are used to deal with particular instances and situations (Shorter-Gooden, 2004).

Categories of coping as it relates to this dissertation. The Perceived Racism Shifting Instrument (PRSS) consists of two types of "shifting": external and internal. *External shifting is defined as the change in behavior used to manage the stress associated with the anticipation of inter and intragroup racism. Internal shifting is defined as what occurs cognitively in anticipation of inter or intragroup racism, which in turn influences behavior.*

Problem-focused forms of coping are noted in both the internal and external domains, as items within these domains aim to measure cognitive and behavioral efforts an individual uses to regulate the stress of anticipated racism. Although separated by two categories (internal and external), the tool in its entirety or the concept of "shifting" can be categorized as situation specific, as it targets strategies used to manage intergroup and intragroup racism.

African Americans and Cultural Specific Coping

It has been identified that there are culturally specific ways in which African

Americans cope with stress, referred to as Africultural coping (Utsey, 2000). This form of coping results from an African-centered worldview that holds that everything in the universe is connected, thus having a sense of community/group orientation is important. From this philosophical perspective, Africultural coping is described "as an effort to maintain a sense of harmony and balance within the physical, metaphysical, collective/communal, and the spiritual/psychological realms of existence" (Utsey et al., 2000, p. 197). Africultural coping reflects the values and attitudes of individuals of African descent. Africultural coping consists of cognitive/emotional debriefing, spiritual-centered coping, collective coping, and ritual-centered coping. Within this framework cognitive/emotional debriefing are actions aimed at managing the perceived environmental stressor. Spiritual-centered coping is the identification and connection with a higher power (e.g. God). Collective coping involves coming together with other African Americans. Ritual-centered coping are rituals used to manage stress, such as lighting candles (Utsey, 2000). Specifically, spiritual/religious coping (Clark, 2004, Hall et al. 2012; Lewis-Coles & Constantine 2006; Shorter-Gooden, 2004) and collective coping (Lewis-Coles & Constantine, 2006) have been noted in the literature. Lewis-Coles and Constantine (2006) examined racism-related stress, Africultural coping, and religious problem-solving among African Americans. The results revealed that institutional racism-related stress was associated with spiritual-centered coping among African American women. However, African American men were more likely to use collective coping strategies that rely on group-centered activities. Interpersonal racism was not predictive of Africultural coping strategies or religious problem-solving.

Coping with Perceived Racism

There are two types of racism that are particularly salient for this dissertation work,

intergroup and intragroup racism. Intergroup has received more attention. However, based on the author's previous qualitative work, it has been noted that perceptions of intragroup racism might cause more distress among African Americans (Hollier unpublished, 2011).

There are a variety of coping strategies that have been used in response to intergroup racism. Due to the fact that intragroup racism is understudied, it is not clearly understood if the coping strategies used for intergroup racism are the same as those that are used for intragroup racism. Coping strategies for perceived racism utilized by African Americans have been noted in the sections below.

Coping responses to intergroup racism. There has been multiple coping strategies identified in the literature related to African American's experiences with intergroup racism. One qualitative study consisting of 209 African American men and women identified the following coping strategies in relationship to perceived racism: assessment before acting, withdrawal and avoidance, acceptance, verbal confrontation, and taking legal action (Feagin & Sikes, 1994). Other research suggests that many African Americans seek social support after perceiving a racist encounter in an effort to cope (Brondolo et al., 2009; Krieger, 1990; Krieger & Sidney, 1996; Shorter-Gooden, 2004). Confrontation anger has also been investigated as a coping strategy among African Americans, specifically as it relates to blood pressure and cardiac outcomes (Krieger, 1990; Krieger & Sidney, 1996).

Additionally, there has been gender differences noted in relationship to coping with intergroup racism. African American women are more likely to use emotion-focused coping and religious coping after perceiving racism, compared to African American men (Clark, 2004; Swim, Hyers, Cohen, Fitzgerald, & Byslama, 2003; Williams et al., 2003).

Coping responses to intragroup racism. The literature on coping with perceived

racism predominantly focuses on intergroup racism (Brondolo et al., 2009); coping with intragroup racism has received little attention. Clark's (2004) is one of few studies that have explored coping responses used to mitigate perceptions of both intragroup and intergroup racism. The results revealed that for both intergroup and intragroup racism, African American males and females used comparable amounts of problem-focused, avoidant, and cognitive coping responses. However, African American males were significantly more likely to use alcohol as a means of coping with intragroup racism. African American females were more likely to use emotion-focused and religious coping for both forms of racism.

Coping with combined inter-and intra-group racism. Due to the fact that perceived racism can be experienced both intergroup and intragroup, coping strategies are necessary for African Americans to navigate in both a "Black" and "White" world. Having to manage a dual existence has resulted in the use of two racism-specific coping strategies: "code switching", and "shifting".

"Code switching". The term "code switching" refers to adjusting one's speech as it relates to the environment (Hecht et al., 2003). For African Americans, "code switching" is often defined as switching between the use of "Black English" and "Standardized English" (Doss & Gross, 1994). Factors that have been identified in the literature to influence code switching include but are not limited to familiarity with the speaker, setting, context, and awareness of social expectations.

Code switching has traditionally been studied from a linguistic perspective and not in relationship to perceptions of racism (Doss & Gross, 1994; Koch, Gross & Kolts, 2001; Nelson, 1990). However, Garner & Rubin (1986) examined the perceptions and influences of code switching and found that Black English was cherished among the participants as a

means of preserving their culture, however, they acknowledged that the use of Black English could impede mobility into mainstream America. The participants reported that they used Standard English within the context of certain environments (e.g. formal setting) and that it was necessary for survival. Additionally, the participants had a negative reaction to individuals who were not able to code switch when necessary. Although this study's focus was not on perceived racism, it provides evidence of code switching being used as a means to manage a dual existence.

Code switching has been identified as a coping strategy to manage a dual existence in other studies (Hall et al., 2012; Jones & Shorter-Gooden, 2003) however in those studies the concept was discussed in relationship to the concept of "shifting"; hence will be summarized in the section below titled "shifting". Although code switching has been studied independently as a coping process used to manage a dual existence, the concept will be considered a "shifting" strategy for the purposes of this dissertation; this is also consistent with Jones & Shorter-Gooden (2003) who developed the concept of "shifting".

The Concept of "Shifting"

"Shifting" described. "Shifting" refers to cognitive, as well as behavioral coping strategies used by African Americans to cope with bias and mistreatment due to race, gender, and class (Jones & Shorter-Gooden, 2003). "Shifting" can be conscious or subconscious, and can be either effective or ineffective in terms of coping outcomes. The essence of "shifting" is described in the following quote:

> African American women change the way they think of things or
> expectations they have for themselves. Or they alter their outer appearance.
> They modify their speech. They shift in one direction at work each morning,
> then in another at home each night. They adjust the way they act in one
> context after another. They try to cover up their intelligence with one group

of friends and do everything possible to prove it to another. They deny
their sadness and loneliness (Jones & Shorter- Gooden, 2003 p. 61).

The concept of shifting emerged as a result of Jones & Shorter-Gooden's (2003) qualitative

research, which included 71 in-depth interviews of African American women. As described,

shifting addresses a variety of coping strategies, some of which have been noted in the

coping literature discussed above.

"Shifting": influences & strategies. Although "shifting" has been studied

mostly among African American women, it has been acknowledged that "shifting" is a

common practice among African American men and women (Jones & Shorter-Gooden,

2003). "Shifting" occurs as a result of actual or perceived bias and mistreatment,

specifically, racism, sexism, and classism and also occurs as a result of attempts to dispel or

meet societal expectations (Jones & Shorter-Gooden, 2003). Data collected from Jones and

Shorter-Gooden's (2003) study resulted in the identification of six "shifting" strategies: 1)

battling the myths, 2) *scanning and surveying and scrutinizing*, 3) *walling it off*, 4) *seeking*

spiritual and emotional support, 5) *retreating to the Black community and abiding by the*

home codes, and 6) *fighting back*. According to Jones & Shorter-Gooden (2003), the above

listed strategies are cognitive coping strategies, behavioral coping strategies, or a

combination of both. However, they have not specified which form of coping (cognitive or

behavioral) applies to which "shifting" strategy.

For the purposes of instrument development, the author of this study identified two

types of "shifting", internal and external. Consistent with Jones and Shorter-Gooden (2003),

behavioral strategies have been identified for the external domain, and cognitive strategies

for the internal domain. The author of this dissertation has categorized the six "shifting"

strategies as described by Jones & Shorter-Gooden (2003) in the section below into internal and external.

Internal "shifting"

Scanning, surveying and scrutinizing. The "shifting" strategy referred to as "scanning, surveying and scrutinizing" refers to continuous monitoring of how one is being perceived (Jones & Shorter-Gooden, 2003). It includes high-effort coping, and a constant alertness of one's own behavior and environment. This "shifting" strategy is a result of perceived discrimination, in which the individual is constantly assessing for bias and mistreatment in an effort to think of ways to respond (Jones & Shorter-Gooden, 2003). Examples of behaviors associated with this "shifting" strategy may include, constant scrutinizing over what one says or how one speaks. It may also include constant scrutinizing over what to wear, as an individual is trying to gain acceptance in a certain environment. Swim (1998) also identified constant monitoring as a major strategy used by groups who experience discrimination often. It allows the individuals to prepare themselves for potential encounters with bias and mistreatment. Individuals who utilize this coping strategy are rarely able to relax.

Walling it off. The "shifting strategy" referred to as "walling it off" is an emotional coping strategy that enables an individual to suppress their emotional reactions associated with experiences of discrimination (Jones & Shorter-Gooden, 2003). Feelings of anxiety, isolation, anger, shame, and low-self esteem can result from encounters; hence, individuals may "shift" by downplaying their experiences, screening out distressing facts, denying, or ignoring their experiences (Jones & Shorter-Gooden, 2003). The behaviors associated with this "shifting" strategy were also identified in the discrimination literature. Specifically,

Ruggiero & Marx (1999) found that African Americans and Caucasian women, who perceived discrimination, were more likely to dismiss discrimination as an explanation for their failures than Caucasian males. In fact, they had more of a tendency to blame themselves for their failures. Ruggiero & Marx (1999) described this minimization of discrimination as a means of maintaining control, a sense that they have control of their fate as opposed to others having that control. Further suggesting that downplaying discrimination may be psychologically beneficial, as these encounters are not viewed as having a negative impact. However, in terms of physical health, Krieger (1990) found that women who minimized or denied discrimination were more likely to report higher blood pressures, than those who acknowledged discrimination and fought against it.

Seeking spiritual and emotional support. This strategy involves turning to spirituality and seeking faith or emotional support in an effort to "shift" away from the emotional consequences associated with discrimination (Jones & Shorter-Gooden, 2003). The shifting of seeking spiritual support is a part of religious coping that has been identified as being, particularly salient in the lives of African Americans, and is often used to manage the stress of personal adversity (Chatters, Taylor, Jackson, & Lincoln, 2008). Prayer and church attendance is a common strategy used to cope with the stress of discrimination, particularly among African American women (Hall, Everett & Hamilton-Mason, 2011; Jones & Shorter-Gooden, 2003; Weber & Higginbotham, 1997).

External "Shifting"

Battling the myths. The "shifting" strategy *battling the myths* refers to changes in behavior that an individual makes in an effort to dispel preconceived notions that others may have about them (Jones & Shorter-Gooden, 2003). These preconceived notions are often the

result of stereotypes accepted and promoted throughout society. One example of *battling the myths* is when an African American changes the way they speak, using "standard English" versus "Ebonics", in an effort to transcend misconceptions about African Americans. The altering of one's speech is a common practice among this population, and is referred to as "code switching" in the literature (Doss & Gross, 1994; Hall, Everett & Hamilton-Mason, 2012; Koch, Gross & Kolts, 2001, Nelson, 1990). Jones & Shorter-Gooden have classified code-switching as one of the strategies used to "shift" in response to perceived racism. The participants in their study often spoke of "code switching" in an effort to *battle the myths,* while trying to gain acceptance in their work environments and dismiss stereotypes that may be associated with lack of knowledge or ability. "Code switching" was also identified as a strategy to *battle the myths* as a means to cope with race and gender bias and overcome barriers in the workplace (Hall, et al., 2012). In some instances, individuals may alter their speech, while in other instances individuals may change the way they communicate (verbally and non-verbally), such as altering the pitch/volume of their voice, or the mannerisms they normally use to express themselves (Jones & Shorter-Gooden, 2003). For example, African American women have often been stereotyped as confrontational, opinionated, and harsh, due to the way they communicate. Hence, some African American women have reported "shifting" the way they express themselves in an effort to refute such stereotypes (Jones & Shorter-Gooden, 2003). Another example of "shifting" to *dispel the myths* occurs in instances where an individual works excessively to prove their level of education, knowledge or skill. In Jones and Shorter Gooden's (2003) study, one participant mentioned that they find themselves always listing their credentials around "White folks", to prove that they are just as capable of doing the same job.

Retreating to the Black community and abiding by the home codes. Jones and Shorter-Gooden (2003) refer to *retreating to the Black community* as a way of "shifting" by "going home". For African Americans, this may mean returning to the Black community in an effort to seek solace from the pressures of society. Although this can be an effective way of coping, there are instances when "going home" can present challenges. For instance, African Americans who spend a large amount of time "shifting" to accommodate societal expectations, may have difficulty conforming to "home codes" when returning back to the African American community. "Home codes are the rules of comportment within Black culture that are defined not just by race but also by gender and class" (Jones & Shorter-Gooden, 2003, p. 83). Home codes will vary based on the expectations of the group to which the individual is returning. For example, African Americans who often "shift" to cope with the expectations of the dominant culture may be shunned by individuals in their community for "acting White". These same African Americans may have to "shift" when "going home" to conform to the "home codes" in order to be accepted; meaning there is an expectation that they disassociate themselves from the speech and behaviors of the dominant culture (Jones & Shorter-Gooden, 2003). Conversely, African Americans may need to suppress their Black identity when "going home", if they are around other African Americans who relate more to the dominant culture (Jones & Shorter-Gooden, 2003). In either instance, "going home" may not allow the individual to be them self.

Fighting back. The "shifting" strategy referred to as *fighting back* is considered an active coping strategy, in which individuals "shift" away from taking a passive approach to discriminatory practices, and began to take direct action. For many African Americans, *fighting back* is meaningful and can promote self-esteem and enable individuals to thrive

(Shorter-Gooden, 2003). *Fighting back* includes a variety of behaviors, including but not limited to: advocacy, speaking up, and protesting.

"**Shifting" & Perceived Racism**

Although the concept of "shifting" has been studied in relationship to perceptions of discrimination in general, Jones & Shorter-Gooden (2003) have identified that "shifting" also occurs as a result of perceived racism. Perceived racism can be experienced between members of a different race (intergroup), as well as, among members of the same race or ethnic group (intragroup). Due to the fact that perceived racism can be experienced intergroup and intragroup, the concept of "shifting" often becomes a necessity for survival for many African Americans, allowing them to navigate in both a "Black" and "White" world.

"Shifting" specific to perceive racism is understudied. After searching Cinhal, Medline, and Psychinfo databases, the author was only able to find one article, besides the book *Shifting* by Jones & Shorter Gooden (2003), that examined the concept of "shifting" in relationship to discrimination. The article was a qualitative study that consisted of 41 African American women (Hall et al., 2012). "Shifting" was identified as a coping strategy in relationship to perceived racism and perceived sexism in the workplace. "Code switching" was considered a "shifting" strategy used by participants to cope with both intergroup and intragroup racism (Hall et al., 2012). Additionally, the participants spoke about "controlling their reactions to stress" or "just letting the stress go." These themes are consistent with the "walling" it off strategy introduced by Shorter-Jones & Gooden (2003).

Although not labeled as "shifting", coping strategies that are consistent with the elements of "shifting" are noted in Hollier's (unpublished, 2011) study, as well as, Shorter-

Gooden's (2004) research. In Hollier's study, a phenomenological qualitative design was used to explore how interpersonal, institutional, and intragroup racism affected the lives of African Americans, as well as, to uncover strategies used to cope with perceived racism. Two mixed gender focus groups were conducted to elicit descriptions of experiences of racism and coping. Participants consisted of 18 middle-class African Americans (11 women, 7 men), 25-40 years of age. Descriptions of the experience of racism resulted in an overarching theme*: racism as a "mist"* (being pervasive in nature), and a subtheme of *living a dual existence* (experiencing racism from both Whites and Blacks). The strategies participants used to cope with the pervasiveness of racism and the stress of living a dual existence were consistent with the findings of Jones & Shorter-Gooden (2003).

The idea of living a dual existence was evident as the participants talked about their experiences of "code switching" to adjust to the expectations of the dominant culture in their work environment, while also having to code switch so they could be viewed as relatable to individuals within their own community. The theme of "code switching" is consistent with the concept of "shifting" as identified by Jones and Shorter-Gooden (2003), and was identified as a strategy to cope with both inter- and intragroup racism. Intragroup racism appeared to be particularly salient between focus groups, and between males and females alike. One individual stated, "We are more racist toward one another" (Hollier, 2011 unpublished).

Although the men more so than women, expressed the belief that racism did not have a huge affect on their lives (e.g., stating "the sky is the limit for me"), they were more likely to express a constant awareness of the presence of racism. Descriptions such as "sleeping with one eye open", "always aware of my surroundings", "always ready" suggested the

pervasive nature of racism and its potential unconscious effects. These descriptions are consistent with Jones & Shorter-Gooden (2003) cognitive "shifting" strategies of *scanning, surveying, & scrutinizing.* Additionally, the denial of how much their perceptions of racism affected their lives reflects the emotional "shifting" strategy referred to as *walling it off.* In fact, some of the participants stated that they did not realize how much racism affected them until they participated in the study (Hollier, 2011 unpublished).

For African American women, concern over their physical appearance, specifically their hair, reflected the cognitive coping strategy of *scanning, surveying, & scrutinizing* as they considered how their hair style would be perceived. The women discussed their experiences specific to changing their hair texture. They described behavioral coping strategies stating that that they would straighten their natural "kinky" hair when going to work, or if they knew they had a job interview, because they know that they have to "mainstream" in order to be employable. However, the participants also stated that wearing their natural "kinky" hair around other African Americans often resulted in negative comments and rejection.

At the end of the focus groups, many of the participants, especially the men requested follow-up group sessions to further discuss their experiences with racism. This suggests a need among this population to have a venue to discuss experiences and gain support from others. Wanting continued support, is consistent with the current literature on racism-related coping that suggests social support as a coping strategy (Brondolo, 2009), and is also consistent with the emotional "shifting" strategy referred to the as *seeking spiritual and emotional support* (Jones & Shorter-Gooden, 2003).

Shorter-Gooden (2004) examined the coping strategies African Americans use to manage the stress of both racism and sexism. The results of the study revealed three specific immediate coping strategies that included: role flexing (altering ones outward appearance or behavior), avoidance, and fighting back. The study also reported both internal and external coping resources used to manage the stress of discrimination. Internal resources included: prayer and spirituality, maintaining a positive self-image; and drawing strength from their ancestors. One external coping strategy was identified: seeking social support. The study results are consistent with the elements of "shifting" as identified above; particularly, the strategy of role flexing, which captures the essence of "shifting" as a coping strategy.

Summary: Racism-Specific Coping. In summary, coping has been recognized as a mediating factor in the relationship between perceptions of racism and health. Although hundreds of coping strategies have been identified for coping in general, few have been found that are specific to coping with racism. Two that were discussed in this proposal are those of "code switching" and "shifting". A review of the literature found that code switching has been traditionally studied from a linguistic perspective, not as a coping mechanism specific to perceived racism. The three studies noted above (Hall et al, 2012; Hollier unpublished, 2011; Jones & Shorter-Gooden, 2003) are the only ones that the author was able to locate that addressed code switching specifically in relationship to perceived racism. Of the three studies, two of them (Hollier unpublished, 2011; Jones & Shorter-Gooden, 2003) addressed code switching in response to both intergroup and intragroup racism, specifically switching between Standard and Black English depending on the group they were associating with at the time. Hall and colleagues (2012) discussed code switching

in relationship to intergroup racism only. Code switching is a behavioral strategy that reflects the idea of "shifting".

The concept of "shifting" has been identified as a means of coping with the perceptions of racism while living a dual existence. Six shifting strategies have been identified, with these six strategies reflecting cognitive, behavioral, and emotional forms of coping. The concept of "shifting" is understudied. Only two studies (Hall et al., 2011; Jones & Shorter-Gooden, 2003) have been noted to address "shifting" as a coping response to racism. Two additional studies have been identified that examine coping strategies in relationship to perceived racism that can be considered elements of "shifting". Due to the fact that "shifting" is understudied, there is little known about the effects of "shifting" as a racism-specific coping mechanism on health outcomes.

Coping with racism and health outcomes

Coping strategies used to mitigate experiences with racism have been found to affect the health of African Americans. The majority of the work has focused on coping with intergroup racism; coping outcomes for intragroup racism are understudied. The section below will discuss the different ways that coping with racism affects health.

Mental health. Although there have been studies that examine the effects of racism on mental health, there is limited research on racism-specific coping's affects on mental health (Pieterse et al., 2012). Passive coping strategies have been associated with an increased possibility of depression in relationship to discrimination (Moghaddam, Taylor, Ditto, Jacabs, & Bianchi, 2002). Ethnic identity has been found to be directly associated with fewer depressive symptoms in relationship to racial discrimination (Mossakowski, 2003).

Cardiac health. A large portion of the literature that examines racism, coping, and health among African Americans focuses on cardiac health. African Americans have higher morbidity and mortality rates for cardiovascular disease than other race/ethnic groups (Schiller et al., 2012). Cardiovascular illnesses, specifically heart failure, have been known to occur earlier in the lives of African Americans (CDC, 2011). Three-fourths of African-Americans who develop heart failure have high blood pressure by age 40 (CDC, 2011). Hypertension has also been known to occur earlier among African Americans. As a result of this disparity, the research in the area of racism, coping and health has often focused on blood pressure. A variety of coping strategies will be discussed in the section below in relationship to racism and blood pressure.

Active vs. passive coping. Active coping (e.g., confrontation) and passive coping (e.g., withdrawal) have been noted in the literature as strategies utilized during perceived racist encounters (Clark, 2004;Landrine & Klonoff, 1996; Plummer & Slane, 1996). Both styles of coping influence cardiovascular functioning differently. Passive coping styles have traditionally been associated with higher systolic blood pressures, and slower diastolic blood pressure and heart rate recovery (Fontana & McLaughlin, 1998; Kohlmann, Weidner, & Messina, 1996). Conversely, active coping responses have been associated with lower blood pressure and decreased risk of hypertension (Krieger & Sidney, 1996; Dressler, Bindon, & Neggers, 1998). It has been proposed that chronic perceptions of racism in conjunction with passive coping responses may lead to prolonged activation of the sympathetic nervous system resulting in higher blood pressures (Manuck, Kasprowicz, & Muldoon, 1990); hence explaining the differences or the effects of active and passive coping on cardiac health.

Social Support. There is little evidence that social support mitigates the effects of

racism on physical health (Brondolo et al., 2009). However, two studies that examined perceived racism and blood pressure reported buffering effects of social support in subjects who reported low levels of racism (Clark, 2003; Clark & Gochett, 2006). Lower diastolic blood pressure reactivity was noted in both of these studies. Buffering effects were not noted among subjects who reported higher levels of racism.

Anger Coping. The literature describes anger coping (active) specific to perceived racism as a strategy used to confront race-related stressors in order to affect the outcome of an encounter (Brondolo et al., 2009). Anger coping has also been described as a means to combat the emotional burden of perceived racism (Brondolo et al., 2009). Anger suppression has been associated with higher blood pressure and poor cardiovascular recovery (Dorr, Brosschot, Sollers, & Thayer, 2007; Steffen et al., 2003). Krieger (1990) and Krieger and Sidney (1996), found that suppression of anger resulted in higher blood pressures in individuals who did not report high levels of racism leading to the idea of internalized oppression. Peters (2004) noted that the racism/blood pressure relationship was moderated by age. Younger participants who had significantly higher "anger-out" scores were less likely to have higher blood pressures. Elevated blood pressures were noted among older participants who reported low levels of perceived racism, suggesting that "internalized racism" may be a coping response (Peters, 2004). There is also evidence that shows that anger coping may be related to poor cardiovascular recovery among African Americans. Dorr, Brosschot, Sollers and Thayer (2007) found that blood pressure and heart rate were slower to recover when African American subjects were asked to express anger, as opposed to when they were asked to restrain their anger expression.

John Henryism. John Henryism is described as an active coping strategy used by

many African Americans to deal with psychosocial and environmental stressors, including but not limited to, experiences with racism (Dressler et al., 1998). Individuals who utilize John Henryism as a coping strategy are extremely driven toward success. However, in many instances these individuals lack the resources (educational, financial, emotional etc.) needed to obtain sought after goals (Dressler et al., 1998). Individuals with high levels of John Henryism and inadequate resources are at significant risk for adverse health outcomes (Dressler et al., 1998). John Henyrism has been studied among African Americans in relationship to perceived racism and blood pressure. Dressler et al. (1998) found gender specific differences related to John Henyrism among African Americans. Higher levels of John Henyrism were associated with increases in blood pressure and hypertension risk among African American men (Dressler et al., 1998). However, as John Henyrism increased among African American women it was noted that blood pressure and hypertension risk decreased (Dressler et al., 1998).

Although there has been some research that has investigated racism-specific coping strategies, this area remains understudied as it relates to the effectiveness of these strategies on health outcomes. Coping strategies such as anger suppression and denial, in relationship to racial stress, have been noted to have a deleterious impact on the cardiac health of African Americans. However, there is less evidence regarding the effectiveness of other strategies such as, social support. Furthermore, it has been proposed that African Americans may use fewer coping strategies with racial stress than when confronted with general stress (Plummer & Slane, 1996). This implies that racial stress may be more difficult to handle, and suggests a need to determine the effectiveness of racism-specific coping strategies identified among this population.

Theoretical Framework

The mid-range theory used to guide this study was derived from Lazarus (1999; Lazarus & Folkman, 1984) Cognitive-Motivational-Relational Theory of Stress and coping. Key concepts used to explicate this theory include: cognitive appraisal, antecedents (personal and environmental), stress, coping, and adaptational outcomes.

Cognitive-Motivational-Relational Theory of Stress

Cognitive appraisal. Lazarus & Folkman (1984) refer to three types of cognitive appraisal: primary, secondary, and reappraisal. Primary appraisal is how a person assesses an encounter (Lazarus & Folkman, 1984). In primary appraisal, an event can be considered irrelevant, benign positive, or stressful. Due to the fact that there are no perceived benefits or threats with encounters that are appraised as irrelevant, there are no implications for the individual's well being (Lazarus & Folkman, 1984). Person-environment encounters that are appraised as positive are referred to as benign-positive appraisals and have the potential to improve the well being of an individual (Lazarus & Folkman, 1984). Stressful appraisals involve threat, harm/loss, and challenge.

As a result of instances when an encounter has been appraised as stressful, further processes are needed to attempt to manage the encounter. Hence, Lazarus & Folkman (1984) identify secondary appraisal as an activity that involves assessment of coping strategies as it relates to a specific encounter, as well as, an assessment of the ability to utilize the identified coping strategies (Lazarus & Folkman, 1984). Both primary and secondary appraisals interact with one another in a complex evaluation process of the person-environment transaction, and the coping options that are available. The third type of cognitive appraisal is referred to as reappraisal. "Reappraisal refers to a changed appraisal based on new

information from the environment and/or the person" (Lazarus & Folkman, 1984, p. 53). Reappraisal of the person-environment interaction can influence stress.

Antecedants. There are both person and environmental variables that affect cognitive appraisal. "Person variables influence what we are able and unable to do as we seek to gratify needs, attain goals, and cope with the stresses produced by demands, constraints and opportunities" (Lazarus, 1999 p. 71). Person variables include goal commitments, beliefs and personal resources (Lazarus, 1999).

Goal commitments. Goal commitments affect the choices that an individual makes, as they are a representation of what is valued by the individual (Lazarus, 1999). The more attached an individual is to their goal commitments; the greater potential there is for an appraisal of threat that can result in stress (Lazarus & Folkman, 1984).

Beliefs. Beliefs are person variables and also affect cognitive appraisal, as they are used to assess what is currently happening, or what will happen in the future (Lazarus & Folkman, 1984). Beliefs are "pre-existing notions about reality" and shape the perceptual meaning of the person- environment interaction (Lazarus & Folkman, 1984). Belief systems are often unexpressed, and the influence on cognitive appraisal may be difficult to evaluate (Lazarus & Folkman, 1984). Lazarus & Folkman (1984) state that the beliefs about personal control are especially salient in stress theory. Personal control speaks to one's confidence of mastery of the events and outcomes within the environment.

Personal resources. Personal resources are person variables that also affect cognitive appraisal. Personal resources influence an individual's chance to attain goals, and cope with environmental stressors. Personal resources include, but are not limited to: intelligence, money, education, and social support.

Environmental variables: Environmental variables also act as antecedents to cognitive appraisal. *Demands, constraints, opportunities, and, culture* are all environmental antecedents that affect the appraisal process. *Demands* are "implicit or explicit pressures from the societal environment to act in certain ways and manifest socially correct attitudes" (Lazarus, 1999 p. 61). *Constraints* are behaviors that are viewed as not allowed, while *demands* are societal pressures placed on behavior that has been deemed as acceptable (Lazarus, 1999).

Stress

According to Lazarus and Folkman (1984), stress is described as a person-environment transaction, in which the individual evaluates the transaction with the environment as exceeding the ability to cope. From this perspective, stress depends not only on the events that take place within the environment, but also takes into consideration characteristics of the individual (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) believe that one's view of a situation determines whether an event is experienced as stressful, and also plays a role in determining the magnitude of the stress response (Lazarus & Folkman, 1984). A stressful appraisal of an event occurs when the person anticipates threat, harm/loss, or challenge (Lazarus & Folkman, 1984). Threat is defined as anticipated harm or loss. Harm/loss indicates that damage to the individual has already occurred. Encounters appraised as a challenge are viewed as opportunities for gain or growth. Lazarus (1999) later refined his definition of stress to include a subset of emotions that have psychological and physiological implications for health.

Coping

Coping is defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 p. 141). Coping implies effort and can include any strategy used to manage stress, regardless of the effectiveness of the strategy on stress reduction. There are two forms of coping that have been identified by Lazarus and Folkman (1984): problem-focused and emotion-focused. Problem-focused coping results in efforts to regulate the identified stressor, and may be directed toward self or the environment (Lazarus, 1999). Emotion-focused coping is aimed at regulating the emotions associated with a stressful encounter. Both coping and appraisal influence physiological and psychological outcomes (Lazarus, 1999).

Adaptational Outcomes

Appraisal and coping processes influence adaptational outcomes. There are three types of outcomes as described by Lazarus and Folkman (1984): (a) social functioning, (b) morale or life satisfaction, and (c) somatic health. Social functioning is defined as the ways that the individual fulfills his/her roles and maintains relationships (Lazarus & Folkman, 1984). Social functioning is determined by how well the individual is able to appraise and cope with daily events (Lazarus & Folkman, 1984). Morale is specific to how an individual feels about themselves and their conditions in life; assessment of morale focuses on general negative and positive emotions (Lazarus & Folkman, 1984). In terms of somatic health, stress, emotion, and coping are viewed as casual factors in illness (Lazarus & Folkman, 1984). The relationship between morale, social functioning and somatic health are complex. Good functioning in one outcome does not necessitate the same results in another outcome.

For example, an individual may be effectively functioning socially, however may not be functioning well in terms of somatic health (Lazarus & Folkman, 1984).

Stress and Emotion

Lazarus (1999) later refined his stress and coping theory to emphasize the transactional and emotional aspects of stress in relationship to the person and environment (Lazarus, 1999). Stress is described as a subset of emotions that has psychological and physiological implications on health. Fifteen emotions have been identified: anger envy, jealousy, anxiety, fright, guilt, shame, relief, hope, sadness, happiness, pride, love, gratitude, and, compassion (Lazarus, 1999). Lazarus describes emotions as negatively-toned or positively-toned. Negatively-toned emotions such as, anger, jealousy, and, anxiety have been labeled as stress emotions. Emotions such as happiness, love, and, gratitude have been identified as positively-toned emotions. Positively toned emotions can become stress emotions when they are a manifestation of events that present challenge. For example, a wedding/marriage can present with emotions of happiness for an individual, however stress emotions can develop as a result of the preparation needed to plan the event.

Knowledge regarding one's emotional state provides information about how a person has appraised an encounter, as well as, how they are coping with it. "Each emotion has a different scenario or story about an ongoing relationship with the environment" (Lazarus, 1999 p. 34). Additionally, if someone has a typical emotional response such as, anger, to various encounters, this indicates a tendency toward that emotion and may be characteristic of their personality. Hence, understanding one's emotional response may also provide information about how that individual relates to the world (Lazarus, 1999).

Emotion and Appraisal

Person and environmental antecedents affect appraisal and are tied to stress and emotion; hence emotions are a result of appraisal (Lazarus, 1999). During the appraisal of stimuli, the individual will experience negatively toned or positively toned emotions (Lazarus, 1999). Appraisal consists of conscious and unconscious processes that allow the individual to evaluate the stressor and the coping resources available (Lazarus, 1999).

In primary appraisal, there are three components that affect emotions: *goal relevance, goal congruence or incongruence, and type of ego involvement* (Lazarus, 1999). *Goal relevance* is important in determining the significance of an encounter to well being. If no significance or threat to a goal has been identified, there is no emotion or stress. *Goal congruence or incongruence* refers to whether a transaction facilitates or hinders a goal. If the transaction hinders goal attainment, negatively-toned emotions are likely to be expressed. If the transaction is congruent with goal attainment, positively-toned emotions are likely to be expressed. *Type of ego involvement* refers to the role of diverse goals in the influence of an emotion.

Secondary appraisal has to with options for coping and evaluating a *choice of emotion*. *Choice of emotion* requires assessment of *blame or credit, coping potential, and future expectations* (Lazarus, 1999). Assessment of *blame or credit* requires the individual to decide who or what is responsible for the stressful encounter. *Coping potential* is dependent upon the individual's belief about their capacity to resolve a stressful encounter. *Future expectations* can be positive or negative in the person-environment transaction, depending on the individual's belief about the nature of the transaction, whether they believe the transaction will get better or become worse. Emotions are a result of both primary and

secondary appraisal.

Core Relational Themes

 "Core relational meaning refers to the synthesis of the whole relational meaning underlying a given emotion" (Lazarus, 1999 p. 94). Relational meaning refers to the individual's appraisal of the significance of a person-environment transaction to their wellbeing. Lazarus (1999) believes that there are specific appraisal components (core relational themes) for each of the previously identified 15 emotions. The significance of core relational themes is that they assist with regulating the expression of emotions. Emotions affect both psychological and physiological responses. These responses assist with moving individuals toward coping and are mediated by the individual's appraisal and available resources (Lazarus, 1999).

Emotions and Coping

 Lazarus (1999) believes that coping is involved in the emotion process from start to finish in the person-environment transaction. Secondary appraisal prepares the way for coping as it affects a person's understanding of the nature of the encounter, the available resources, and any constraints against them (Lazarus, 1999). Coping changes as the person-environment transaction changes and is considered a mediating factor of emotional outcomes. Lazarus (1999) states that an emotional state can change from the beginning of an encounter to the end of an encounter depending on the coping strategy employed.

 Lazarus (1999) also believes that when a transaction is reappraised as stressful, individuals alter their emotions by creating a new relational meaning of the stressful encounter. For example, upon discovery of an illness, an individual may become anxious. However, once treatment options are discussed and they have reappraised the situation, they

may feel relief and more reassured of recovery. Reappraisal has been identified as an effective way to cope with stressful situations (Lazarus, 1999).

The Model of Perceived Racism and Shifting

This dissertation study was guided by *The Model of Perceived Racism and Shifting (MPRS).* The middle-range theory was derived from the stress and coping framework described by Lazarus (1999) and Lazarus and Folkman (1984). There are five key concepts in the Model of Perceived Racism and Shifting that have been derived from Lazarus' work, specifically: 1) Socio-demographic factors, 2) Perceived racism, 3) "Shifting", 4) Cardiac Health, and 5) Affect. The relationship of these concepts to Lazarus's stress and coping model will be discussed in the sections below. The purpose of The Model of Perceived Racism and "Shifting" is to provide a structure that can explain the relationships between perceived racism, "shifting" and health outcomes.

The following section contains the conceptual definition that was found in Lazarus' conceptual framework, and the theoretical definition, which has been constructed specific to the Model of Perceived Racism and Shifting.

Antecedents. Antecedents influence cognitive appraisal and consists of both person and environmental variables (Lazarus, 1999). Within the MPRS, person variables were the focus of study. Person variables include goal commitments, beliefs, and personal resources.

Socio-demographic factors. Antecedents are theoretically defined as socio-demographic factors. Socio-demographic factors are those factors that influence an individual's perception of racism in any given encounter. These factors include age, gender, education level, income and racial identity. For the purposes of the MPRS, racial identity was defined as the significance an individual attributes to being African American.

The theoretical concept of socio-demographic factors was operationalized using a demographic data sheet created by the investigator, and the Multidimensional Inventory of Black Identity (MIBI) centrality scale (Sellers, Rowley, Chavous, Shelton, & Smith, 1997) was used to measure racial identity.

Stress. Lazarus and Folkman (1984) define stress as a person-environment transaction, in which the individual appraises the transaction with the environment as exceeding the ability to cope. From this perspective, stress depends not only on the events that take place within the environment, but also takes into consideration characteristics of the individual (Lazarus & Folkman, 1984). Lazarus (1999) later refined his definition to include stress as a subset of emotions that have physiological and psychological ramifications.

Perceived racism. Within the MPRS, stress was defined theoretically as perceived racism. Racism has been described in the literature as an environmental stressor that is chronic in nature. Therefore, perceived experiences of racism have both psychological and physiological ramifications on the health of individuals. Due to the fact that perceived racism involves the appraisal of environmental encounters, the description of perceived racism, as portrayed in the literature, support the idea of the person-environment transaction being crucial in determining the magnitude of the stress response. This is consistent with Lazarus's description of the stress process. Thus, for the purposes of this study, *perceived racism was defined as a stressor associated with experiences of perceived bias or mistreatment from others due to one's phenotypic characteristics.* Perceived racism may occur in both inter-and intra-personal group situations.

The theoretical concept of perceived racism was operationalized using the

Experiences of Discrimination Scale (EOD) created by (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). The EOD was chosen because of its wide use among African Americans to measure self-reports of racism. The instrument has shown good reliability and validity. The tool was also chosen because it can be easily modified to measure both intergroup and intragroup racism.

Coping. Lazarus & Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 p. 141).

Shifting. Coping was explored through the theoretical concept of "shifting". For the purpose of this dissertation work, *"Shifting" was defined as the external and internal processes used to manage the anticipation of both inter and intragroup racism. The external processes are the behavioral changes used to manage the stress associated with the anticipation of inter or intragroup racism. Internal processes are what occurs cognitively in anticipation of inter or intragroup racism, which in turn influences behavior.* Shifting is one of the ways that African Americans use to respond to living a "dual existence", experiencing racism from individuals of another race, as well as other African Americans. The theoretical concept of "shifting" was operationalized using the Perceived Racism Shifting Survey (PRSS), which was developed for this study.

Adaptational outcomes. According to Lazarus & Fokman (1984) somatic health is an adaptational outcome and refers to the physiological response to a given person-environment transaction appraised as stressful (Lazaurs & Folkman, 1984). Somatic health was explored through the theoretical concept of *cardiovascular health*. Morale is an

adaptational outcome and is specific to how an individual feels about themselves and their conditions in life (Lazarus & Folkman, 1984). The adaptational outcome of morale was explored through the theoretical concept of *affect*.

Cardiovascular health. *Cardiovascular health was defined as the structural and functional integrity of the cardiovascular system as evidenced by cardiovascular indicators being within well-established normal ranges.* Systolic and diastolic blood pressure, body mass index, and salivary high-sensitivity C-reactive protein (CRP) was obtained in order to operationalize the theoretical concept of cardiovascular health.

Blood pressure. Cardiac outcomes, specifically blood pressure as a measure have been examined frequently in the perceived racism literature among African Americans. Hence, was chosen as a measure for this study. The literature suggests that perceived racism might affect hypertension via stress exposure and reactivity (Brondolo et al., 2011). Ambulatory blood pressure has been investigated to measure blood pressure reactivity in relationship to perceived racism (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Smart, Pek, Pascoe, & Bauer, 2010; Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010).

Body mass index (BMI). BMI is a common measure for obesity. Obesity has negative implications on cardiac health (Gorber et al., 2007). This empirical measure was chosen because obesity is a common health concern among African Americans and contributes to cardiac disease risk (Gorber et al., 2007). BMI was calculated using the subject's weight and height using the following formula: [weight (pounds)/height (inches)^2] x 703 (U.S. Department of Health and Human Services, 1998).

*Salivary CRP.*C-reactive protein is a marker of systematic inflammation, and has been associated with acute stress (Miller, Rohleder, Stetler, & Kirschbaum, 2005; Nijm, Kristenson, Olsson, & Jonasson, 2007), chronic stress (Coussons-Read, Okun, & Nettles, 2007; Ouellet-Morin, Danese, Williams, & Arseneault, 2011; Ranjit et al., 2007), and poor cardiovascular health outcomes (Cushman et al., 2005; Sesso, Wang, Buring, Ridker, & Gaziano, 2007; Willerson & Ridker, 2004). Due to the fact that racism is conceptualized as a stressor, and coping as a potential mediating factor on cardiac health outcomes, high-sensitivity CRP was deemed an appropriate biomarker for use in this study. Although use of CRP has been understudied in relationship to racism specifically, one study found that self-reported experiences of everyday discrimination were associated with elevated serum CRP levels among a sample of older African Americans (Lewis, Aiello, Leurgans, Kelly, & Barns, 2010). For the purposes of this dissertation study, salivary CRP was chosen as opposed to blood spot or serum CRP due to cost and feasibility. One recent study suggests that salivary CRP allows valid prediction of serum CRP, finding a moderate-to-strong correlation (r= .72, p<.001) (Ouellet-Morin et al., 2011).

Affect. *Affect was defined as an individual's trait mood state in relationship to perceived racism and "shifting".* The theoretical concept of affect was operationalized using the 20-item Positive and Negative Affect Schedule Scales (PANAS) developed by Watson, Clark, & Tellegen, 1988. The PANAS was selected for this study due to its established validity and reliability in the literature. It has also been used among African American subjects (Holt et al., 2011). The literature has established that perceived racism has a negative impact on mental health (Broudy et al., 2007, Gee et al., 2007; Salvatore &

Shelton, 2007). The PANAS is a good measure of trait mood state, which is an aspect of mental health.

Philosophical Assumptions of The Model of Perceived Racism and Shifting

1. Nursing is concerned with the health of humans recognizing that humans are in constant interaction with the environment.

2. Stress arises from the person environment interaction.

3. Stress negatively affects mental and physical health.

4. Nursing is concerned with the role of perceived racism on the health and well being of individuals.

5. Perceived racism arises from the person environment interaction and is an acute and chronic stressor.

6. Perceived racism can be experienced in both inter- and intra group situations.

7. Perceived racism negatively affects physiological and psychological health.

8. Perceptions of racism can occur at the conscious or subconscious level

9. "Shifting" is an internal and external process involving cognitive and behavioral coping strategies.

10. "Shifting" is a mediator between perceived racism, cardiac health and affect.

11. "Shifting" can positively or negatively influence physical and mental health.

FIGURE 1. THE MODEL OF PERCEIVED RACISM & SHIFTING (MPRS)
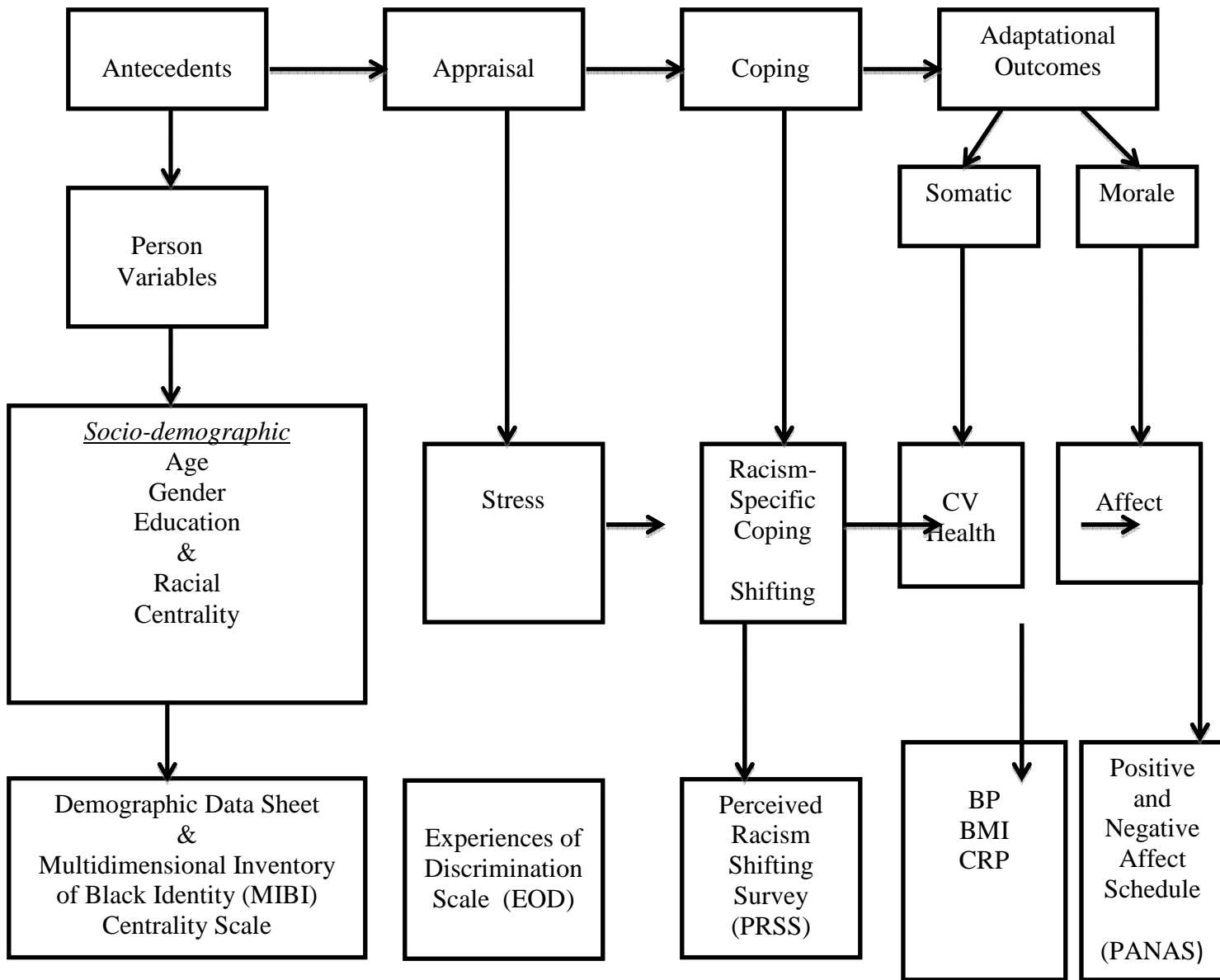
Chapter Summary

Perceived racism is a chronic stressor and may be a contributing factor in the health disparities among African Americans. Due to the fact that perceived racism can be experienced intergroup and intragroup, coping strategies are necessary for African Americans to navigate in both a "Black" and "White" world. In an effort to cope with a dual existence, "shifting" has become a common practice among African Americans.

"Shifting" is the external and internal processes used to manage the anticipation of both inter and intragroup racism**.** Currently the concept is understudied, particularly as it relates to perceived racism. Therefore, the relationship between perceived racism, "shifting", and health is not well understood. In an effort to better understand these relationships, The Perceived Racism Shifting Survey (PRSS) was developed to measure self-reports of "shifting". Furthermore, the author developed The Model of Perceived Racism and Shifting derived from Lazarus (1999) and Lazarus & Folkman 's (1984) stress and coping theory, to provide a theoretical bases for the development of PRSS.

CHAPTER 3 "STUDY PROCEDURE"

Methods

The purpose of this study was to develop and test a culturally-sensitive instrument to assess "shifting" among African Americans. The aims of the study were: 1) to develop a culturally-relevant instrument to assess self-reports of "shifting" in response to perceived interpersonal racism among African Americans, 2) to perform an initial psychometric evaluation of the newly-developed instrument, and 3) to determine socio-demographic factors associated with "shifting". Tran & Aroian's (1999) method for developing a culturally-relevant instrument was used to guide the study. Tran & Aroian (1999) describe a three-phase, nine step process in instrument development. *Phase 1* includes two steps: (1) defining a concept within its cultural meaning, and, (2) gaining cultural consensus among the ethno-cultural group of interest. *Phase 2* of the instrument development process includes five steps: (3) developing measurement items, (4) evaluation of the items by content experts, (5) pre-testing the measurement items from a sample of individuals among the ethno-cultural group of interest, (6) revision of measurement items based on additional peer feedback and (7) pilot testing the instrument. *Phase 3* consists of the last two steps: (8) analysis of internal structure of the instrument, and (9) establishing the validity of the instrument in relationship to other variables.

Phase 1: Concept Development

"Shifting" from an emic perspective. The process of defining the concept of "shifting" for the purposes of this dissertation work began by reviewing the literature on "shifting". The concept emerged as a result of Jones and Shorter-Gooden's (2003) research, which included 71 in-depth interviews of African American women. Although the study

only consisted of interviews with African American women, the authors acknowledge that "shifting" is a common practice among African American men and women (Jones & Shorter-Gooden, 2003). According to the authors, "shifting" refers to cognitive, as well as, behavioral changes made by African Americans to cope with biases and mistreatment (e.g., racism, sexism, and classism) (Jones & Shorter-Gooden, 2003). As a result of the data collected from the interviews, six "shifting" strategies (battling the myths, scanning and surveying and scrutinizing, walling it off, seeking spiritual and emotional support, retreating to the black community and abiding by the home codes, and fighting back) were identified and have been explained in detail in the background section of this proposal. In another qualitative study conducted by Hall et al. (2011), 41 African American women identified "shifting" as a coping strategy in relationship to perceived racism and perceived sexism in the workplace. The description of the concept in that study was consistent with the work of Jones & Shorter-Gooden (2003).

Upon review of the literature on racism-specific coping conducted among African Americans, the concept of "shifting" is not often used. However, elements of the six "shifting" strategies explicated by Jones & Shorter-Gooden (2003) are noted throughout the racism-specific coping literature. For example, (Feagin & Sikes, 1994) qualitative study consisting of 209 African American men and women, revealed both cognitive and behavioral responses to racism including: assessment before acting, withdrawal and avoidance, acceptance, verbal confrontation, and, taking legal action. These coping strategies are consistent with Jones & Shorter-Gooden's (2003) "shifting" strategies referred to as "scanning, surveying, and scrutinizing", "walling it off", and "fighting back".

Seeking social support (Brondolo, ver Halen, Pencille, Beatty, & Contrada, 2009)

and religious coping (Lewis-Coles & Constantine, 2006) have also been identified as strategies within the racism coping literature specific to African Americans, and are consistent with Jones & Shorter-Gooden's (2003) "shifting" strategy referred to as "seeking spiritual and emotional support".

Krieger & Sidney's (1996) study examined the association between blood pressure, perceived discrimination, and coping responses to unfair treatment. The results of their study revealed that working class African Americans who stated that they typically accept unfair treatment and had reported experiencing racism, had higher blood pressures than working class African Americans who typically challenged unfair treatment and had reported experiencing racism. This study suggests acceptance and internalizing racial discrimination (walling it off) as opposed to challenging it (fighting back) may have affects on blood pressure.

Although Jones & Shorter-Gooden (2003) describe, "shifting" in terms of cognitive and behavioral coping, there are a few studies that look at the effects of anger coping in relationship to racism on the health outcomes of African Americans (Armstead and Clark 2002; Brondolo et al., 2009; Dorr et al., 2007; Krieger, 1990; Krieger and Sidney, 1996). Hence, suggesting that emotional coping might be another domain needed to define "shifting" among this population.

Gaining consensus. The concept of "shifting" has been investigated qualitatively among African Americans; thus, contributing to the understanding of the concept's cultural meaning among this population. The definition of "shifting" for this proposed study was developed as a result of the "shifting" literature, as well as, the author's previous qualitative work.

The author's previous study included individual interviews, as well as, focus group data that explored perceived racism and coping among African Americans men and women (Hollier, 2011, unpublished). One of the subthemes that emerged regarding experiences with racism included "living a dual existence" (experiencing racism from both Caucasians and African Americans). Hence, consistent themes regarding the coping processes used to manage the perceptions of racism were identified for both inter and intragroup racism, including the themes of vigilance, code switching, and fighting back. The participants described *vigilance* as the continuous scrutiny of their behavior, their appearance, and the behavior of others, in response to experiences with intergroup and intragroup racism. Another theme identified among the groups was *"code switching"*. Although the literature refers to "code switching" from the perspective of linguistic changes, the participants used the term in reference to behavioral changes in general (speech, appearance etc.). Another theme identified among the group participants was *"fighting back"*. Many of the participants identified that they speak up in response to encounters with racism. The themes identified in this qualitative study are consistent with the racism-specific coping literature as well as the "shifting" strategies discussed by Jones & Shorter-Gooden (2003), thereby providing consensus regarding the concept of shifting as one of the strategies used to cope with perceived interpersonal racism.

Although Jones and Shorter-Gooden (2003) used shifting in terms of discrimination (e.g., racism, sexism, classism), the purpose of this study was to develop a culturally-sensitive instrument to measure shifting in response specifically to perceived racism. Hence, for the purposes of this dissertation, *"Shifting" was defined as the external and internal processes used to manage the anticipation of both inter- and intragroup racism.*

Shifting is one of the ways that African Americans use to respond to living a "dual existence". Based on the results of the pilot study and other qualitative studies (Hall et al., 2012; Jones & Shorter-Gooden, 2003), two domains of "shifting" as a coping process for perceived racism were identified: internal and external (described in the section below).

Phase 2: Instrument Development Phase

 Developing a pool of measurement items. *Phase 2 step 3* involved developing a pool of measurement items for the PRSS. The author identified two types of "shifting" specific to perceived racism, internal shifting and external shifting. Items specific to internal shifting were written with the intent to measure what occurs cognitively in anticipation of intra and intergroup racism. Items written for external shifting were written with the intent to measure behavioral changes used to manage the anticipation of intra- and intergroup racism. The domains and items were established as a result of the qualitative data obtained from the author's previous study, as well as information from the literature review. There were a total of 60 initial items, 32 question created with the intent of measuring external shifting and 28 created with the intent of measuring internal shifting. According to Pedhazur & Schmelkin, (1991) 10-15 items is the suggested number of items needed for each dimension to ensure that there is a sufficient number of items available at the conclusion of the scale, as some items may be eliminated as a result of the peer validation and pre-testing processes. Three to five psychometrically sound items are needed to adequately measure a concept (Pedhazur & Schemelkin, 1991).

 Obtaining expert validation of items. In an effort to establish content validity of the PRSS, content experts evaluated the instrument items. The initial items along with the content validity evaluation form provided to the experts can be found in *Appendix A.*

Content validity is established to determine the "representativeness or content relevance" of the instrument items (Lynn, 1986). The item pool was reviewed for content validity by five experts, which included experts in instrument development, racism, and coping research, social determinants of stress and health, and health literacy.

Each content expert was provided an evaluation tool to assess the instrument. The experts were asked to rate each item according to its relevance (content validity) to "shifting", and item clarity. Each item was evaluated for relevance using a four-point scale: 1= not relevant, 2=somewhat relevant, 3=quite relevant, and 4=highly relevant (Lynn, 1986). In addition, a four point scale was used to rate items for clarity: 1=not applicable, 2=very unclear, 3=minor revision, 4=no revision. The experts were also asked to rate relevant items as "external shifting" or "internal shifting", by writing either the letter "E" for external or the letter "I" for internal next to each item. The evaluation tool also provided a means for the experts to comment on each item.

Once the content experts evaluated the measurement items, the index of content validity (CVI) was calculated for each measurement item, as well as for the entire instrument. The CVI of each item was calculated by establishing the proportion of experts who deem the item relevant (scores of 3 or 4) (Waltz & Bausell, 1981). An item was considered content valid with a rating of 3 or 4 by at least four of the five experts. A CVI of .83-1.00 is desired for each item and the entire scale (Lynn, 1986). To determine the CVI for the entire instrument, the proportion of total items judged as content valid was calculated (Waltz & Bausell, 1981).

Items that were not considered relevant were removed or revised. Additionally, the investigator evaluated items that were recommended for omission by the experts, and a

decision was made regarding continued inclusion of the items or removal of the items based on theoretical considerations, resulting in 50 items remaining prior to pre-testing. Once expert validation of the instrument was complete, the Flesch Kincaid readability level was calculated using Microsoft software. The National Adult Literacy Survey shows that the average adult in the U.S. reads at the 7th grade level (Kutner et al., 2007). The Flesch Kincaid reading level for the PRSS was 6.9.

Pre-testing the measurement items. After content validity evaluation and item pool revision, *phase 2 step 5* involved pretesting the measurement items with a small sample of African Americans. The revised items along with the pre-testing evaluation form can be found in *Appendix B.* The purpose of pretesting was to evaluate the instrument for potential issues with administration, comprehension, content, and missing data (Tran & Aroian, 1999). Wayne State University's Institutional Review Board (IRB) reviewed the study prior to the recruitment of subjects for the pre-testing phase.

Sample. A convenience sample of 12 African Americans meeting the inclusion criteria was recruited from a local church in the metropolitan Detroit area. The inclusion criteria for the pre-testing sample were: 1) self-identified African American male or female 2) has experienced racism, 3) able to speak and understand English, and 4) 18-80 years of age. The exclusion criteria were: 1) persons who did not meet the inclusion criteria, and 2) individuals who had obvious cognitive impairment or mental illness.

Pretesting recruitment. Subjects were recruited through fliers and announcements. Fliers were posted on bulletin boards at specific recruitment sites. The fliers included: participant criteria, purpose of participation, location, timeframe, dates of participation, as well as, the investigator's contact information. Verbal announcements were made at the

recruitment sites, reiterating the same information included in the flier. In addition, the investigator recruited individuals one-on-one. Potential participants were told that the purpose of their participation was to review a questionnaire in which the researcher is interested in their critique of the questions asked. Participants who were interested were screened for eligibility. Obvious cognitive impairment was not in question among any of the subjects in this sample; hence the Mental Status Assessment of Older Adults (The Mini-Cog) (Borson, Scanlan, Brush, Vitallano, & Dokmak, 2000; Borson, Scanlan, Watanabe, Tu, & Lessing, 2006; Lessig, Scanlan, Nazemi, & Borson, 2008) was not performed during this phase.

Pretesting procedure. Prior to evaluating the tool, the investigator obtained written consent. The consent included the purpose of their participation, the procedure, the timeframe, and any possible psychological risks (anger, sadness, anxiety etc.) associated with recalling experiences with racism. After the consent was obtained, the participants were assessed for literacy. Literacy was assessed using The Rapid Estimate of Adult Literacy in Medicine—Short Form (REALM-SF). The REALM is a 7-item word recognition that has been well validated in research and has been used to assess health literacy (Agency for Healthcare Research, 2009). The scores for the REALM range from zero to seven. A score between four and six indicates that the subject can read between a 7th and 8th grade level. All of the subjects in the pretesting phase scored at least a 6 or greater on the REALM and were able to evaluate the PRSS without assistance.

After the participants were assessed for literacy, they were asked to complete the items on the PRSS. Upon completion of the instrument, the investigator asked the participants "How easy or difficult did you find the survey questions?" Subjects were asked

to elaborate on their responses as needed. The investigator also assessed for discrepancies between the respondents understanding of the items, and the intended purpose of the items (Waltz et al., 2010). This was done using the "Think Aloud" method (Kucan & Beck, 1997). The "Think Aloud" method requires that the investigator chose items from the instrument and asks the participants to read the item. They are then asked to "explain what they had in mind when they chose their response" (Kucan & Beck, 1997). The content experts expressed concerns about the use of the word "downplay" and the redundancy of the "hair" items. Thus, the following items from the PRSS were chosen for the "Think Aloud" method: 1) I "downplay" my level of education, 2) I often wear my hair natural in order to "fit in", 3) I often "straighten" my hair in order to "fit in", 3) I often change my hairstyle in order to "fit in". The investigator digitally recorded and transcribed verbatim the participant's responses to the above questions, so that decisions regarding the revision or removal of items could be made at a later time. The subjects were asked to choose a pseudonym prior to recording their responses, so that their anonymity could be maintained. The researcher was the only person who had access to the recordings and transcripts. Digital recordings and transcriptions were destroyed once the responses were evaluated. Pretesting of the instrument was conducted in a secluded setting where confidentiality of the participant was maintained.

Step 6 in the instrument development process involved obtaining input in an effort to make revisions to the instrument items that had been identified as problematic. Thus, subjects from the pretesting phase were also utilized to obtain input for revising items. In order to obtain feedback, the subjects were asked the following questions: 1) If you found any of the questions not relevant to "shifting" or difficult to understand, how would you change the question in order to make it better?" 2) "If this was your survey, are there any

questions you would get rid of? If so, which questions and why?" 3) "If this was your survey, are there any questions you would add?" The investigator digitally recorded and transcribed verbatim the participant's responses. The pretesting transcripts were reviewed to determine whether to remove or revise specific items. Upon completion of the evaluation of the instrument, the investigator thanked the participants for their time. Audiotapes and transcripts were kept in a locked file cabinet that was only accessible to the investigator. Audiotapes and transcripts will be destroyed at the completion of the study.

Pilot-testing the measurement items. After revisions to the PRSS were made as a result of the pre-testing phase 2 *step 7* of the instrument development process consisted of pilot-testing the instrument. According to Tran & Aroian (1999) pilot-testing allows the investigator to evaluate the length of time it takes to complete the instrument, item frequencies, and missing data. Missing data may mean the item is asking for information that is too personal, threatening, or not applicable (Waltz et al., 2010).

Pilot-Testing Sample. A convenience sample of eight African American men and women between the ages of 21-62 years were recruited in January 2013. Age, gender, and level of education were self-reported. The inclusion and exclusion criteria were the same as the pre-testing phase.

Pilot-testing procedures. The revised PRSS was compiled into a single instrument (Appendix C) to distribute for pilot testing among eight African American participants. The sampling plan, recruitment strategies, cognitive assessment, consent procedure, and literacy assessment, were the same as listed in the pre-testing stage. Data collection was conducted in a secluded setting where confidentiality of the participants was maintained. Item frequencies of the pilot-test data were evaluated using SPSS software in an effort to

determine variability in response to each item. As a result of the pilot test, it was determined that no additional changes needed to be made to the PRSS prior to testing it in a larger sample.

Phase 3: Psychometric Testing

Based on the results of the pre-test and the pilot-test, psychometric testing of the PRSS was initiated in *Phase 3*. A descriptive-correlational study was conducted with a sample of 145 African Americans. The internal structure of the instrument was evaluated as well as the instrument's relationship to other variables.

Initial Psychometric Evaluation of the PRSS

Study design. A descriptive-correlational design was used to obtain data to evaluate the psychometric properties of the PRSS. Internal structure of the PRSS was established by analyzing item-to-item correlations, item-to-total scale correlations, and use of exploratory factor analysis (EFA) using principal axis factoring as an extraction method and using oblimin rotation. EFA is used to summarize data by grouping together variables that are inter-correlated and is often used in instrument development (Plichta & Kelvin, 2005). Principle axis extraction is used when the researcher wants to focus on the common variance (Plichta & Kelvin, 2005). An oblimin rotation allowed the investigator to see how the factors correlated with one another (Waltz et al., 2010). Rotated factors also allowed the investigator to interpret how the items loaded on the various factors. The validity of the PRSS was further evaluated by assessing its relationship to other variables.

Psychometric testing phase sample. A sample of African Americans ages 18-80 years of age living in the greater metropolitan Detroit area was recruited for the study between February 2014-July 2014. Due to the fact that "shifting" has been primarily studied

among African American women, quota sampling was used to achieve an approximate sample representation based on gender. Additionally, the literature suggests that coping with perceived racism may vary based on gender (Clark, 2004; Swim, Hyers, Cohen, Fitzgerald, & Byslama, 2003; Williams et al., 2003). Thus, measuring "shifting" among African American men and women was particularly salient for this study. Furthermore, life experiences for participants, particularly in relationship to perceived racism, may vary between age groups. Hence, the researcher obtained a sample consisting of a wide variety of ages.

Sample Size. When using EFA, the number of items on the instrument determines the sample size. It is suggested that 5-10 cases per instrument item should be used to determine sample size (Plichta & Kelvin, 2005). There are a total of 30 items (15 shifting White, 15 shifting Black) on the PRSS and the study comprised of 145 subjects. The inclusion criteria was as follows: 1) self-identified African American male or female 2) had experienced racism, 3) able to speak and understand English, and 4) 18-80 years of age. The exclusion criteria were: 1) persons who do not meet the inclusion criteria, 2) individuals who have obvious cognitive impairment or mental illness, and 3) women who report they are pregnant. Due to the fluctuations in blood pressure during pregnancy (Mannisto et al., 2013) that may affect the study findings, pregnant women were to be excluded from the study. All of the female participants screened for this study reported that they were not pregnant. Additionally, subjects with an elevated blood pressure ≥180 systolic or ≥110 diastolic were also excluded. According to The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7), subjects with a blood pressure in this range should be referred immediately to a physician for follow-

up (Chobanian et al., 2003), hence should not be allowed to continue in the study. Three male subjects were excluded from the study based on the above guidelines for elevated blood pressure. All three subjects were assessed by a nurse and educated regarding the need for immediate medical follow-up. Referrals to local clinics were provided to the subjects.

Recruitment. Subjects were recruited from Wayne State University, as well as churches, sororities, and fraternities throughout the Detroit metropolitan area. The recruitment sites were chosen in an effort to get a representative sample of both African American men and women who met the study criteria. The recruitment strategy, consent procedure, and assessment of literacy procedure were the same as described in the pre-testing stage. Participants who were interested in being apart of the study were screened for eligibility.

Instruments and measures for phase 3. The concepts that were examined in this study are antecedents, appraisal, coping, and adaptational outcomes.

Person factor antecedents. Person factor antecedents are person variables that affect cognitive appraisal. Person variables include goal commitments, beliefs, and personal resources (Lazarus, 1999). A demographic data sheet developed by the investigator, along with the Multidimensional Inventory of Black Identity (MIBI) Centrality Scale was used to measure antecedents for this study.

Demographic data sheet. The demographic data sheet obtained data specific to the subject's gender, age, education level, income, and health history. The previous research on "shifting" has been conducted mostly on African American women; therefore, collecting demographic information specific to gender was particularly salient for this study.

Multidimensional Inventory of Black Identity (MIBI) Centrality Scale. The MIBI is a 51-item measure consisting of seven subscales representing three dimensions of African American racial identity: Ideology, Regard, and Centrality. Due to the length of the entire instrument, the investigator decided to utilize only the 8–item Centrality Scale for this study. The Centrality Scale is a measure of whether race is a core part of an individual's self-concept. This subscale was selected because the literature suggests that the more central a person's racial identity is to their self-concept, the more likely those individuals are to associate discriminatory events to race (Sellers & Shelton, 2003). The developers of the MIBI evaluated the internal structure using factor analysis. Reliability of the Centrality Scale was evaluated using Cronbach's alpha coefficient. The authors reported a Cronbach's alpha coefficient of .77. The participants in this study were asked to respond to the MIBI Centrality Scale. The scale is a 7-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (7).

Appraisal. Cognitive appraisal occurs when a person considers two factors during an encounter: 1) the assessment of threat, harm, or loss related to the encounter (primary appraisal), 2) the assessment of coping strategies, and an evaluation of the ability to use them as it relates to the identified encounter (secondary appraisal) (Lazarus & Folkman, 1984). Thus, encounters that are appraised as threating or harmful are deemed stressful, and the assessment of coping resources is initiated. In this study, experiences of racial discrimination have been conceptualized as encounters that are appraised as stressful. The Experiences of Discrimination Scale (EOD) (Krieger et al., 2005) was used to measure self-reports of racism and operationalize the appraisal of racial stress. The Perceived Stress Scale

(PSS) was used to operationalize the appraisal of general stress and assess concurrent validity of the PRSS.

Experiences of discrimination (EOD). The EOD created by Krieger et al. (2005) consists of two sets of items. The first set of items, were used to measure intragroup and intergroup racial discrimination in seven different domains (at school, getting a job, at work, getting housing, getting medical care, from the police or in the courts, and on the streets in a public setting). The second set of items, were used to measure coping responses to inter- and intragroup discrimination. Therefore, the scale was broken into two parts (discrimination and coping) for analysis purposes.

The EOD is a self-administered paper-and-pencil instrument. Krieger et al., (2005) conducted a psychometric evaluation of the EOD using a sample consisting of African American and Latino participants. Scale reliability was high with Cronbach's alpha of .74 or greater reported, and a test-retest reliability coeffcient of .70 was also reported. Confirmatory factor analysis and structural equation modeling were used to establish internal structure. Convergent validity for the construct of discrimination was established by assessing the correlation between the EOD and the Major and Everyday Discrimination Scale (D. R. Williams, Yu, Jackson, & Anderson, 1997). Predictive validity was established by evaluating the EOD in relationship to psychological stress and smoking status.

For the purposes of this study, the EOD discrimination question was modified so that both intergroup and intragroup discrimination could be measured. The current question reads as follows:

> "Have you ever experienced discrimination-or been prevented from doing
> something- or hassled- or made to feel inferior in any of the following situations
> because of your race or color"? (Krieger et al., 2005, p. 1590)

For this dissertation work, the author asked the subject to fill out the scale items based on the following questions:

> "Have you ever experienced discrimination-or been prevented from doing something-or hassled-or made to feel inferior in any of the following situations because of your race or color by someone who is a different race than you"?

> "Have you ever experienced discrimination-or been prevented from doing something-or hassled-or made to feel inferior in any of the following situations by someone who is the same race as you"?

Perceived stress scale (PSS). In an effort to assess concurrent validity of the PRSS, the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983) was used to differentiate between appraisal of stressful events and coping with the event. The PSS is a 14-item self-report instrument created to evaluate the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983). The developers of this scale collected validation data among three samples, two samples consisting of college students, and a group of participants from a community smoking-cessation program. Both convergent and predictive validity were established. Convergent validity was established by evaluating correlations between the PSS and Life-Event Scores (number of life events and impact of life events). The correlation between the PSS and Life Events Scores increased significantly when taken into account the perception of the life event (impact) rather than looking at the number of life events. There was a small to moderate correlation between the PSS and Life-Events score, ranging .24-.49 among the samples. Predictive validity was established, by examining the correlations between the PSS, depressive and physical symptomatology, utilized health services, social anxiety and smoking-reduction maintenance (Cohen et al., 1983). In each of these instances, the PSS was a better predictor of the outcome than were

life-event scores (Cohen et al., 1983). The PSS showed adequate internal consistency reliability in each of the three samples ranging from .84-.86 (Cohen et al., 1983). Test-retest reliability was conducted in two days among the college sample (alpha coefficient .85) and at six weeks among the smoking cessation community sample (alpha coefficient .55) (Cohen et al., 1983). Test-retest correlations were expected to be higher for the shorter re-test intervals than the longer ones (Cohen et al., 1983). The PSS is one of the most widely used instruments to measure perceived stress and has shown good reliability among African American subjects (Sharp, Kimmel, Kee, Saltoun, & Chang, 2007; Sims et al., 2008).

Coping. Coping is defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 p. 141). In this study, "shifting" has been conceptualized as a coping strategy that African Americans use to manage anticipated inter-and intragroup racism. The Perceived Racism Shifting Scale (PRSS) developed for this study, was used to operationalize "shifting" as a coping strategy. Additionally, two questions on the EOD Scale that focus on coping responses to experiences of discrimination, was used to assess convergent validity of the PRSS.

PRSS. "Shifting" was measured using the PRSS instrument developed for this study. The purpose of the instrument was to measure self-reports of "shifting" as a coping strategy to perceived intergroup and intragroup racism, using Likert-type items ranging from 1=strongly disagree to 7=strongly agree. Tran & Aroian's (1999) methodology for creating a culturally-sensitive instrument was used to guide the PRSS's development; hence it is specific to measuring "shifting" among African Americans.

EOD coping questions. As previously stated above, two items from the EOD specific

to coping with unfair treatment was used to assess convergent validity of the PRSS. The EOD includes two questions that assess typical coping responses to unfair treatment. The coping questions were included on the survey tool provided to subjects. The coping questions were not modified and presented as originally written by Krieger et al. (2005). The coping questions from the EOD are the following:

"If you feel you've been treated unfairly, how do you respond-do you usually"
(circle one)
 1. Accept it as a fact of life
 2. Try to do something about it

"And if you have been treated unfairly-do you usually" (circle one)
 1. Talk to other people about it?
 2. Keep it to yourself?

Adaptational outcomes. There are three types of outcomes as described by Lazarus and Folkman (1984): (a) social functioning, (b) morale or life satisfaction, and (c) somatic health. In this study, the adaptational outcomes of focus were somatic health and morale. Morale is specific to how an individual feels about themselves and their conditions in life; assessment of morale focuses on general negative and positive emotions (Lazarus & Folkman, 1984). In terms of somatic health, stress, emotion, and coping are viewed as casual factors in illness (Lazarus & Folkman, 1984). Affect (morale) and cardiovascular health (somatic) were measured to evaluate outcomes in relationship to the PRSS.

Affect. Affect was measured using the 20-item Positive and Negative Affect Schedule Scales (PANAS) developed by Watson and colleagues (1988). The PANAS was used to evaluate the predictive validity of the PRSS by determining the psychological outcomes of "shifting". The PANAS consists of two mood scales, one measuring positive affect and the other measuring negative affect. Positive affect (PA) refers to the extent to

which a person feels enthusiastic and engaged (Watson et al., 1988). High positive affect is characteristic of "high energy and pleasurable engagement". However, low positive affect may reflect sadness (Watson et al., 1988). Negative affect (NA) includes a variety of mood states characteristic of distress, including anger, guilt, and anxiety. Low negative affect reflects a state of calm (Watson et al., 1988).

Each item on the PANAS is rated on a 5-point scale ranging from 1 = very slightly or not at all, to 5 = extremely. Each item on the scale indicates the extent to which a respondent has felt a certain way within a specified time frame (at this moment, today, the past few days, the past week, the past few weeks, the past year, and on average). The timeframe that was used for this study was "on average". The developers of this scale collected psychometric data from different samples. Instructions regarding the timeframes differed among the samples. Cronbach's alpha coefficients were reported for the various timeframes and ranged from .86 to .90 for the Positive Affect scale and .84 to .87 for the Negative Affect scale (Watson et al., 1988). For the timeframe identified as "on average", the alpha was .88 for Positive Affect and .87 for Negative Affect. Test-retest correlations ranged from .47 to .68 for Positive Affect, .39 to .71 for Negative Affect (for the on average time period, Positive Affect stability = .68, Negative Affect Stability = .71) (Watson et al., 1988). The authors established validity by examining the correlations for the measures of general distress, depression, and, state anxiety, which were more highly correlated with the Negative Affect scale than the Positive Affect Scale (Watson et al., 1988). The PANAS was selected for this study due to its established validity and reliability in the literature. It has also been used among African Americans (Holt et al., 2011). The PANAS is a good measure of mood states, an aspect of mental health.

Cardiovascular health. Systolic and diastolic blood pressures were obtained to measure cardiovascular health. Salivary c-reactive protein (CRP) levels were also obtained. CRP is a marker of systematic inflammation, and has been associated with acute stress (Miller et al., 2005; Nijm et al., 2007), chronic stress (Coussons-Read et al., 2007; Ouellet-Morin et al., 2011; Ranjit et al., 2007), and poor cardiovascular health outcomes (Cushman et al., 2005; Sesso et al., 2007; Willerson & Ridker, 2004). Body mass index (BMI) was also collected as an indicator of cardiovascular health. BMI is a common measure for obesity. Obesity has negative implications on cardiac health (Gorber et al., 2007). This empirical measure was chosen because obesity is a common health concern among African Americans and contributes to cardiac disease risk (Gorber et al., 2007).

Data collection procedures for phase 3. Prior to data collection, approval for each phase of the study was obtained from Wayne State University's Institutional Review Board. Written consent was acquired from the subjects, and an explanation of the study (procedures, risks, benefits, timeframe, and compensation) was provided before data collection. Once details of the study were addressed and all questions answered, the investigator obtained the subjects blood pressure, BMI, and saliva specimen. Patients who were prehypertensive (120-139mmHg systolic or 80-89mmHg diastolic) or hypertensive ($\geq$ to 140mmHg systolic or $\geq$ 90mmHg diastolic) (Chobanian et al., 2003) received an education sheet on high blood pressure and treatment.

Blood pressure. Blood pressure was taken using an automatic Omron HEM-907-E blood pressure machine. The machine was tested for accuracy using a mercury sphygmomanometer prior to use. Blood pressure was taken in accordance with the American Heart Association Guidelines (Pickering et al., 2005). Per the guidelines, blood pressure was

obtained in the following manner: 1) the subject was seated with their back supported and the upper arm bared without restrictive clothing. 2) The arm was supported at heart level, and the bladder of the cuff encircled at least 80% of the arm circumference. 3) Two readings were taken at intervals of 1 minute, and the average of those readings was recorded as the subject's blood pressure. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) classifies BP as ranging from optimal (systolic <120mmHg and <80mmHg diastolic), prehypertensive (120-139 systolic or 80-89 diastolic) or hypertensive (> than or equal to 140 systolic or > or equal to 90 diastolic). JNC suggests that all persons with hypertension be treated (Chobanian et al., 2003). Therefore, subjects with a blood pressure that fell into the hypertensive range were counseled to follow-up with their health care provider. Additionally, community resources were offered to those who did not have a primary care provider; written education on hypertension was provided. Additionally, subjects with an extremely elevated blood pressure, defined as systolic ≥180mmHg or diastolic ≥110mmHg, were excluded from the study and referred immediately for physician follow-up per JNC guidelines (Chobanian et al., 2003). Three male subjects were excluded from this study as a result of extremely elevated blood pressures.

BMI. The investigator recorded the subject's height using a tape measure and obtained the subjects weight using a digital scale. The scale was calibrated prior to use in the study to ensure accuracy. Once the height and weight was obtained, the BMI was calculated and recorded using the following formula: [weight (pounds)/height (inches)^2] x 703 (U.S. Department of Health and Human Services, 1998). BMI is a common measure for obesity.

Individuals with a BMI ≥ 30 are considered obese (U.S. Department of Health and Human Services, 1998). Obesity has negative implications on cardiac health and is a risk factor for a variety of chronic illnesses (Czernichow, Kengne, Stamatakis, Hamer, & Batty, 2011). The author chose this empirical measure for the study because obesity is a common health concern among African Americans and contributes to cardiac disease risk (e.g. hypertension) (Czernichow et al., 2011).

High sensitivity salivary c-reactive protein (CRP). The author chose CRP as an empirical measure for this study because CRP is a marker of systematic inflammation, and has been associated with acute stress (Miller et al., 2005; Nijm et al., 2007), chronic stress (Coussons-Read et al., 2007; Ouellet-Morin et al., 2011; Ranjit et al., 2007), and poor cardiovascular health outcomes (Cushman et al., 2005; Sesso et al., 2007; Willerson & Ridker, 2004).

The subjects were instructed not to eat 60 minutes prior to sample collection. The subjects were asked to rinse their mouth thoroughly with water 10 minutes before saliva was collected. Whole saliva was collected by instructing the subjects to tilt their head forward allowing saliva to pool on the floor of their mouth and then passing the saliva into a propylene container. Once the sample was collected, it was labeled with the time and date of sample collection. The sample was immediately refrigerated and was frozen at -20 degrees centigrade within eight hours of collection.

After saliva was collected, c-reactive protein levels were analyzed by enzyme-linked immunoassay specifically designed for quantitative measurement of salivary C reactive protein (Salivary C-Reactive Protein Kit No. 1-3302-5, Salimetrics, State College, PA). Analysis was performed by Salimetrics Lab. Results were read on Versamax microplate

reader (Molecular Devices, Sunnyvale, CA) at 450nm. All assays were run in duplicate and sensitivity, intra- and interassay precision was reported.

Surveys. After the blood pressure, BMI, CRP, had been obtained, the subjects were then asked to complete the survey packet (Appendix D) consisting of the demographic data sheet, the PRSS, the EOD, the PSS, the MIBI centrality, and the PANAS. Subjects who scored four or higher on the REALM-SF were allowed to complete the surveys without assistance. One subject scored less than a four, and the survey was read to that participant. The study took 30 minutes to an hour to complete. Once the subjects completed the data collection process, they received a $10 CVS gift card as a token of appreciation for their participation.

Data Management. An identification number was assigned to all of the data collected and was used for the purposes of allowing C-reactive protein data to be connected to the survey, blood pressure, and BMI data The participants could not be identified in relationship to the identification number. The data will be shredded five years after the study has been completed. Demographic data, BMI, blood pressure, CRP, and data from the questionnaires were coded and transposed into SPSS software for processing and analysis. The data was assessed for accuracy using item frequencies. Missing data analysis was also conducted. A log transformation was applied to correct for skewed distribution of the CRP results (Tabachnick & Fidell, 2001).

Data cleaning. The amount of missing data from the questionnaires was determined using SPSS computer software. Specifically, the patterns of missing data were more important than the amount of missing data (Tabachnick & Fidell, 2000). The questionnaires used for this study that had random missing responses totaling less than 10% were included

in the analysis, and missing values were estimated (Cohen & Cohen, 1983) using mean substitutions.

The majority of the surveys were reviewed for missing data immediately upon the subject's completion, hence missing data was minimal and appeared random. The demographic sheets didn't have any missing data. The PRSS, MIBI, PANAS and EOD (intergroup and intragroup) had missing data, however all of the surveys were included in the analysis as missing responses totaled less than 10%. Missing values were replaced using mean substitution.

Items on the PRSS were separated by questions that reflected, "shifting" around individuals who are a different race (shifting White), and items that measure "shifting" around other African Americans (shifting Black). The items for "shifting White" and "shifting Black" were scored separately. Specific items on the MIBI centrality and PSS were reverse scored as indicated on the questionnaire scoring instructions. Those items that were reversed scored are identified with asterisks in the survey packet (Appendix D). The EOD discrimination intergroup items and the EOD intragroup items were scored separately. Furthermore, The EOD coping items were coded to reflect responses that were characterized as "engaged" (score of 2), "moderate" (score of 1), or passive (score of 0) (Krieger et al., 2005). The PANAS was separated by negative and positive affect and scored separately as indicated on the scoring instructions.

Phase 3 step 8: Evidence of internal structure

Evidence based on internal structure is the extent to which relationships among items and components match the construct as operationally defined (Waltz et al., 2010). Evidence of internal structure of the PRSS was established by analyzing item-item correlations and

item-total scale correlations, and use of exploratory factor analysis (EFA). EFA was used to summarize data by grouping together items that were intercorrelated (Plichta & Kelvin, 2005). Once the structure of the scale was established, reliability analysis was conducted.

Item correlations. During instrument development, it is common for items to be evaluated prior to factor analysis to identify items that may not perform well (Waltz et al., 2010). This was done using SPSS computer program to analyze both item-to-total scale correlations and item-to-item correlations. The item-to-total scale correlations provided evidence as to how individual items correlated with the total construct of "shifting". Cronbach's alpha coefficient was used to interpret correlations, and alphas > .70 were deemed acceptable (Nunnally & Bernstein, 1994).

For the purposes of analysis in this study, the PRSS scale was separated into questions aimed at measuring "shifting" around individuals who are a different race (shifting White), and items that measure "shifting" around other African Americans (shifting Black). Item correlations were ran separately for both groups of questions. Items that measured "shifting White" correlated well with the overall scale and with one another, as well as those that measured "shifting Black". Hence, all of the items were retained for exploratory factor analysis.

Exploratory factor analysis (EFA). Once item analysis was completed, SPSS computer program was used to perform an EFA using principle axis factoring as the extraction method with oblimin rotation. From a strictly exploratory perspective, the number of factors was not identified, allowing the analysis to determine the number of factors (Waltz et al., 2010). EFA was performed separately for "shifting White" and "shifting Black" using an oblimin rotation of all factors with eigenvalues >1. An oblimin rotation

allowed the investigator to see how the factors correlated with one another (Waltz et al., 2010). Rotated factors also allowed the investigator to interpret how the items loaded on the various factors. Items with standard loadings of .30 or greater were identified. Eigenvalues > 1 and scree plots were also used to evaluate the factor solutions. As a result of the EFA, subscales for "shifting White" and "shifting Black" were identified. Each subscale was named by the investigator based on the interpretation of the items that loaded for each factor.

Total scale analysis. Upon completion of the EFA, it was determined that the total PRSS would also be included in the study analysis, as the concept of "shifting" has been conceptualized as the combination of "shifting" White and "shifting" Black". Hence, the total scale was established by combining the "shifting White" and "shifting Black" subscales.

Reliability. Once the subscales and the total PRSS were established, internal consistency was assessed.

Internal consistency. Internal consistency refers to the extent to which items on an instrument are measuring the same attribute or dimension (Polit & Beck, 2008). Cronbach's alpha coefficient is the most commonly used measure for internal consistency reliability (Waltz et al., 2010) and was used to evaluate the subscales and the total PRSS. A Cronbach's alpha coefficient >.70 was considered sufficient for internal consistency (Nunnally and Bernstein, 1994).

Phase 3 Step 9: Evidence of relationships to other variables

Due the fact that this was a cross-sectional study, theoretical linkages were used to examine convergent, and concurrent validity of the PRSS. Figure 2 below illustrates The Model of Perceived Racism and Shifting in relationship to other variables.

Convergent validity. Convergent validity is established when a new instrument is compared to an existing one to determine if they measure the same construct (Burns & Grove, 2011). "Shifting" was conceptualized as a coping strategy, thus convergent validity was established using Person product moment coefficient (r) with the two coping items from the Experiences of Discrimination Scale (EOD). An instrument has convergent validity if it has a high correlation with another test measure that measures the same construct, greater than or equal to 0.50 (Pedhazur & Schmelkin, 1991). Convergent validity was evaluated for the subscales and the total PRSS.

Concurrent validity. "Concurrent validity is the degree to which scores on an instrument are correlated with an external criterion measured at the same time" (Polit & Beck, p. 460). Concurrent validity is established when a test correlates highly with a measure that has been previously validated, and is often used to defend the use of an instrument to predict established outcomes in a study**.** Concurrent validity of the total PRSS and the subscales was assessed using correlations in conjunction with measures of appraisal (EOD and PSS), and with the adaptational outcomes established for this study (blood pressure, BMI, salivary CRP, and positive and negative affect).

FIGURE 2. THE MODEL OF PERCEIVED RACISM & SHIFTING (MPRS) IN RELATIONSHIP TO OTHER VARIABLES
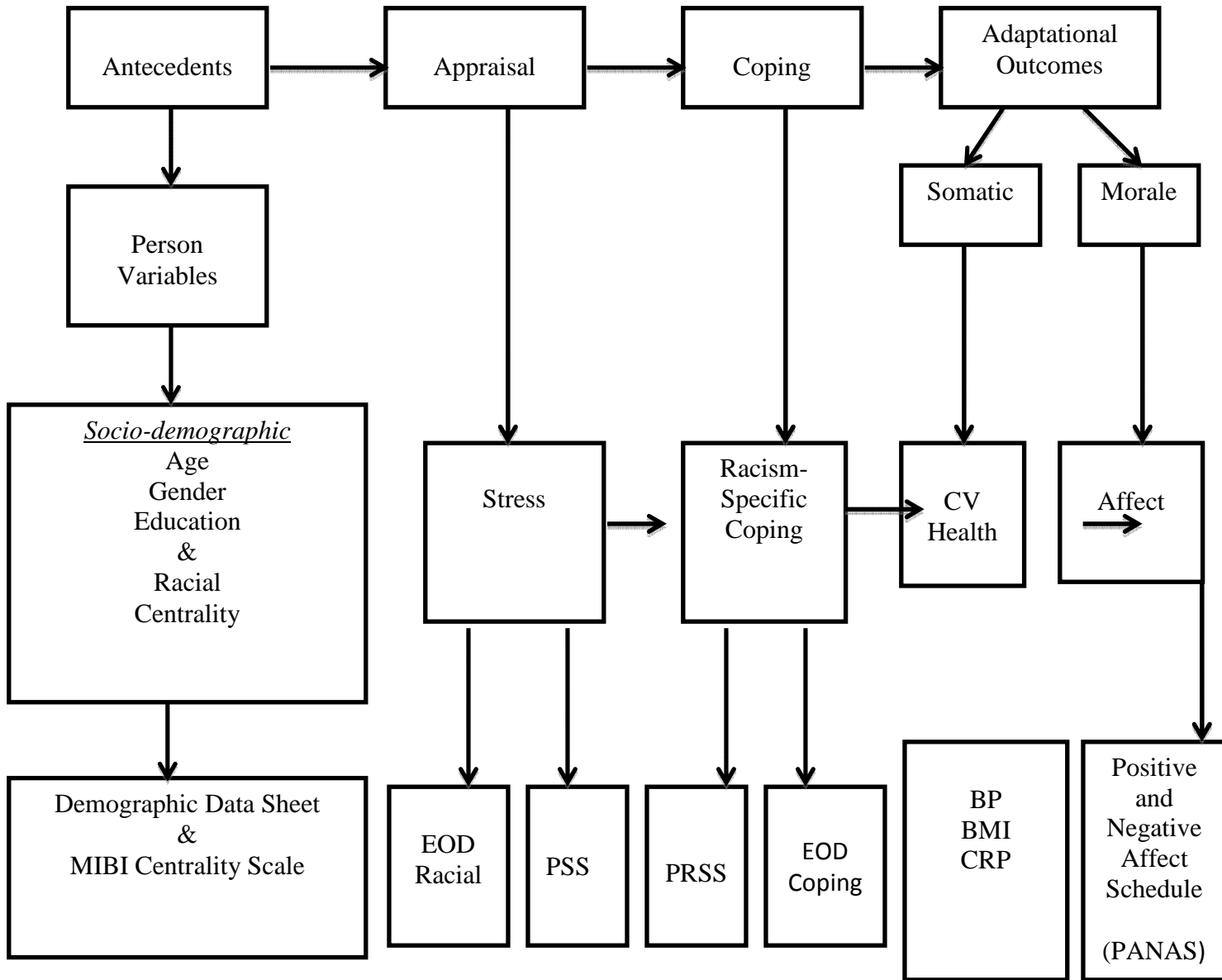
EOD Racial- Items from the Experiences of Discrimination Scale specific to intergroup and intragroup Discrimination
EOD Coping- Items from the Experiences of Discrimination Scale specific to coping with racial discrimination
PSS-Perceived Stress Scale
PRSS-Perceived Racism Shifting Scale

Data Analysis of the PRSS

EFA using principle axis factor as the extraction method with oblimin rotation was performed separately for "shifting White" and "shifting Black". Items with standard loadings of .30 or greater were identified. Eigenvalues > 1 and scree plots were also used to evaluate the factor solutions. As a result of the EFA, subscales for "shifting White" and "shifting Black" were identified. Each subscale was named by the investigator based on the interpretation of the items that loaded for each factor. Upon completion of the EFA, it was determined that the total PRSS would also be included in the study analysis, as the concept of "shifting" has been conceptualized as the combination of "shifting White" and "shifting Black". Therefore, the total scale was established by combining the "shifting White" and "shifting Black" subscales.

Descriptive statistics were obtained for all of PRSS subscale items (means, standard deviations). Bivariate correlations were used to evaluate the PRSS subscales and total scale in relationship to the study variables (experiences of discrimination, perceived stress, coping, BMI, blood pressure, CRP, and Affect) in an effort to assess both concurrent and convergent validity. Pearson's correlations were also used to determine socio-demographic factors associated with "shifting". Due to the fact that the concept of "shifting" has not been studied among African American men, gender was particularly salient in this study. An independent sample t-tests was done to determine if there were differences between gender and "shifting".

Multiple regression analysis is used to predict a continuous dependent variable from a number of independent variables (Tabachnick & Fidell, 2000). Originally, given the theory presented, hierarchical regression was going to be used to assess how much the PRSS

explained the variance in the outcome variables above and beyond perceived racism. Hierarchical regression is done when the researcher assigns order entry of the predictor variables for analysis according to theoretical importance (Tabachnick & Fidell, 2000). However, the predictor variables were not highly correlated with the total PRSS or the subscales. Higher correlations produce more accurate predictions (Polit & Beck, 2008). Due to the weak correlations, it was determined that a moderated regression would be performed instead.

Moderated regression models are used to identify factors that change the relationship between independent and dependent variables (Tabachnick & Fidell, 2000). A moderated regression analysis was conducted to examine the affect of "shifting" on the relationship between total experiences of racism (inter and intragroup) and the outcome measures (systolic blood pressure, CRP, PANAS). Preset alpha level of .05 was used to determine if the results of each analysis was significant. Blood pressure and CRP were of particular interest because they are both associated with stress, which is salient in terms of using a stress and coping theory to evaluate the concept of "shifting". Specifically, blood pressure is a measure of cardiovascular reactivity to stress (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Smart, Pek, Pascoe, & Bauer, 2010; Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010). CRP is a measure of inflammation associated with stress (Miller et al., 2005; Nijm et al., 2007). There is a lack of research that explores the influence of racism-specific coping on mental health. Thus, the PANAS was also evaluated as an outcome measure of the moderated regression analysis.

Chapter Summary

In summary, the aims of this study were to develop a culturally-sensitive instrument

to assess self-reports of "shifting" in response to perceived racism among African Americans, and to perform an initial psychometric evaluation of the instrument. Tran & Aroian's (1999) three-phase, nine-step process was used to guide instrument development. A pool of items were established for this study based on the author's knowledge of the current literature on "shifting" and her prior qualitative work. The items underwent both expert and peer evaluation. Items were added or removed based on these evaluations. Once expert and peer evaluations were complete, the remaining items were pilot-tested in a small sample of African Americans, and then a descriptive-correlational study utilizing a quota sample of 145 African Americans completed to psychometrically test the PRSS.

CHAPTER 4

Results

The Perceived Racism and Shifting Survey (PRSS) had been developed in an effort to measure the concept of "shifting". Shifting is a racism-specific coping mechanism that African Americans use in order to manage living a "dual existence", in which they experience racism from people of a different race, and other African Americans. More specifically, it is *the external and internal processes used to manage the anticipation of both inter- and intragroup racism.* Development of the PRSS included, item development, pre-testing, pilot-testing, and psychometric evaluation. This chapter describes the results of the development of the PRSS, and the scale's relationship to other variables.

Evidence of Content Validity

Expert content validity. Five experts received a packet with measurement items including detailed instructions specific to evaluating content validity for each of the items (Appendix A*).* The items were developed as a result of the "shifting" literature, as well as the author's previous qualitative work on racism and racism-specific coping. The panel of experts consisted of individuals with expertise in instrument development, racism and coping research, social determinants of stress and health, and health literacy.

The content experts originally evaluated 60 items. Thirty of the items were specific to "shifting" around those of a different race (shifting White), and thirty were specific to shifting around other African Americans (shifting Black). Twenty-two of the 60 items were judged as content valid by the experts, achieving a CVI > than 0.83. Thirty-eight items were not judged as content valid and had CVI scores <0.83. Out of the 38 items that were not judged as content valid, 28 were retained to see how they would test among subjects in the

pre-testing phase; the remaining ten items were removed. The investigator evaluated items that achieved low CVI scores, and made decisions regarding continued inclusion of the items or removal of the items based on theoretical considerations and her knowledge of "shifting". The content experts were also asked to provide recommendations for items that they deemed needed revisions. Thirty-two items were revised based on the feedback received from the experts. After expert evaluation, a total of 50 items (25 shifting White, 25 shifting Black) remained for the pretesting phase. Results of the content expert evaluation are presented in Table 1 below.

TABLE 1: PHASE 2 CONTENT VALIDITY INDEX CALCULATIONS

_____

Content Relevance: 1=not relevant; 2=somewhat relevant; 3=quite relevant; 4=highly relevant

Clarity of items: na=not applicable; vu=very unclear; mr=minor revisions; nr=no revisions

E=External process; I=Internal process

++ = Item revised due to expert feedback

Italicized Bolded Items = items removed prior to pre-testing

Item	Expert #1 (RP)	Expert #2 (FW)	Expert #3 (TL)	Expert #4 (RB)	Expert #5 (TT)	CVI Score
1. I change the way I speak when I am around: People of a different race	4/nr/E	4/nr/I	4/nr/E	4/nr/E	4/nr/E	5/5=1
2. I change the way I speak when I am around: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	4/nr/E	5/5=1
++3. I change the tone of my voice when I am around: People of a different race	4/nr/E	4/nr/I	3/nr/E	4/mr/E	3/nr/E	5/5=1
++4. I change the tone of my voice when I am around: Other African Americans/Blacks	4/nr/E	3/nr/I	3/nr/E	4/mr/E	3/nr/E	5/5=1
++5. I am careful to watch what I say around:	4/mr/I & E	4/nr/I	4/mr/E	4/nr/E	3/nr/E	5/5=1

People of a different race					
++6. I am careful to watch what I say around: 　Other African 　Americans/Blacks	4/mr/I & E	3/nr/I	4/mr/E	4/nr/E	3/nr/E	5/5=1
++7. I am careful not to act "too Black" when I am around: 　People of a 　different race	4/mr/E	4/nr/E	4/nr/E	4/nr/E	1/na	4/5=0.8
++8. I am careful not to act "too Black" when I am around: 　Other African Americans/Blacks	4/mr/E	4/nr/I	4/nr/E	4/mr/E	1/na	4/5=0.8
++9. I am careful not to act "too White" when I am around: 　People of a 　different race	4/mr/E	4/nr/I	4/nr/E	2/vu/E	1/na	3/5=0.6
++10. I am careful not to act "too White" when I am around: 　Other African 　Americans/Blacks	4/mr/E	4/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
11. I "straighten" my hair in order to "fit in" with: 　People of a 　different race	4/nr/E	4/nr/I	4/mr/E	4/nr/E	1/na	4/5=0.8
12. I "straighten" my hair in order to "fit in" with: 　Other African 　Americans/Blacks	4/nr/E	4/nr/I	4/mr/E	4/nr/E	1/na	4/5=0.8
13. I wear my hair	4/nr/E	4/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8

"natural" in order to "fit in" with: People of a different race						
14. I wear my hair "natural" in order to "fit in" with: Other African Americans/Blacks	4/nr/E	4/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
15. I change my hairstyle in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
16. I change my hairstyle in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
17. I change the way I dress in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
18. I change the way I dress in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	1/na	4/5=0.8
++19. I down play my knowledge in order to "fit in" with: People of a different race	4/nr/E	4/nr/E	4/vu/E	1/na	1/na	3/5=0.6
++20. I down play my knowledge in order to "fit in" with: Other African	4/nr/E	3/nr/I	4/vu/E	2/nr/E	1/na	3/5=0.6

Americans/Blacks						
++21. I down play my talents in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/vu/E	1/na	1/na	3/5=0.6
++22. I down play my talents in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/vu/E	2/nr/E	1/na	3/5=0.6
++23. I down play my level of education in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/vu/E	1/na	1/na	3/5=0.6
++24. I down play my level of education in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/vu/E	2/mr/E	1/na	3/5=0.6
++25. I "show off" my knowledge in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/nr/E	3/nr/E	3/nr/E	5/5=1
++26. I "show off" my knowledge in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	3/nr/E	5/5=1
++27. I "show off" my talents in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/nr/E	3/nr/E	3/nr/E	5/5=1

++28. I "show off" my talents in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	3/nr/E	5/5=1
++29. I "show off" my level of education in order to "fit in" with: People of a different race	4/nr/E	4/nr/I	4/nr/E	4/nr/E	3/nr/E	5/5=1
++30. I "show off" my level of education in order to "fit in" with: Other African Americans/Blacks	4/nr/E	3/nr/I	4/nr/E	4/nr/E	3/nr/E	5/5=1
++31. I change who I am in order to "fit in" with: People of a different race	4/vu/E & I	4/nr/I	4/mr/E	3/mr/I	3/nr/E	5/5=1
++32. I change who I am in order to "fit in" with: Other African Americans/Blacks	4/vu/E & I	3/nr/I	4/vu/I	3/mr/I	3/nr/E	5/5=1
++33. I often pay close attention to how I am treated by: People of a different race	4/vu/E & I	4/nr/I	4/vu/I	4/nr/I	3/nr/I	5/5=1
++34. I often pay close attention to how I am treated by: Other African	4/vu/E & I	3/nr/I	4/vu/I	4/nr/I	3/nr/I	5/5=1

Americans/Blacks						
35. I closely watch for unfair treatment when I am around: People of a different race	2/vu/E&I	4/nr/I	4/vu/I	4/mr/E&I	2/vu/I	3/5=0.6
36. I closely watch for unfair treatment when I am around: Other African Americans/Blacks	2/vu/E & I	3/nr/E	4/vu/I	4/mr/E&I	2/vu/I	3/5=0.6
++37. I think about ways to avoid unfair treatment when I am around: People of a different race	4/nr/I	4/nr/E	4/vu/I	4/nr/I	4/nr/I	5/5=1
++38. I think about ways to avoid unfair treatment when I am around: Other African Americans/Blacks	4/nr/I	3/nr/E	4/vu/I	4/nr/I	4/nr/I	5/5=1
39. I think about how I will respond to unfair treatment when I am around: People of a different race	4/nr/I	4/nr/E	4/vu/I	4/nr/I	4/nr/I	5/5=1
40. I think about how I will respond to unfair treatment when I am around:	4/nr/I	3/nr/E	4/vu/I	4/nr/I	4/nr/I	5/5=1

Other African Americans/Blacks						
41. I plan how I will dress when I know I will be around: People of a different race	4/nr/I	4/nr/E	4/vu/E	4/nr/I	2/mr/I	4/5=0.8
42. I plan how I will dress when I know I will be around: Other African Americans/Blacks	4/nr/I	3/nr/E	4/vu/E	4/nr/I	2/mr/I	4/5=0.8
43. I think about how I should talk when I am around: People of a different race	4/nr/I	4/nr/E	4/vu/E	4/nr/I	2/mr/I	4/5=0.8
44. I think about how I should talk when I am around: Other African Americans/Blacks	4/nr/I	3/nr/I	4/nr/I	4/nr/I	2/mr/I	4/5=0.8
45. I plan what to say when I know I will be around: People of a different race	4/nr/I	4/nr/E	4/nr/I	4/nr/I	2/mr/I	4/5=0.8
46. I plan what to say when I know I will be around: Other African Americans/Blacks	4/nr/I	3/nr/E	4/nr/I	4/nr/I	2/mr/I	4/5=0.8
47. I plan how I will act when I know I will be around: People of a different race	4/nr/I	4/nr/E	4/nr/I	4/nr/I	2/mr/I	4/5=0.8

48. I plan how I will act when I know I will be around: Other African Americans/Blacks	4/nr/I	3/nr/E	4/nr/I	4/nr/I	2/mr/I	4/5=0.8
49. I pay close attention to what is said about me when I am around: *People of a different race*	2/vu/?	4/nr/E	4/nr/I	4/mr/E&I	2/mr/I	3/5=0.6
50. I pay close attention to what is said about me when I am around: *Other African Americans/Blacks*	2/vu/?	3/nr/E	4/nr/I	4/mr/E&I	2/mr/I	3/5=0.6
++51. I often pay close attention to how people act toward me who are: A different race	4/mr/?	4/nr/E	3/mr/I	4/mr/E&I	2/mr/I	4/5=0.8
++52. I often pay close attention to how people act toward me who are: African American/Black	4/mr/?	3/nr/E	3/mr/I	4/mr/E&I	2/mr/I	4/5=0.8
53. I often pay close attention to	2/vu/?	4/nr/E	3/mr/I	4/mr/E&I	2/mr/I	3/5=0.6

how people dress who are: *A different race*						
54. I often pay close attention to how people dress who are: *African American/Black*	2/vu/?	3/nr/E	3/mr/I	4/mr/E&I	2/mr/I	3/5=0.6
55. I often pay close attention to how people talk who are: *A different race*	2/vu/?	4/nr/E	3/mr/I	4/mr/E&I	2/mr/I	3/5=0.6
56. I often pay close attention to how people talk who are: *African American/Black*	2/vu/?	3/nr/E	4/nr/I	4/mr/E&I	2/mr/I	3/5=0.6
57. I often pay close attention to what people say who are: *A different race*	2/vu/?	4/nr/E	3/mr/I	4/mr/E&I	2/mr/I	3/5=0.6
58. I often pay close attention to what people say who are: *African American/Black*	2/vu/?	3/mr/E	4/nr/I	4/mr/E&I	2/mr/I	3/5=0.6
++59. I often pay close attention to how people speak to me who are: A different race	4/mr/?	4/nr/E	3/mr/I	4/mr/E&I	3/nr/I	5/5=1
++60. I often pay close attention to how people speak to me who are:	4/mr/?	3/nr/E	3/mr/I	4/mr/E&I	3/nr/I	5/5=1

African American/Black					
Total CVI					22/60=0.37

Pre-Testing Items for Content

Once the content experts evaluated the items, they were revised or removed based on expert feedback and the author's knowledge of "shifting". There were no items added to the PRSS as a result of expert evaluation. Fifty items remained after expert assessment (25 for shifting Black, 25 for shifting White) (Appendix B). The items were initially given to 10 African American male and female subjects who were recruited and screened by the researcher at a local church in Detroit. The subjects met the inclusion criteria: 1) self-identified African American 2) had experienced racism, 3) able to speak and understand English, and 4) 18-80 years of age. There were no subjects excluded from pre-testing due to obvious cognitive impairment or mental illness.

Sample characteristics pre-testing phase. A convenience sample of 12 African American men and women between the ages of 21-64 years old were recruited from November, 2013 to December, 2013. Age, gender and level of education were self-reported. The sample characteristics for the pre-testing phase are presented in Table 2 below. The sample consisted of slightly more women (58%, n=7) than men (42%, n=5). Overall, the sample was well educated. All of the subjects had reported graduating from high school. One fourth of the sample reported their highest level of education as some college 25% (n=3), while 33% of the sample had graduated college (n=4). Approximately 17% reported their highest level of education as graduate school (n=2).

TABLE 2: PRE-TESTING PHASE SAMPLE CHARACTERISTICS (*N*=12)

Gender

Women	58%	(*n*=7)
Men	42%	(*n*=5)

Age — Range: 21-64 years (*M*=43.00, *SD*=16.60)

Women	Range: 24-64 years (*M*=42.40, *SD*=14.68)
Men	Range: 21-64 years (*M*=45.40, *SD*=18.17)

Years of Education

<High school	0%	(*n*=0)
High school graduate	25%	(*n*=3)
Some College	25%	(*n*=3)
College Graduate	33%	(*n*=4)
Graduate	17%	(*n*=2)

Pre-testing procedure. The subjects were asked to evaluate the scale items in relationship to relevance to "shifting", clarity of the items, and whether the items reflected a behavior (external) or a thought (internal). Table 3 presents the results of the pre-testing phase. In addition, the subjects were asked to provide input regarding revisions to the instrument. They were asked the following questions: 1) Did you find the format of the survey easy or difficult? 2) If you found any of the questions not relevant to "shifting" or difficult to understand, how would you change the questions in order to make them better? 3) If this was your survey, are there any questions you would get rid of? 4) If this was your survey, are there any questions you would add? The investigator reviewed the subject's responses. Retention, revision, or removal of items was based on theoretical considerations,

results of the pre-testing evaluation form, as well as repetitive themes that emerged from the subject's input.

Survey format. Overall, the subjects reported that the format of the instrument was easy to follow and questions were clear and concise.

Items the subjects deemed not relevant. Four of the ten participants felt that the items "I change the way I speak" and "I change the tone of my voice" were relevant in terms of "shifting" around people of a different race, however were not relevant to "shifting" around African Americans/Blacks. The investigator opted to retain the items and continue to measure both "shifting" around people of a different race and "shifting" around other African Americans. However, the item "I change the way I speak" was revised to include examples of specific behaviors (use of slang, speak proper English, etc.). Additionally, the following three items: "I often wear my hair natural in order to fit in," "I often straighten my hair in order to fit in", and "I often change my hairstyle in order to fit in", did poorly in terms of relevance to shifting on the evaluation form. One participant suggested that the three items be eliminated and replaced with the following item: "I often change my hair to look like people of a different race". Two other participants suggested that the items be more specific to situations. For example "I change my hair when I go to an interview". After review of the subject comments, the investigator decided to combine the three questions to form the following item, "I change my hair (such as: straighten it, wear weaves/extensions, wear it natural etc.) when I know I will be around people of a different race or other African Americans/Blacks." Furthermore, there were two participants who admitted that they had experienced a lot of racism, but could not relate to the concept of "shifting." They rated

majority of the items as "not relevant" with the exception of the items related to "unfair treatment".

Items recommended for removal. The items "I try not to act too Black" and "I try not to act too White" were deemed not relevant to shifting by 3 of the 10 participants. One participant suggested that either the items be eliminated or revised to include examples of behaviors specific to "acting Black" or "acting White". Due to the fact that the investigator felt that trying to define such behaviors would require stereotyping "Black behavior" and "White behavior" the items were both eliminated. Additionally, two of the participants suggested removal of the "show off" items: "I show off my level of education", "I show off my level of knowledge", and "I show off my talents". The subject's rational for removal was that the questions were redundant. The same two subjects also felt that the "downplay" items should also be removed: "I downplay my level of education", "I downplay my knowledge", and "I downplay my talents". Based on the pre-testing recommendations, two of the three "show off" items and two of the three "downplay" items were removed, but one of each was kept.

Items recommended for inclusion. The participants did not recommend any additional items for inclusion. However, based on the results of the evaluation form, the investigator added the following item "I think carefully about how I should present myself ". This item was added in an effort to better measure internal "shifting" and replaced "I think about how I should talk", "I plan what to say", and "I plan how I will act". There was a lack of consensus among the subjects regarding whether the three items measured a behavior (external) or a thought (internal), hence the items were removed and replaced with a single item.

Think aloud method. Subjects were asked to read the "downplay" items and explain what the word "downplay" meant in relationship to the questions being asked. This was done to assess for discrepancies between the respondents understanding of the items, and the intended purpose of the items. These particular items were recommended for assessment as a result of the expert's evaluations. Use of the word "downplay" in relationship to the questions being asked was well understood among all of the subjects. However, two of the questions were removed as a result of participant feedback.

Pretesting the revised items. The items were revised as stated above, and re-tested with two additional subjects (1 male and 1 female). The pretesting phase consisted of a total of 12 subjects. Post revision, there were a total of 28 items. The subjects evaluated the items using the form found in Appendix C. Both subjects rated all of the items as relevant to shifting further stating the questions were clear and concise. However, one subject recommended revisions to the "downplay" and "showoff" items so that they would be inclusive of more than education. Thus, the items were revised as follows: "I downplay my success (such as: my level of education, job title, etc.)" and "I show off my success (such as: my level of education, job title, etc.)". Additionally, one of the subjects recommended that the following item be added: "I have my guard up in order to prepare myself for unfair treatment". The investigator agreed that the item was a good measure of internal "shifting", and it was added to the measurement tool. Upon conclusion of these revisions, the PRSS consisted of 30 items (15 shifting White, 15 shifting Black) going into the pilot-testing phase. There was still no clear consensus regarding which items represented internal "shifting" and which measured external "shifting". Therefore, it was determined that the PRSS would not be separated into domains of "shifting", and the investigator would allow

the domains to be established during psychometric testing with the use of exploratory factor analysis.

TABLE 3: RESULTS OF PRE-TESTED ITEMS FOR CONTENT (*N*=10)

_____

Item relevant to shifting: 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant

Item clarity: 1=very unclear, 2=some changes, 3=no changes needed

B=Behavior (external)

T= Thought (internal)

++=Items that were revised and re-tested

^=Items that were combined and re-tested

Bolded and Italicized items= items that were removed

	Item	% Relevant to Shifting (Scores of 3 & 4)	% Found that the Question was clear (Scores of 3)	% Behavior (B) or %Thought (T)
1	++I change the way I speak when I am around**:**	80% (n=8)	100%	B=90% (n=9) T=10% (n=1)
2	I change the tone of my voice (such as: change how loud I speak, change the quality or attitude of my voice) when I am around**:**	70% (n=7)	100% (n=10)	B=70% (n=7) T=20% (n=2) B&T=10% (n=1)
3	++I watch what I say around:	80% (n=8)	100% (n=10)	B=30% (n=3) T=60% (n=6) B&T=10% (n=1)

4	*I try not to act "too Black" when I am around:*	70% (n=7)	100% (n=10)	B=70% (n=7) T=20% (n=2) B&T=10% (n=1)
5	*I try not to act "too White" when I am around:*	70% (n=7)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10% (n=1)
6.	^ I often wear my hair "natural" in order to "fit in" with:	30% (n=3)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10% (n=1)
7	^ I often "straighten" my hair in order to "fit in" with:	30% (n=3)	100% (n=10)	B=70% (n=7) T=20% (n=2) B&T=10% (n=1)
8	^ I often change my hairstyle in order to "fit in" with:	50% (n=5)	100% (n=10)	B=50% (n=5) T=40% (n=4) B&T=10% (n=1)
9	++I change the way I dress in order to "fit in" with:	70% (n=7)	90% (n=9)	B=50% (n=5) T=40% (n=4) B&T=10% (n=1)
10	I "down play" my level of education when I am around:	70% (n=7)	90% (n=9)	B=60% (n=6) T=20% (n=2) B&T=20% (n=2)
11	*I "down play" my knowledge when I am around:*	70% (n=7)	80% (n=8)	B=50% (n=5) T=30% (n=3) B&T=20% (n=2)
12	*I "down play" my talents (such as: things you are good at) when I am around:*	60% (n=6)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10%

				(n=1)
13	I "show off" my level of education when I am around:	80% (n=8)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10% (n=1)
14	*I "show off" my knowledge when I am around:*	80% (n=8)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10% (n=1)
15	*I "show off" my talents (such as: things you are good at) when I am around:*	80% (n=8)	80% (n=8)	B=70% (n=7) T=20% (n=2) B&T=10% (n=1)
16	++I act differently than my "true self "when I am around:	70% (n=7)	90% (n=9)	B=60% (n=6) T=30% (n=3) B&T=10% (n=1)
17	++I often take note of how I am being treated by:	90% (n=9)	100% (n=10)	B=20% (n=2) T=80% (n=8)
18	++I look for ways to avoid unfair treatment when I am around:	80% (n=8)	100 (n=10)	B=30% (n=3) T=60% (n=6) B&T=10% (n=1)
19	I think about how I will respond to unfair treatment when I am around:	90% (n=9)	90% (n=9)	B=10% (n=1) T=80% (n=8) B&T=10% (n=1)

20	++I plan how I will dress when I know I will be around:	80% (n=8)	100% (n=10)	B=30% (n=3) T=70% (n=7)
21	*I think about how I should talk when I am around:*	90% (n=9)	90% (n=9)	B=30% (n=3) T=70% (n=7)
22	*I plan what to say when I know I will be around:*	80% (n=7)	100% (n=10)	B=40% (n=4) T=60% (n=6)
23	*I plan how I will act when I know I will be around:*	70% (n=7)	90% (n=9)	B=40% (n=4) T=60% (n=6)
24	++I often take note of how people act toward me who are:	80% (n=7)	100% (n=10)	B=30% (n=3) T=70% (n=7)
25	++I often take note of how people speak to me who are:	90% (n=7)	90% (n=9)	B=30% (n=3) T=70% (n=7) B&T=10% (n=1)

Pilot-Testing

Initially the PRSS consisted of 60 items, which were developed as a result of the literature on "shifting" and the researcher's pilot study. The items were submitted to five content experts for evaluation. As a result of expert evaluation, 50 items remained and were pretested among 12 African American subjects. At the conclusion of pre-testing, 30 items remained (15 shifting White, 15 shifting Black) and were pilot-tested in a small sample of African American men and women. (Appendix D).

Sample characteristics for the pilot-testing phase. A convenience sample of eight African American men and women between the ages of 21-62 years were recruited in January 2014. Age, gender, and level of education were self-reported. The sample characteristics for the pilot-testing phase are presented in Table 4 below. The sample consisted of 50% women (*n*=4) and 50% men (*n*=4). Overall, the sample was well educated. All of the subjects had reported graduating from high school. One fourth of the sample reported highest level of education as some college 25% (*n*=2) while 37.5% of the sample had graduated college (*n*=3). Approximately 12.5% reported their highest level of education as graduate school (*n*=1).

TABLE 4: PILOT-TESTING PHASE SAMPLE CHARACTERISTICS (*N*=8)

Gender		
Women	50%	(*n*=4)
Men	50%	(*n*=4)
Age	Range: 21-62 years (*M*=39.37, *SD*=17.16)	
Women	Range: 23-62 years (*M*=47.70, *SD*=18.24)	
Men	Range: 21-50 years (*M*=31.00, *SD*=12.93)	
Years of Education		
<High school	0.0%	(*n*=0)
High school graduate	25.0%	(*n*=2)
Some College	25.0%	(*n*=2)
College Graduate	37.5%	(*n*=3)
Graduate	12.5%	(*n*=1)

Pilot study results. The purpose of pilot testing was to evaluate the length of time it took to complete the instrument, item frequencies, and missing data. The item frequencies

had maximum and minimum values that were all within three standard deviations of the mean, which is indicative of good score dispersion. It took subjects approximately 5-10 minutes to complete. The participants did not report any difficulty with the survey questions or format. There were no additional changes made to the PRSS prior to psychometric testing. The results of the pilot-testing phase can be found in Table 5.

TABLE 5: PILOT-TESTING RESULTS (N=8)

	Change Speech (White)	Change Speech (Black)	Change Voice (White)	Change Voice (Black)	Think before Speak (White)	Think before Speak (Black)
Mean	4.00	3.75	3.00	2.50	4.50	3.75
SD	2.56	2.31	2.07	2.00	2.67	2.31
Min-Max	1-7	1-6	1-6	1-5	1-7	1-7

	Change Behavior (White)	Change Behavior (Black)	Change Dress (White)	Change Dress (Black)	Change Hair (White)	Change Hair (Black)
Mean	2.75	2.62	1.87	1.75	1.37	1.37
SD	1.98	2.06	.99	.88	.51	.51
Min-Max	1-6	1-6	1-3	1-3	1-2	1-2

	Present Self (White)	*Present Self (Black)*	*Downplay success (White)*	*Downplay success (Black)*	*Show off success (White)*	*Show off success (Black)*
Mean	3.62	3.62	2.00	2.00	3.75	2.65
SD	2.06	2.06	1.69	1.69	2.54	2.26
Min-Max	1-6	1-6	1-6	1-6	1-7	1-7

	Avoid Unfair Treatment (White)	*Avoid Unfair Treatment (Black)*	*Respond Unfair Treatment (White)*	*Respond Unfair Treatment (Black)*	*Observe Behavior (White)*	*Observe Behavior (Black)*
Mean	5.37	4.50	5.75	4.00	5.25	5.25
SD	2.19	2.44	2.05	2.20	1.83	1.72
Min-Max	1-7	1-7	1-7	1-7	1-7	1-6

	Observe how people talk (White)	*Observe how people talk (Black)*	*Think about how to act (White)*	*Think about how to act (White)*	*Have my guard up (White)*	*Have my guard up (Black)*
Mean	5.50	4.87	4.00	4.12	5.25	4.62
SD	1.85	2.10	1.92	2.03	1.75	1.84
Min-Max	1-7	1-6	1-6	1-6	2-7	2-7

Psychometric Testing of the PRSS

      Sample characteristics. A descriptive-correlational design was used to evaluate the psychometric properties of the PRSS using a sample of 145 African American subjects ages 19-77 living in the greater metropolitan Detroit area. Table 6 describes the sample characteristics. Quota sampling was used to achieve an approximate sample representation based on gender, and consisted of 52% women ($n=75$) and 48% men ($n=70$). On average the participants were younger than 43 years of age ($M=43.40$, $SD=15.76$). Overall, the sample was well educated; the majority had some college, completed college, or attended graduate school 80.5% ($n=117$). Only 1.4% ($n=2$) of the sample had less than a high school education, while 17.9% ($n=26$) had reported graduating from high school. More than half of the sample reported a household income greater than \$50,000 ($n=95$).

      Approximately 42% of the sample were obese BMI >30 ($n=61$). More than half of the participants denied drinking alcohol or smoking. Sixty percent ($n=88$) reported less than one alcoholic beverage in a typical week. Eighty six percent ($n=125$) reported that they never smoked or have not smoked within the last year. The majority of the subjects denied ever receiving a hypertension diagnosis. However, 57.2% ($n=83$) of the participants had blood pressures that were categorized as pre-hypertensive or above. Approximately forty two percent of the subjects had blood pressures that were categorized as optimal (n=62). The majority of the subjects denied a history of congestive heart failure, heart attack, other heart problems, stroke, or diabetes.

TABLE 6: PHASE 3 SAMPLE CHARACTERISTICS (*N*=145)

Gender

Women	52% (*n*=75)
Men	48% (*n*=70)

Age   Range: 19-77 years *M* = 43.4 (*SD* = 15.7)

Years of Education   Range: 10-22 years M=15.0 (SD=2.2)

<High School	1.4% (*n*=2)
High School	17.9% (*n*=26)
Some college	28.2% (*n*=41)
College	42.7 (*n*=62)
Graduate School	9.5% (*n*=14)

Annual Household Income   Mode= $50,000-69,999

Under $10,000	4.8% (*n*=7)
$10,000-$29,999	14.5% (*n*=21)
$30,000-$49,000	15.2% (*n*=22)
$50,000-$69,999	30.3% (*n*=44)
$70,000-$99,000	12.4% (*n*=18)
$100,000-150,000	10.3% (*n*=15)
Over 150,000	12.4% (*n*=18)

Weight   Range: 120 pounds-350 pounds (*M*=193.88, *SD*=48.05)

BMI   Range: 18-52 (*M*=30.09, *SD*=6.74)

Underweight	<18.5	0.7% (*n*=1)
Normal Range	18.50-24.99	20.0% (*n*=29)

Pre Obese	25.00-29.99	37.2% (*n*=54)
Obese Class I	30.00-34.99	22.8% (*n*=33)
Obese Class II	35.00-39.99	10.3% (*n*=15)
Obese Class III	> or equal to 40	9.0% (*n*=13)

Blood Pressure:

Range: Systolic Blood Pressure 94-178 (*M*=126, *SD*=17.27)

Range: Diastolic Blood Pressure 50-99 (*M*=77, *SD*=10.33)

Optimal	<120mmHg and <80mmHg	42.8% (*n*=62)
Pre-hyper	120-139mmHg and 80-90mmHg	35.2% (*n*=51)
Stage I	140-159mmHg or 90-99mmHg	17.2% (*n*=25)
Stage II	$\geq$160mmHg or $\geq$ or equal to 90mmHg	4.8% (*n*=7)

CRP:

Range: 37pg/ml-28477pg/ml (*M*=3342.51, *SD*=4510.93)

Hypertension Diagnosis

No	70.3% (*n*=102)
Yes	29.7% (*n*=43)

Medical History

Congestive Heart Failure

No	99.3% (*n*=144)
Yes	0.7% (*n*=1)

Heart Attack

No	98.6 % (*n*=143)
Yes	1.4% (*n*=2)

Other heart problems

No	95.2% (*n*=139)
Yes	4.1% (*n*=6)

Stroke

       No   97.9% (*n=142*)
       Yes   2.1% (*n=3*)

Diabetes

       No   86.2% (*n=126*)
       Yes   13.1% (*n=19*)

Cigarette Use

       Never Smoked   62.8% (*n=91*)

       Have not smoked in a year   23.4% (*n=34*)

       Smoked within the last year 4.8% (*n=7*)

       Currently smokes   9.0% (*n=13*)

Alcohol Use

       Less than one drink   60.7% (*n=88*)

       1-7   30.3% (*n=44*)

       8-14   4.8% (*n=7*)

       15-21   2.1% (*n=3*)

       22-28   0.7% (*n=1*)

       more than 28   1.4% (*n=2*)

Evidence of internal structure. Evidence of internal structure was established by performing an exploratory factor analysis (EFA) and by assessing internal consistency. For the purposes of analysis, the PRSS scale was separated into questions aimed at measuring "shifting" around individuals who are a different race "shifting White", and items that measure "shifting" around other African Americans "shifting Black".

Descriptive Data

"Shifting white". Table 7 below presents the means and standard deviations for the items that measure "shifting White". The mean scores range from 2.27 to 5.45 on a Likert scale (1=strongly disagree to 7=strongly agree). The standard deviations for each of the items were greater than one, indicative of good dispersion around the mean. More than half of the subjects agreed that they "shift White" by changing their speech (58%), thinking before they speak (66%), thinking about ways to avoid unfair treatment (55%), thinking about ways to respond to unfair treatment (65%), observing how people acted (80%), observing how people talk (83%), thinking carefully how to act, or having their guard up (59%). None of the items exhibited extreme skewness (absolute values > 3) or extreme kurtosis (absolute values >10) (Kline, 2005).

TABLE 7: ITEM STATISTICS "SHIFTING WHITE"

	Mean	Std. Deviation
1 I change the way I speak	4.19	2.20
2 I change the tone of my voice	3.60	2.13
3 I think before I speak	4.64	2.14
4 I change the way I act	3.58	2.10
5 I change way I dress	2.76	1.73
6 I change my hair	2.27	1.72
7 How I present myself	3.49	2.05
8 I downplay my success	2.64	1.88
9 I show off my success	2.94	1.90
10 Avoid unfair treatment	4.49	2.00
11 Respond to unfair treatment	4.77	1.94
12 Observe how people act	5.41	1.63
13 Observe how people talk	5.45	1.61
14 Think about how to act	4.33	1.96
15 I have my guard up	4.54	1.92

"Shifting black". Table 8 below presents the means and standard deviations for the items that measure "shifting" around individuals of the same race "shifting Black". The mean scores range from 2.10 to 4.79 on a Likert scale (1=strongly disagree to 7=strongly agree). The standard deviations for each of the items were greater than one, indicative of good dispersion around the mean. More than half of the subjects "shift Black" by observing how people act (66%), and observing how people talk (63%). None of the items for "shifting Black" exhibited extreme skewness (absolute values > 3) or kurtosis (absolute values >10) (Kline, 2005).

TABLE 8: ITEM STATISTICS "SHIFTING BLACK"

	Mean	Std. Deviation
1.I change the way I speak AA	3.77	2.06
2 I change the tone of my voice	3.17	1.83
3 I think before I speak	4.01	2.01
4 I change the way I act	3.04	1.75
5 I change way I dress	2.61	1.65
6 I change my hair	2.10	1.54
7 I think about how I present myself	3.30	1.84
8 I downplay my success	3.03	1.98
9 I show off my success	2.76	1.83
10 Avoid unfair treatment	3.81	1.97
11 Respond to unfair treatment	3.92	1.96
12 Observe how people act	4.79	1.81
13 Observe how people talk	4.70	1.81
14 I think about how to act	3.72	1.82
15 I have my guard up	3.63	1.84

Summary of descriptions for shifting behavior. For the purposes of analysis, the PRSS scale was separated into questions aimed at measuring "shifting" around individuals who are a different race "shifting White", and items that measure "shifting" around other African Americans "shifting Black". Similarly to "shifting White", more than half of the subjects reported "shifting Black" by observing how people act and observing how people talk, indicating that heightened awareness of the environment is a common "shifting" strategy for anticipated inter-and intragroup racial discrimination. Shifting strategies that were more commonly used for "shifting White" included: changes in speech, trying to avoid unfair treatment, trying to prepare for unfair treatments, and having one's guard up.

Exploratory Factor Analysis. Exploratory factor analysis (EFA) using principle axis as the extraction method with oblimin rotation was performed separately for shifting around

those of a different race "shifting White" and shifting around African Americans "shifting Black". Due to the fact that there is a limited understanding of the concept of "shifting", the researcher did not want to predetermine the number of factors, allowing the data to drive the structure. EFA allows the analysis to determine the number of factors (Waltz et al., 2010) and is used to summarize data by grouping together variables that are inter-correlated (Plichta & Kelvin, 2005). Principle axis extraction was used because the researcher wanted to focus on the common variance (Plichta & Kelvin, 2005). An oblimin rotation was used to allow the investigator to see how the factors correlated with one another (Waltz et al., 2010). Eigenvalues greater than one and scree plots were used to determine the number of factors to retain (Plichta & Kelvin, 2005). Items with factor loadings less than .30 or -.30 were not retained (Plichta & Kelvin, 2005). Table 9 summarizes the results of the EFA.

TABLE 9: SUBSCALE RESULTS BASED ON EXPLORATORY FACTOR ANALYSIS (EIGENVALUES >1.0)

Subscales	Items	Factor Loadings
Shifting White Outward	1. I change the way I speak	0.80
	2. I change tone of voice	0.85
	3. I think before I speak	0.79
	4. I change the way I act	0.69
	5. I change the way I dress	0.58
	6. I change my hair	0.37
	7. I think about how to present myself.	0.61
	8. I think about how I should act	0.59
Preparatory	1. I think about how to avoid unfair treatment	0.71
	2. I think about how to respond to unfair treatment.	0.84
	3. I observe how people act	0.58
	4. I observe how people talk	0.54
	5. I have my guard up	0.42
Adaptive	1. I change the way I dress	0.51
	2. I change my hair	0.46
	3. I downplay my success	0.35
Shifting Black Outward	1. I change the way I speak	0.78
	2. I Change tone of voice	0.81
	3. I think before I speak	0.70
	4. I change the way I act	0.46
	5. I think about how I should act	0.38
	6. I have my guard up	0.55
Passive	1. Observe how people act	1.01
	2. Observe how people talk	0.54
Preparatory	1. I think about how to avoid unfair treatment	0.86
	2. I think about how to respond to unfair treatment.	0.77

Adaptive	1. I change the way I act	0.50
	2. I change the way I dress	0.76
	3. I change my hair	0.78
	4. I think about how to present myself	0.50
	5. I downplay my success	0.44
	6. I show off my success	0.41

_____

"*Shifting white*". There were three factors retained for "shifting White" which explained 54% of the variance in how subjects describe shifting around those of a different race. The three factors were conceptualized as: outward shifting, preparatory shifting, and adaptive shifting. Outward shifting accounted for 39% of the variance explained, while preparatory shifting accounted for 9%, and adaptive shifting accounted for 5%. The item "I have my guard up" loaded on outward shifting and on preparatory shifting, however it was removed from outward shifting and retained on preparatory because it was more conceptually related to preparatory shifting. The conceptualization of factors is subjective and should be rooted in theoretical purpose (Williams, Brown, & Onsman, 2012). Additionally, the item "I show off my success" was removed from the "shifting White" subscales due to poor loading on all the factors.

"*Shifting black*". There were four factors retained for "shifting Black" which explained 57% of the variance in how subjects describe shifting around other African Americans. The factors were conceptualized as: outward shifting, passive shifting, preparatory shifting, and adaptive shifting. Outward shifting accounted for 39% of the variance explained, while passive shifting accounted for 11%, preparatory shifting accounted for 6%, and adaptive shifting accounted for 5%.

Summary of the EFA. As a result of the EFA, seven factors were extracted. The factors were conceptualized, named, and subscales were developed by summing the items with loadings >0.30 for each factor. The factors were named and conceptualized as subscales. Most of the "shifting White" and "shifting Black" subscales were named similarly to one another (outward, preparatory, adaptive) because they had positive strong correlations, comparable item descriptions, and similarities in the variance explained. Based on EFA loadings, the item "I show off my success" was removed from "shifting White". There were no items removed from "shifting Black". Hence, "shifting White" consists of 3 subscales with 14 items, and "shifting Black" consists of four subscales with 15 items.

Reliability of the subscales

Internal consistency reliability. Internal consistency of the seven subscales was determined using Cronbach's alpha. The majority of the subscales had Cronbach's alpha scores greater than 0.70, ranging from 0.78 to 0.89, indicating adequate internal consistency (Nunnally & Bernstein, 1994). There was only one scale with a Cronbach's alpha < 0.70; the adaptive shifting subscale for "shifting White" had a Cronbach's alpha of 0.61 (Table 10). There were three items on the adaptive shifting subscale. The lower alpha may be a reflection of the small number of items that loaded on that particular factor.

**TABLE 10: INTERNAL CONSISTENCY OF THE PERCEIVED RACISM
SHIFTING SURVEY (PRSS)**

	Shifting Subscales	Cronbach's Alpha☐ $N = 145$	Scale Mean (SD) (Rating Scale 1-7)
Shifting White (3)	Outward	.89	3.60 (1.53)
	Preparatory	.80	4.92 (1.37)
	Adaptive	.61	2.55 (1.34)
Shifting Black (4)	Outward	.86	3.55 (1.44)
	Passive	.78	4.74 (1.63)
	Preparatory	.83	3.86 (1.82)
	Adaptive	0.80	2.80 (1.26)

Correlations of the subscales. Pearson product moment correlations were used to examine the relationships between the subscales for additional evidence of construct validity and allow the researcher to exam similarities between "shifting White" and "shifting Black". Overall, the results suggest that the subscales are measuring a shared construct. Table 11 displays the correlational matrix for the subscales.

**TABLE 11: CORRELATIONS OF THE SUBSCALES WITHIN AND ACROSS
"SHIFITNG WHITE" AND "SHIFITNG BLACK"**

	Outward White	Preparatory White	Adaptive White	Outward Black	Passive Black	Preparatory Black	Adaptive Black
Outward (White)	1	.54**	.67**	.80**	.27**	.24**	.78**
Preparatory (White)		1	.28**	.47**	.60**	.53**	.45**
Adaptive (White)			1	.41**	.08	.21*	.82**
Outward (Black)				1	.36**	.30**	.68**
Passive (Black)					1	.38**	.26**
Preparatory (Black)						1	.31**
Adaptive (Black)	.						1

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

The "shifting White" subscales were all significantly correlated ($p < 0.001$) with one another with correlations ranging from $r = 0.28$ (preparatory with adaptive) to $r = 0.67$ (outward with adaptive). Among "shifting Black", all of the subscales were significantly correlated with one another ($p < 0.001$) with correlations ranging from $r = 0.26$ (passive with adaptive) to $r = 0.68$ (outward with adaptive). Across the subscales ("shifting White" and

"shifting Black"), all but one correlation (adaptive White with passive Black) were statistically significant, with most correlations moderate to strong in magnitude.

Similarities in shifting styles were evident. Outward "shifting White" was strongly correlated with outward "shifting Black" ($r = 0.80$, $p < 0.01$). Preparatory "shifting White" was strongly correlated with passive "shifting Black" ($r = 0.60$, $p < 0.01$), and adaptive shifting White was strongly correlated with adaptive "shifting Black" ($r = 0.82$, $p < 0.01$). The highly correlated subscales support the fact that there are similarities between "shifting White" and "shifting Black". The significant correlations further support construct validity, the degree to which the subscales measure the concept (Polit & Beck, 2008). The results of the subscale correlations were not unexpected, as the EFA used to construct the subscales was used to group variables together that were inter-correlated (Plichta & Kelvin, 2005).

Evidence of subscale relationships to other variables. Evidence of the "shifting" subscales in relationship to other variables was evaluated. The evidence will be presented as it relates to *The Model of Perceived Racism and Shifting (MPRS)*, the middle range theory used to guide this study. Convergent and concurrent validity will also be discussed.

Antecedents. Antecedents are factors that influence cognitive appraisal, and as a result influence coping (Lazarus, 1999). For the purposes of this study, antecedents were theoretically defined as socio-demographic factors. Socio-demographic factors are those factors that influence an individual's perception of racial discrimination in any given encounter. These factors include age, gender, education level, and racial identity centrality. Aim three of this dissertation was to determine socio-demographic factors associated with "shifting." This aim was addressed by correlating the PRSS subscales with the socio-demographic variables of this study. Table 12 summarizes the results.

TABLE 12: CORRELATIONS BETWEEN THE PRSS SUBSCALES AND SOCIO-DEMOGRAPHIC VARIABLES

Scales	Gender	Age	Education	Centrality
Outward (White)	-.01	-.19*	.08	.21**
Preparatory (White)	-.03	-.13	.12	.33**
Adaptive (White)	.04	-.02	.10	-.04
Outward (Black)	-.02	-.11	.05	.19
Passive (Black)	-.06	-.11	.08	.29
Preparatory (Black)	-.09	.04	.13	.14
Adaptive (Black)	-.03	-.08	.15	.10

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

Age, gender, education. The PRSS subscales had very weak ($r= -0.09$ to $r= 0.15$) and non-significant correlations with gender and education. Outward shifting (White) was significantly and inversely associated with age ($r= -0.19$, $p= < 0.05$). The results suggest, that younger people do more outward shifting to manage intergroup racial discrimination.

Racial centrality. Racial centrality was defined as the significance an individual attributes to being African American. Correlations were used to evaluate racial centrality in relationship to the PRSS subscales using the Multidimensional Black Inventory of Black Identity Scale (MIBI) Centrality. The MIBI Centrality is a 51-item measure consisting of seven subscales representing three dimensions of African American racial identity: Ideology, Regard, and Centrality. The Centrality scale is a measure of whether race is a core

part of an individual's self-concept. The literature suggests that the more central a person's racial identity is to their self-concept, the more likely those individuals are to associate discriminatory events to race (Sellers & Shelton, 2003), hence centrality may influence coping. Due to the length of the entire instrument, the investigator decided to utilize only the 8–item centrality scale for this study. The MIBI Centrality scale is a 7-point Likert-type scale ranging from strongly disagree=1 to strongly agree=7. For this study sample, the mean score for the scale was 4.73 (*SD*=1.06). The Cronbach's alpha for the MIBI Centrality was 0.72.

There was a significant positive correlation between outward "shifting White" and racial centrality (*r*= 0.21, *p* < 0.05), and between preparatory "shifting White" and racial centrality (*r*= 0.33, *p*< 0.001). The results indicate that subjects who tend to identify more with their race exhibit more outward "shifting White" and preparatory "shifting White". The results also indicate that racial centrality is only significantly associated with "shifting White", as there were no significant relationships between centrality and the "shifting Black" subscales. This was an expected finding. A person who holds being Black as a central part of their identity, may be more likely to hold positive feelings toward other Black Americans (Sellers et al. 2003), thus not exercising the same level of awareness of racial mistreatment as they would around others of a different race. This may influence the level of shifting. There is limited research on centrality and racism-specific coping, particularly in relationship to intragroup racism, therefore this idea needs further study.

Appraisal. Cognitive appraisal occurs when a person considers two factors during an encounter. The factors include: 1) the assessment of threat, harm, or loss related to the encounter (primary appraisal), 2) the assessment of coping strategies, and an evaluation of

the ability to use them as it relates to the identified encounter (secondary appraisal) (Lazarus & Folkman, 1984). Thus, encounters that are appraised as threating or harmful are deemed stressful. In this study, experiences of racial discrimination have been conceptualized as encounters that are appraised as stressful. The Experiences of Discrimination Scale (EOD) (Krieger et al., 2005) was used to measure self-reports of racism and operationalize the appraisal of racial stress. The Perceived Stress Scale (PSS) was used to operationalize the appraisal of general stress. Both measures were also used in to assess concurrent validity of the PRSS subscales.

"Concurrent validity is the degree to which scores on an instrument are correlated with an external criterion measured at the same time" (Polit & Beck, p. 460). Concurrent validity is established when a test correlates highly with a measure that has been previously validated. Concurrent validity of the subscales was assessed using correlations in conjunction with the theoretical measures of appraisal (EOD and PSS) for this study. Table 13 summarizes the results of the correlations.

TABLE 13: CORRELATIONS BETWEEN THE PRSS SUBSCALES WITH STRESS APPRAISAL VARIABLES (EOD & PSS)

	EOD Intergroup	EOD Intragroup	PSS
Outward (White)	.20*	-	.12
Preparatory (White)	.27**	-	.17*
Adaptive (White)	.16*	-	-.04
Outward (Black)		.25**	.19*
Passive (Black)		.15	.29**
Preparatory (Black)		.22**	.14
Adaptive (Black)		.22**	.10

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
EOD-Experiences of Discrimination
PSS-Perceived Stress Scale

EOD Racial. Correlations were used to evaluate experiences of racial discrimination in relationship to the subscales. Experiences of racial discrimination were measured using the Experiences of Discrimination Scale (EOD). The original EOD measures intergroup discrimination, however for this study, the scale instructions were modified to also measure intragroup discrimination. The EOD intergroup and intragroup were scored separately by adding the total number of experiences of racial discrimination for each, ranging from 0 experiences to a maximum of 9 experiences. The mean score for the EOD (intergroup) was 4.73 (*SD*=2.35) and the Cronbach's alpha was 0.74. The mean score for the EOD (intragroup) was 3.44 (*SD*=2.71) and the Cronbach's alpha was 0.82.

EOD intergroup. Positive significant relationships were noted between the EOD (intergroup) and all three of the "shifting White" subscales. The results suggest that the more reports of experiences of intergroup discrimination, the more reported shifting. This was an expected finding. In this study, experiences of racial discrimination are conceptualized as encounters that are appraised as stressful. The assessment of coping resources is initiated when encounters are appraised as stressful (Lazarus & Folkman, 1984). Therefore, it was an expectation that more reported experiences with racial stress would be positively and significantly associated with "shifting", a coping strategy used to manage racial stress.

EOD intragroup. There were positive significant relationships noted between the EOD (intragroup) and all of the "shifting Black" subscales, with the exception of passive shifting Black (r= 0.15, p= 0.07). Similar to the "shifting White" subscales, it was expected that all of the "shifting Black" subscales would be positively and significantly associated with the EOD Scale intragroup. The passive "shifting Black" subscale may not have exhibited a significant relationship, because it only consists of two items. Three to five psychometrically sound items are needed to adequately measure a concept (Pedhazur & Schemelkin, 1991). The subscale may need further development before it demonstrates significance with experiences of intragroup discrimination.

Perceived stress scale (PSS). Correlations were used to evaluate perceived general stress in relationship to the "shifting" subscales using the PSS. The PSS is a 14-item self-report instrument created to evaluate the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983). The survey uses a 5-point Likert-type scale with

responses ranging from 0=never to 4=very often. The mean for this study sample was 1.73 (*SD*= .53), indicating low perceived stress, and the Cronbach's alpha was .82.

There were positive and significant correlations between the PSS and preparatory "shifting White", the PSS and outward "shifting Black", and the PSS and passive "shifting Black". Theoretically, the relationship between coping and stress is dynamic and the two are intimately associated with one another (Lazarus, 1999), thus shifting may influence stress, but the reverse may also be true, stress may influence shifting. Thus, there was an expectation that there may be some correlations between perceived general stress and the "shifting" subscales. It is unclear why the significant correlation was not noted for all of the subscales. The relationship between perceived stress and "shifting" needs further study.

Coping. Lazarus & Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984 p. 141). Coping was explored through the theoretical concept of "shifting" and was operationalized using the Perceived Racism Shifting Survey (PRSS). The PRSS subscales were correlated with coping items obtained from the Experiences of Discrimination to assess convergent validity (Table 15). Convergent validity is established when a new instrument is compared to an existing one to determine if they measure the same construct (Burns & Grove, 2011). The coping questions from the EOD were the following:

"If you feel you've been treated unfairly, how do you respond-do you usually"
(circle one)
 1. Accept it as a fact of life
 2. Try to do something about it

"And if you have been treated unfairly-do you usually" (circle one)
 1. Talk to other people about it?

2. Keep it to yourself?

Responses to unfair treatment were scored as engaged (response="do something/talk to others"; score=2), moderate (response="accept it/keep it to yourself" or "accept it/talk"; score=1), or passive (response="accept it/keep it to yourself"; score=0) (Krieger et al., 2005). The subjects responded to the coping questions for both intergroup and intragroup racial discrimination. On average, subjects reported their response to racial discrimination as moderate (M= 1.43, SD= 0.71). There were no significant correlations between the PRSS subscales and the EOD coping items, with the exception of preparatory "shifting Black". There was a positive significant association between preparatory "shifting Black" and the EOD (intragroup) coping items, suggesting that more preparatory shifting is associated with more engaged responses to unfair treatment. An instrument has convergent validity if it has high correlations with another test measure that measures the same construct (Pedhazur & Schmelkin, 1991). Although significant, the correlation between preparatory shifting and EOD coping were low. Based on the results, convergent validity of the subscales was not established. This was an unexpected finding. The concept of "shifting" was conceptualized as a coping strategy, thus high positive and significant associations were expected between the subscales and EOD coping items.

TABLE 14: CORRELATIONS FOR CONVERGENT VALIDITY

Scales	EOD Coping Intergroup	EOD Coping Intragroup
Outward (White)	-.06	-
Preparatory (White)	.16	-
Adaptive (White)	-.11	-
Outward (Black)	-	.03
Passive (Black)	-	.01
Preparatory (Black)	-	.20*
Adaptive (Black)	-	-.05

*Correlation is significant at the 0.05 level (2-tailed)
EOD-Experiences of Discrimination

Adaptational outcomes. In this study, the adaptational outcomes of focus were somatic health and morale. Somatic health was theoretically defined as cardiovascular health. Cardiovascular health was operationalized as blood pressure, BMI, and C-reactive protein levels (CRP). Morale is specific to how an individual feels about themselves and their conditions in life; assessment of morale focuses on general negative and positive emotions (Lazarus & Folkman, 1984). Morale was operationalized as positive and negative affect. Correlations were used to evaluate the relationship between the PRSS subscales and the adaptational outcomes in an effort to assess convergent validity. Table 15 summarizes the findings.

The PRSS subscales had very weak and mostly non-significant correlations with the outcome variables, with the exception of systolic blood pressure with passive "shifting

Black", and positive affect (PA) with preparatory "shifting White". Passive "shifting Black" was significantly and inversely associated with systolic blood pressure ($r= -.24$, $p< 0.01$). These results suggest that passive coping may be an effective strategy for blood pressure outcomes. This is an unexpected finding, as this is contrary to what has been found in the literature. Passive coping styles have traditionally been associated with higher systolic blood pressures, and lower diastolic blood pressure and heart rate recovery (Fontana & McLaughlin, 1998; Kohlmann, Weidner, & Messina, 1996). Furthermore, it has been proposed that chronic perceptions of racial discrminiation in conjunction with passive coping responses may lead to prolonged activation of the sympathetic nervous system resulting in higher blood pressures (Manuck, Kasprowicz, & Muldoon, 1990).

The Positive Affect Negative Affect Scale (PANAS) is a 20-item scale, which consists of two mood scales, one measuring positive affect and the other measuring negative affect. Each item on the PANAS is rated on a 5-point scale ranging from 1 = *very slightly or not at all,* to 5 = *extremely.* For analysis purposes the scale was separated into positive affect (PA) and negative affect (NA). The mean for this study sample was 3.83 (*SD*= 0.67) and a Cronbach's alpha of 0.81 for the positive scale. The mean was 1.94 (*SD*= 0.71) and a Cronbach's alpha of 0.88 for the negative scale. The PRSS subscales had very weak (*r*= 0.00 to *r*= 0.24) and mostly non-significant correlations with the PANAS scale. Preparatory shifting (White) was positively and significantly associated with positive affect (*r*= 0.20, *p*<0.05), suggesting that preparatory "shifting Black" may be an effective strategy for intragroup racial discrimination as it relates to mental health.

TABLE 15: CORRELATIONS BETWEEN THE PRSS SUBSCALES AND OUTCOME MEASURES

	Systolic B/P	Diastolic B/P	BMI	CRP	PA	NA
Outward (White)	-.01	-.06	-.13	.01	.13	.12
Preparatory (White)	-.10	-.05	.02	-.05	.20*	.10
Adaptive (White)	.12	.02	.02	.00	.07	.06
Outward (Black)	.00	-.04	.01	.07	.04	.09
Passive (Black)	-.24	-.06	-.07	-.01	.02	.12
Preparatory (Black)	-.15	-.09	.19	.01	.08	.13
Adaptive (Black)	.07	.01	.02	.05	.04	.06

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
BMI- Body Mass Index
CRP- C-Reactive Protein
PA- Positive Affect
NA-Negative Affect

Shifting White vs. Shifting Black

After the subscales were evaluated, the "shifting White" subscales were totaled and the "shifting Black" subscales were totaled to determine if the subjects shifted more for Whites than for Blacks. On average, the subjects in this study shifted more White (M=4.01, SD=1.25) than Black (M=3.49, SD=1.11) on a scale of 1-7. This is the first study to look at shifting quantitatively as it relates to inter- and intragroup racism. However, the researcher expected that African Americans may need to "shift White" more in order to conform to the expectations of the dominant culture.

Total Perceived Racism Shifting Survey (PRSS)

Due to the fact that the concept of "shifting" was conceptualized as a coping strategy used by African Americans to mange the dual existence of living in both a "Black" and "White" world, the total PRSS (Shifting White and Shifting Black combined) was analyzed in relationship to the total Experiences of Discrimination (EOD) (inter- and intragroup discrimination combined). Similarly to the PRSS subscales, the total PRSS was evaluated in relationship to the other study variables. For this study sample, the mean for the total PRSS was 3.74 (SD=1.13) on a scale of 1-7. The Cronbach's alpha for the total PRSS was .93.

Total shifting and socio-demographic measures. To determine the socio-demographic factors associated with "shifting", correlations were used to assess the relationships. Table 16 summarizes the results of the correlations. The results indicated that there were no significant relationships between the total PRSS and gender, age, or education. However, it was noted that age had an inverse relationship with the PRSS, indicating that younger people may report more shifting. An independent sample t-test was also done to evaluate if there were differences between total shifting and gender. The concept of "shifting" has not been studied among African American men, thus gender was of particular interest in this study. The t-test results indicated that there was no difference in "shifting" between the genders t (143)= .37, p= 0.70. This was an unexpected finding and contrary to the literature on racism-specific coping. The literature suggests that there are differences between African American men and women in relationship to racism-specific coping (Swim, Hyers, Cohen, Fitzgerald, & Byslama, 2003; Williams et al., 2003; Clark, 2004).

There was a positive significant correlation between the PRSS and the MIBI Centrality Scale. This was an expected finding. Racial centrality, the degree to which being Black is important to one's self-concept, has been associated with a heightened awareness of racial discrimination (Brondolo, ver Halen, Pencille, Beatty, & Contrada, 2009; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). This increased awareness may prompt coping responses such as "shifting" in an effort to manage the anticipation of racial discrimination.

TABLE 16: CORRELATIONS FOR THE TOTAL PRSS AND SOCIO-DEMOGRAPHIC MEASRUES

	Gender	Age	Education	Racial Centrality
Total PRSS				
Correlation	-.03	-.15	.13	.21*
Significance	.68	.07	.10	.01

*Correlation is significant at the 0.05 level (2-tailed).

Total shifting, racial discrimination, perceived stress. Correlations were used to evaluate the total PRSS in relationship to the total EOD in effort to provide evidence for "shifting" as strategy for managing both inter- and intragroup racism. The mean for the total EOD (inter and intragroup) was 8.17 (*SD* =4.59) on a scale of 0-18. The Cronbach's alpha was 0.86 indicating good reliability. There was a positive significant correlation between the total PRSS and the total EOD (*r*= .31, *p*< .001). This finding lends support to "shifting" as a coping strategy in the presence of perceived racial discrimination. The results further suggest that the more situations of racial discrimination that an individual reports, the more shifting they report.

Correlations were used to evaluate the total PRSS in relationship the Perceived

Stress Scale (PSS) to assess concurrent validity. There was a positive significant correlation between the total PRSS and the PSS ($r= 0.18$, $p< 0.05$). This was not surprising, as the PSS had significant correlations with one of the "shifting White" subscales and three of the "shifting Black" subscales. The results of this correlation may be more driven by the "shifting Black" subscales.

Total shifting and coping measures. There were no significant correlations between the PRSS and the Experiences of Discrimination (EOD) intergroup coping items ($r= 0.03$, $p= 0.69$). There were also no significant results between the total PRSS and the EOD intragroup coping items ($r= 0.05$, $p= 0.53$). These results are consistent with the results of the correlations that were done between the EOD coping items and the PRSS subscales. With the exception of preparatory "shifting Black", there were no significant correlations between the PRSS subscales and the EOD coping items. Although convergent validity was not established between the PRSS and the EOD coping items, the positive significant relationship between the PRSS and the EOD Scale lends support to idea that "shifting" is indeed a coping strategy utilized in the presence of perceived racial discrimination.

Total shifting and outcome measures. Correlations were used to evaluate the total Perceived Racism Shifting Scale in relationship to the outcome variables. Similarly to the results of the PRSS subscales, there were no significant relationships between the total PRSS and outcome measures. Table 17 illustrates the results of the correlation for the total PRSS and the outcome measures.

TABLE 17: CORRELATIONS FOR THE TOTAL PRSS AND OUTCOME MEASURES

	BMI	Systolic BP	Diastolic BP	CRP	PA	NA
Total PRSS						
Correlation	-.04	-.05	-.06	-.04	.12	.12
Significance	.63	.55	.47	.59	.13	.14

BMI-Body Mass Index
CRP-C-Reactive Protein
PA-Positive Affect
NA-Negative Affect

Moderated regression analysis. Originally, given the theory presented, hierarchical regression was going to be used to assess how much the PRSS explained the variance in the outcome variables above and beyond perceived racism. Hierarchical regression is done when the researcher assigns order entry of the predictor variables for analysis according to theoretical importance (Tabachnick & Fidell, 2000). However, the predictor variables were not highly correlated with the total PRSS or the subscales. Higher correlations produce more accurate predictions (Polit & Beck, 2008). Due to the weak correlations, it was determined that a moderated regression would be performed instead.

Moderated regression models are used to identify factors that change the relationship between independent and dependent variables (Tabachnick & Fidell, 2000). A moderated regression analysis was conducted to examine the affect of "shifting" on the relationship between total experiences of racism (inter and intragroup) and the outcome measures (systolic blood pressure, CRP, PANAS). Preset alpha level of .05 was used to determine if the results of each analysis was significant. Blood pressure and CRP were of particular

interest because they are both associated with stress, which is salient in terms of using a stress and coping theory to evaluate the concept of "shifting". Specifically, blood pressure is a measure of cardiovascular reactivity to stress (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Smart, Pek, Pascoe, & Bauer, 2010; Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010). CRP is a measure of inflammation associated with stress (Miller et al., 2005; Nijm et al., 2007). There is a lack of research that explores the influence of racism-specific coping on mental health. Thus, the PANAS was also evaluated as an outcome measure of the moderated regression analysis.

The results revealed that the interaction of "shifting" and experiences of racial discrimination did not significantly predict blood pressure (Table 18). The model summary predicted 0.9% of the variance. Additionally, the interaction of "shifting" and experiences of racial discrimination did not significantly predict blood pressure (Table 19). The model summary predicted 0% of the variance. However, the interaction of "shifting" and experiences of racial discrimination significantly predicted positive affect (PA) (Table 20). The model summary predicted 3.1% of the variance. The interaction is depicted in a scatter plot (figure 3). The results suggest, that the level of "shifting" is associated with positive affect among individuals who report higher levels of racial discrimination. Thus, more "shifting" is associated with more positive affect, further suggesting that "shifting" may have a positive impact on mental health. "Shifting" was not associated with positive affect among individuals who reported low levels of racial discrimination.

TABLE 18: MODERATED REGRESSION EOD AND "SHIFITNG" ON SYSTOLIC BLOOD PRESSURE

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	127.727	5.037		25.355	.000
	PRSS total Scale	-.050	.044	-.098	-1.118	.265
	EOD Total Score	.558	.330	.148	1.688	.094
	Interaction EOD and Shifting	-.010	.008	-.098	-1.173	.243

a. Dependent Variable: Average Systolic BP

TABLE 19: MODERATED REGRESSION EOD AND "SHIFTING" ON CRP

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.256	.138		23.662	.000
	PRSS total Scale	.000	.001	.011	.119	.905
	EOD Total Score	.003	.009	.027	.302	.763
	Interaction EOD and Shifting	.000	.000	-.135	-1.591	.114

a. Dependent Variable: C-Reactive Protein

TABLE 20: MODERATED REGRESSION EOD AND "SHIFTING" ON POSITIVE AFFECT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.535	.194		18.239	.000
	PRSS total Scale	.003	.002	.135	1.561	.121
	EOD Total Score	-.004	.013	-.030	-.344	.731
	Interaction EOD and Shifting	.001	.000	.191	2.319	.022

Dependent Variable: Positive Affect

FIGURE 3. "SHIFITNG" AND EXPERIENCES OF DISCRIMINATION INTERACTION ON POSITIVE AFFECT
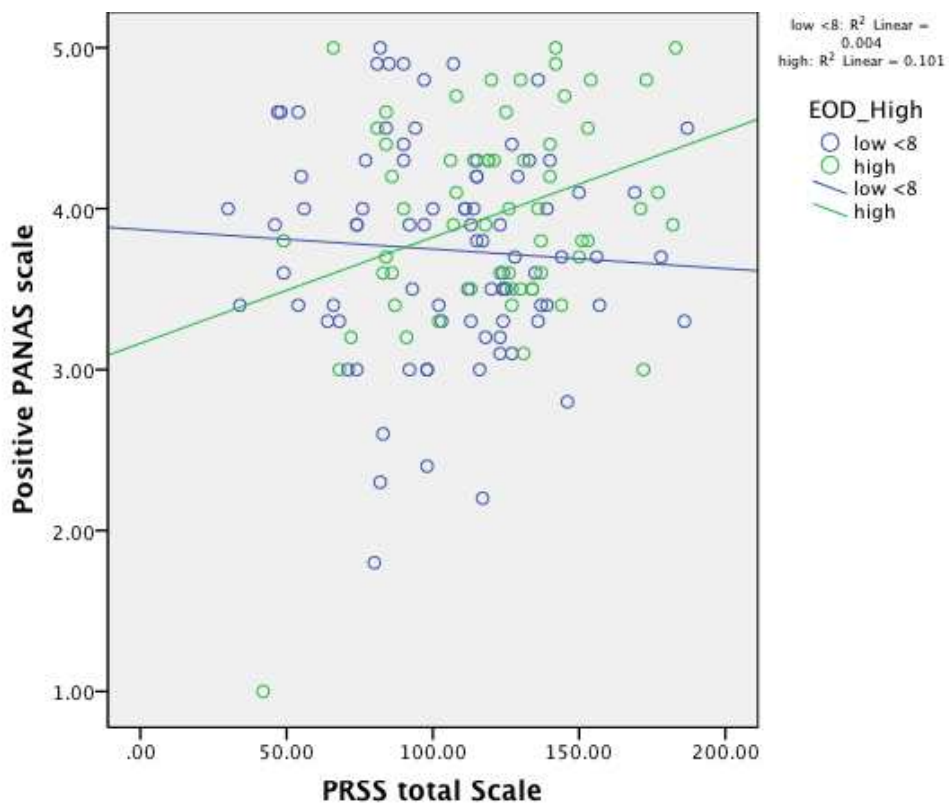
Summary of PRSS Subscales and Total PRSS

There were a total of 7 subscales (3 "shifting White", 4 "shifting Black") as a result of the EFA performed on the PRSS items. The subscales were evaluated in relationship to the other study variables in an effort to assess convergent and concurrent validity. Overall, the most significant finding was that the subscales were significantly correlated with the Experiences of Discrimination (EOD) Scale, lending support to the idea that "shifting" is a coping strategy used in the presence of racial discrimination. Additionally, preparatory "shifting White" was positively and significantly correlated with positive affect, while systolic blood pressure was negatively associated with passive "shifting Black". This suggests that there may be differences in how "shifting White" and "shifting Black" affect health outcomes.

Due to the fact that the concept of "shifting" was conceptualized as a coping strategy used by African Americans to mange the dual existence of living in both a "Black" and "White" world, the total PRSS ("shifting White" and "shifting Black" combined) was also evaluated in relationship to the study variables. Similarly to the subscales, there was a significant relationship between the total PRSS and the total EOD. Additionally, the total PRSS was significantly associated with racial centrality. However, the results of the PRSS subscales suggest that this result may be driven by the "shifting White" subscales, as racial centrality was not significant for any of the "shifting Black" subscales. Furthermore, regression analysis indicated an interaction effect between the EOD and total shifting on positive affect.

Conclusion

The PRSS was developed based on theoretical and empirical considerations.

Initially 60 items (30 "shifting White", 30 "shifting Black") were developed as a result of a pilot study, and were submitted to five content experts for evaluation. Fifty items (25 "shifting White", 25 "shifting Black") items remained after content expert analysis and were pretested among 12 African American subjects. The final PRSS consisted of 30 items (25 "shifting White", 25 "shifting Black"), which were pilot-tested among eight African Americans prior to psychometric testing. Exploratory factor analysis of the instrument identified seven factors, which were conceptualized as subscales and analyzed in relationship to the outcome measures. The total PRSS was also analyzed in relationship to the outcome variables. A significant positive correlation was noted between the total PRSS and the total Experiences of Discrimination Scale (EOD). Further analysis revealed an interaction effect between the EOD and total shifting on positive affect. However, overall evidence of the scale's validty was weak. A discussion of the results, implications, and conclusion of this study are presented next in the final chapter.

CHAPTER 5

Discussion

The purpose of this study was to develop and test the Perceived Racism Shifting Survey (PRSS), a culturally sensitive instrument used to assess "shifting" as a strategy to manage the anticipation of interpersonal racism among African Americans. In this study, experiences of racial discrimination were conceptualized as a stressor and "shifting" as a racism-specific coping strategy that mediates health outcomes. Perceived racism has been associated with negative health outcomes for some African Americans (Bowen-Reid & Harrell, 2002; Merritt et al., 2006). Currently, there is little known about which coping strategies are effective in mitigating the deleterious effects of racism. The PRSS was created to help better understand the relationships between racism, racism-specific coping, and health outcomes. This study was a cross-sectional descriptive study conducted with 145 African Americans in the metropolitan Detroit area. The discussion of the findings is presented in this chapter, including dimensions of shifting, strengths, limitations, and implications for theory, research, and contributions to the discipline of nursing.

Conceptualization of the PRSS

"Shifting" conceptualized as coping. The PRSS was developed within the context of The Model of Perceived Racism and Shifting (MPRS), which was derived from the stress and coping framework described by Lazarus (1999) and Lazarus and Folkman (1984). Within this framework, experiences of racial discrimination were conceptualized as a stressor contributing to poor health outcomes, and "shifting" as a racism-specific coping strategy that mediates health outcomes. The PRSS was used to operationalize "shifting",

thus allowing the stress and coping relationship to be explored, as well as the role of "shifting" as a mediator in health outcomes.

Racism as a stressor for intergroup racism has been well documented among African Americans (Clark et al., 1999; Harrell, 2000; Outlaw, 1993; Williams et al., 2003). Although understudied, intragroup racism has also been noted to be distressful in the lives of some African Americans (Clark, 2004; Hollier, unpublished 2011). Clark's (2004) study was one of few that explored inter-and intragroup racism. In that study, the subjects were asked if they had encountered problematic life experiences (e.g. employment, law enforcement) due to inter- or intragoup racism. Both forms of racism were associated with "problematic life experiences" for the participants (Clark, 2004). African American males associated a greater percentage of "problematic life experiences" to intergroup racism, compared to the female participants (Clark, 2004). Intragroup racism was also identified as problematic among African American subjects in Hollier's (2011, unpublished) qualitative work. The subjects spoke about their experiences with both intragroup and intergroup racism. The subjects conveyed that intergroup racism was pervasive and an expected reality, however they found intragroup racism to be particularly distressing as these encounters were often experienced among friends and family members.

Due to the fact that African Americans can experience racism from those of a different race, as well as from other African Americans, "shifting" may be necessary for African Americans to navigate in both a "Black" and "White" world. Therefore, the PRSS was developed to address both forms of racism (inter- and intragroup). For the purposes of this study, shifting has been defined as the external and internal processes used to manage the anticipation of both inter- and intragroup racism**.**

PRSS development based on conceptualization. A rigorous process was used to develop the PRSS as a culturally-sensitive instrument (Tran & Aroian, 1999). Thirty items (15 "shifting Black", 15 "shifting White) were used to measure the entire concept of shifting. These 30 items were used to measure "shifting" as a coping strategy for both inter- and intragroup racism, as the concept is based on the premise that "shifting" involves moving between environments in which both forms of racism can be experienced. Racism is multi-dimensional and manifests in a variety of ways. Multiple strategies are necessary in order to effectively manage the complexities of racism (Brondolo et al., 2009). Therefore, the type and frequency of "shifting" (White and Black) may vary depending on the circumstances and the environment in which racism is anticipated to occur. For example, an individual may need to "shift White" in their professional life and then "shift Black" when returning to their community, in an effort to manage racism in both environments. The PRSS was conceptualized to address coping with the dual existence, living in both a "Black" and "White" world.

Exploratory factor analysis (EFA) support of conceptualization. As a result of the EFA, there were a total of seven factors representing "shifting" (3 shifting White, 4 shifting Black). The seven factors were named and conceptualized as "shifting" subscales. There were similar factor loadings for "shifting White" and "shifting Black", as well as positive strong correlations between the "White" and "Black" subscales with similar loadings. This suggests that the subscales are measuring related elements of one concept.

Domains of shifting. "Shifting" was conceptualized by the researcher as consisting of two domains, external and internal. This is consistent with Jones and Shorter-Gooden's (2003) description of "shifting" as behavioral (external) and cognitive (internal) strategies

used to manage discrimination. For this study, external shifting was defined as the behavioral changes used to manage the stress associated with the anticipation of inter- and intragroup racism. Internal "shifting" was defined as what occurs cognitively in anticipation of inter- and intragroup racism, which in turn influences behavior.

The original conceptualization of "shifting" consisting of two domains was not supported by the study results. The results of the EFA revealed seven factors; three of the factors consisted of both external and internal strategies, three factors consisted of only internal strategies, and one factor consisted of only external strategies (Table 21). Therefore, attempting to group the factors as simply external or internal was not possible. By definition, internal shifting influences behavior, hence it was not surprising that external and internal descriptions would end up on the same factors; this is also supported theoretically. Lazarus and Folkman's (1984) stress and coping theory emphasize that the cognitive and behavioral processes involved in coping are dynamic.

The factors were named and conceptualized as subscales. Most of the "shifting White" and "shifting Black" subscales were named similarly to one another because they had positive strong correlations and comparable item descriptions. Therefore, "shifting" consists of both internal and external coping strategies that can be categorized as outward, preparatory, adaptive, and passive.

TABLE 21: SUBSCALE ITEMS LABLED INTERNAL AND EXTERNAL

Outward (White)	1. I change the way I speak **(E)** 2. I change tone of voice **(E)** 3. I think before I speak **(I)** 4. I change the way I act **(E)** 5. I think about how I should act **(I)** 6. I change the way I dress **(E)** 7. I change my hair **(E)** 8. I think about how to present myself **(I)**	Outward (Black)	1. I change the way I speak **(E)** 2. I change tone of voice **(E)** 3. I think before I speak **(I)** 4. I change the way I act **(E)** 5. I think about how I should act **(I)** 6. I have my guard up **(I)**
Preparatory (White)	1. I think about how to avoid unfair treatment **(I)** 2. I think about how to respond to unfair treatment. **(I)** 3. I observe how people act **(I)** 4. I observe how people talk **(I)** 5. I have my guard up **(I)**	Preparatory (Black) Passive (Black)	1. I think about how to avoid unfair treatment **(I)** 2. I think about how to respond to unfair treatment **(I)** 1. I observe how people act **(I)** 2. I observe how people talk **(I)**
Adaptive (White)	1. I change the way I dress **(E)** 2. I change my hair **(E)** 3. I downplay my success **(E)**	Adaptive (Black)	1. I change the way I dress **(E)** 3. I change my hair **(E)** 4. I downplay my success **(E)** 5. I change the way I act **(E)** 6. I think about how to present myself **(I)** 6. I show off my success **(E)**

E=External   I=Internal

Outward shifting. Outward (White) was highly correlated with outward (Black)

(r= .80, p< 0.001). These subscales were named outward because the items that loaded on

these subscales expressed behaviors or thoughts that relate to how one presents themselves

(e.g. change speech, change behavior, think before speaking). This type of shifting is

concerned with overall presentation, or what is seen outwardly. Hence, outward shifting

involves the cognitive and behavioral processes that contribute to an individual's overall

presentation in anticipation of inter- and intragroup racism. Comparable to outward (White), outward (Black) also deals with overall presentation. However, in contrast to outward (White), the item "I have my guard up" loaded exclusively on outward (Black). Thus outward (Black) involves self-protection, as well as a concern for how one presents themselves around those of the same race.

Outward shifting as a strategy is also supported by Jones & Shorter-Gooden's (2003) explanation of shifting in their qualitative work. They noted that African American women were concerned over their physical appearance, as well as the way they spoke in relationship to discrimination. The subjects in that study expressed that they would often go to great lengths to plan their outward presentation (Jones & Shorter-Gooden, 2003). Role flexing, a term that was originally identified in the coping literature as a strategy to manage discrimination among African American gay and bisexual men (Wilson & Miller, 2002), has also been identified as a strategy used to deal with racial discrimination (Shorter-Gooden, 2004). Role flexing focuses on changing ones speech, behavior, and presentation in an effort to deal with bias and negative stereotypes (Wilson & Miller, 2002). In contrast to role flexing, which primarily focuses on behavior, outward shifting includes cognitive strategies as well.

Additionally, changes in speech, an element of outward shifting, have also been identified in the "code switching" literature. The term "code switching" refers to adjusting one's speech as it relates to the environment (Hecht et al., 2003). For African Americans, "code switching" is often defined as switching between the use of "Black English" and "Standardized English" (Doss & Gross, 1994). "Code switching" has traditionally been studied from a linguistic perspective and not in relationship to perceptions of racism (Doss

& Gross, 1994; Koch, Gross & Kolts, 2001; Nelson, 1990). However, Garner & Rubin (1986) examined the perceptions and influences of code switching and found that Black English was cherished among the participants as a means of preserving their culture, however, they acknowledged that the use of Black English could impede mobility into mainstream America. The participants reported that they used Standard English within the context of certain environments (e.g. formal setting) and that it was necessary for survival. Although this study's focus was not on perceived racism, it provides evidence of "code switching" being used as a means to manage a dual existence. "Code switching" has been identified as a coping strategy to manage a dual existence in other studies (Hall et al., 2012; Jones & Shorter-Gooden, 2003).

Preparatory shifting

Preparatory (White) and Preparatory (Black) were positively and significantly correlated (r= .53, p< 0.01) with similar item descriptions. These subscales consist of primarily internal coping strategies. Specifically, preparatory "shifting" are the cognitive pre-planning processes that are used to avoid or manage potential encounters with inter- and intragroup racism. Although, preparatory (White) and preparatory (Black) share similar items, it can be noted that the preparatory (White) descriptions reflect a more heightened awareness in response to racism (e.g. having one's guard up, observing the behaviors of others) than preparatory (Black) (I think about how to avoid unfair treatment, I think about how to respond to unfair treatment). Overall, preparatory "shifting" involves heighten awareness and sensitivity to the environment as well as sustained self-protective measures aimed at preparing for encounters of racial discrimination.

Preparatory shifting is similar to what has been described in the vigilant coping

literature. Vigilant coping has been defined as "dealing with an ensuing situation attentively through greater alertness and preparation in expectation of what may occur" (LaVeist, Thorpe, Pierre, Mance, & Williams, 2014). As it relates to racism, vigilant coping aims at decreasing the possibility of experiencing racial discrimination, or aimed at decreasing its potentially negative effects (LaVeist et al., 2014). Furthermore, preparatory shifting as a coping strategy is supported by Jones & Shorter- Gooden's (2003) qualitative work. They state that "shifting" includes high-effort coping, and a constant alertness of one's environment.

Adaptive shifting

Adaptive "White" and adaptive "Black" were highly correlated (r= .82, p< .01) and had similar descriptions. The items that landed on these subscales describe a form of "shifting" in which an individual changes them selves in an effort to avoid potential encounters with inter-and intragroup racism. Adaptive (White) consisted of only three items. Two of which dealt with outer appearance (I change the way I dress, I change my hair). The other item was "I downplay my success". The author believes that while anticipating intergroup racism, some African Americans who are immersed in the dominant culture may feel pressure to suppress their success in order to avoid undesired attention that may be problematic in an environment where there is perceived racism. However, this idea needs further study, as the internal reliability of the adaptive (White) subscale was much lower than the other subscales, Cronbach's alpha 0.61 and there is a lack of exploration of this idea in the current literature. Additionally "down playing" one's success is contrary to Jones & Shorter-Gooden's (2003) qualitative work on "shifting" in which the subjects in the study talked about "showing off" their success in an effort to avoid being stereotyped.

Similarly to adaptive (White), adaptive (Black) included items specific to outer appearance and suppression of success. However, contrary to adaptive (White), the item "I show of my success" positively loaded on adaptive (Black). Indicating that adaptive shifting (Black) includes both "downplaying" and "showing off" success. Jones and Shorter Gooden's (2003) qualitative study, which explored the concept of "shifting", supports why African Americans may "downplay" and "show off" their success when "shifting Black". They describe this form of shifting as retreating to the Black community. For African Americans, returning to the Black community may be an effective coping strategy for dealing with intergroup racism, however it may also be problematic. For instance, African Americans who spend a large amount of time "shifting" to accommodate societal expectations, may have difficulty conforming to "home codes" when returning back to the Black community. "Home codes are the rules of comportment within Black culture" (Jones & Shorter-Gooden, 2003, p. 83). Home codes will vary based on the expectations of the group to which the individual is returning. For example, African Americans who often "shift" to cope with the expectations of the dominant culture may be shunned by individuals in their community for "acting White". Thus they might find themselves "downplaying" their success, knowledge, or talents. Conversely, African Americans may need to suppress their Black identity when "going home" if they are around other African Americans who relate more to the dominant culture (Jones & Shorter-Gooden, 2003), causing them to "show off" their success. Hence, the goal of adaptive shifting "Black" is conformity to group expectations, in an effort to avoid potential intragroup racism.

Passive shifting.

There were only two items on the passive (Black) subscale (I observe how people act, I observe how people talk). Passive shifting is an internal strategy and does not involve any direct action. It is the continuous monitoring of one's environment in anticipation of intragroup racism. The conceptualization of this subscale is supported by Jones & Shorter-Gooden's (2003) explanation of "shifting" in their qualitative work. They refer to this constant monitoring as scanning and surveying, in which the individual is constantly assessing for bias and mistreatment (Jones & Shorter-Gooden, 2003). Swim (1998) also identified constant monitoring as a major strategy used by groups who experience discrimination often. Additionally, passive (Black) was moderately and significantly correlated with preparatory White (r= .60, p< .01). The two scales are similar as they both involve hyperawareness and vigilant activity aimed at decreasing the likelihood of being targeted for racial discrimination. However, these subscales differ in that passive (Black) strictly involves observation. Preparatory (White) includes other cognitive processes that include additional vigilance (e.g. preparing for unfair treatment, having one's guard up).

"Shifting" domains in relationship to problem and emotion-focused coping.
The Model of Perceived Racism and Shifting (MPRS), derived from the stress and coping framework described by Lazarus (1999) and Lazarus and Folkman (1984) was used to guide this study. Lazarus and Folkman (1984) identified two categories of coping (problem and emotion-focused) hence the domains of "shifting" will be discussed as they relate to these categories. Problem-focused coping results in efforts to regulate the identified stressor, and may be directed toward self or the environment. Problem-focused efforts are often directed at identifying the problem, establishing potential solutions, weighing the potential solutions

in relationship to their cost or benefit, choosing among the solutions, and acting on the solutions. Emotion-focused coping refers to efforts that an individual uses to address the emotional reaction to the stressor. Forms of emotion-focused coping include processes directed at decreasing emotional distress (e.g. minimizing or distancing), cognitive reappraisal (changing the meaning of a situation), or deliberately increasing emotional distress to force mobilization toward action.

"Shifting" is an anticipatory strategy used to manage potential racism, thus was originally conceptualized as a problem-focused coping strategy. Outward, adaptive, and preparatory "shifting" include strategies aimed at changing the reality of the person-environment transaction (Lazarus, 1999), therefore lends support to being identified as problem-focused coping strategies. Unlike the other domains of "shifting", passive "shifting" strategies are not aimed at changing the person-environment transaction. The passive domain consists of strategies that involve observing the behavior of others. Therefore, this domain is not problem-focused. Additionally, it cannot be categorized as emotion-focused coping either, as the strategies within this domain are not aimed at addressing the emotional reaction to anticipated racist encounters. The passive domain consists of only two items, more exploration in relationship to passive "shifting" may be necessary. The domain may not be fully developed, requiring additional items prior to categorizing it as problem or emotion focused.

Support for Shifting as a Coping Mechanism

The concept of "shifting" was conceptualized as a coping strategy used to manage inter- and intragroup racism. The results of the study indicate that there is limited support for the concept of "shifting" as a coping mechanism. Due to the fact that the PRSS was

developed to address coping with racism within the context of the dual existence, having to "shift" between a "Black" and "White" world, the findings will be discussed as it relates to the total PRSS (combined "shifting White" and "shifting Black") as opposed to the individual subscales. The findings will also be discussed within the context of the Model of Perceived Racism and Shifting (MPRS) used to guide this study.

"Shifting" as a coping mechanism for perceived stress. Within the MPRS, appraisal was conceptualized as perceived stress (racial and general). There was a positive significant association between perceived racial stress (Experiences of Discrimination Scale) and "shifting" (total PRSS) (r= 0.31, p< 0.001), indicating that increased racial stress was associated with increased "shifting". The findings lend support to "shifting" as a coping strategy that African Americans use in the face of experiences of inter- and intragroup discrimination. The results also lend support to the idea of living a dual existence, having to "shift" between a "Black" and "White" world. The idea that African Americans use specific coping strategies to mange a dual existence is supported in the literature on code switching (Doss & Gross, 1994; Hall, Everett & Hamilton-Mason, 2012; Koch, Gross & Kolts, 2001, Nelson, 1990), shifting (Jones & Shorter-Gooden, 2003), and more recently in Hollier's (unpublished, 2011) study.

The total PRSS was also positively and significantly associated with general stress (Perceived Stress Scale). The association is not clearly understood as it relates to this study, as the PRSS was developed to measure coping as it relates to racial stress not general stress. However, theoretically, the relationship between coping and stress is dynamic. The two are not completely separate of one another and are intimately associated (Lazarus, 1999), thus shifting may influence stress, but the reverse may also be true, stress may influence shifting.

Therefore, increased "shifting" and the need to live a dual existence may actually be a stressor. It can be noted that coping responses, such as "shifting", can produce both psychological and physiological stress (Mwendwa et al., 2011).

The significant relationship between the total PRSS and the Perceived Stress Scale (PSS) may be attributed to the "shifting Black" subscales. The PSS was positively and significantly associated with "shifting Black", specifically the passive Black subscale. There were no significant associations noted with any of the "shifting White" subscales. The literature suggests that passive coping strategies may in fact exacerbate stress (Covic, Adamson, & Hough, 2000). Additionally, this study revealed a higher mean score for "shifting White" than "shifting Black, suggesting that African Americans may "shift" more around those of a different race. Due to the fact that perceived general stress may be more correlated with "shifting Black", a significant correlation between total "shifting" and the PSS many not be noted among individuals who shift more White.

Antecedents related to shifting as a coping strategy. Antecedents are factors that influence cognitive appraisal, thus influence coping (Lazarus & Folkman, 1984). Within the MPRS, antecedents were conceptualized as socio-demographic factors. Gender and racial centrality were two socio-demographic factors that produced findings of importance in relationship to "shifting".

Gender. Interestingly, there were no significant relationships between the PRSS and gender. This was of particular interest because the concept of "shifting" has been primarily studied among African American women (Jones & Shorter-Gooden, 2003). The lack of significance is contrary to what has been identified in the coping literature specific to racism. Research suggests that there are gender differences in coping with racism among

African Americans. African American women are more likely to use emotion-focused coping and religious coping after perceiving intergroup racism, compared to African American men (Swim, Hyers, Cohen, Fitzgerald, & Byslama, 2003; Williams et al., 2003). Clark (2004) is one of few studies that have explored coping responses used to mitigate perceptions of both intergroup and intragroup racism. The results revealed that for both intergroup and intragroup racism, African American males and females used comparable amounts of problem-focused, avoidant, and cognitive coping responses (Clark, 2004). However, African American males were significantly more likely to use alcohol as a means of coping with intragroup racism. African American females were more likely to use emotion-focused and religious coping for both forms of racism (Clark, 2004).

Racial Centrality. The total PRSS was positively and significantly associated with the Multidimensional Inventory Black Identity (MIBI) Racial Centrality Scale (r= .21, p= .01). One possible explanation for this finding is that racial centrality, the degree to which being black is important to one's self-concept, has been associated with a heightened awareness of racism (Brondolo et al., 2009; Sellers et al., 2003). This increased awareness may prompt the appraisal of coping resources, which lead to coping activities to avoid mistreatment. Racial identity has been noted to influence the evaluation of coping options to mange perceptions of racial discrimination (Brondolo et al., 2009; Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003; Quintana, 2007). In this study racial centrality, an aspect of racial identity was conceptualized as an antecedent. According to Lazarus and Folkman (1984), antecedents not only influence how people appraise a situation but also how they cope with it. Thus, the significant association between "shifting" as a coping strategy and centrality appears to be supported theoretically.

Additionally, the "shifting White" subscales may have played a role in the significant correlation between the total PRSS and the MIBI Centrality; racial centrality was only significant in relationship to the "shifting White" subscales, and not to the "shifting Black" subscales. In this study, subjects reported "shifting White" more than "shifting Black", thus the relationship between "shifting" and racial centrality may differ among individuals who report "shifting Black" more than they report "shifting White". One possible explanation for the differences between racial centrality and the "shifting" White and Black subscales is that a person who holds being Black as a central part of their identity, may be more likely to hold positive feelings toward other Black Americans or define situations as "less ambiguous" and intern less stressful (Sellers et al. 2003; Sellers et al., 1997), thus not exercising the same level of awareness of racial mistreatment as they would around others of a different race.

Support for "shifting" in relationship to other coping measures. Within the MPRS, coping was conceptualized as racism-specific coping ("shifting"). Due to the fact that "shifting" was conceptualized as a coping strategy, it was an unexpected result that the PRSS did not significantly correlate ($r= 0.05$, $p=0.54$) with the coping measures obtained from The Experiences of Discrimination Scale (EOD-Coping). However, it can be noted that the EOD coping measures deal with responding to racism after it occurs. The PRSS was conceptualized as coping strategies that occur in anticipation of racism. This may explain the lack of correlation between the measures. Additionally, there were only two items on the EOD-Coping, which may be limited in terms of comparison with an instrument like the PRSS, in which there are multiple domains. The use of another coping measure to support "shifting" as a coping strategy, such as the Racism-Related Coping Scale (RRCS) (Forsyth & Carter, 2012), may provide different results in future studies. The RRCS is the only scale

known to the author that has been published in the research literature that aims to capture racism-specific coping strategies used by African Americans. The instrument was developed to assess situational coping behaviors used to manage and avoid racism (Forsyth & Carter, 2012). Although this instrument is not specific to anticipatory racism or intragroup racism like the PRSS, it consists of items that aim to look at avoidance and hyperawareness type strategies, similar to the PRSS. The RRCS may be a more appropriate measure of comparison with the PRSS for future studies. The RRCS was unknown to the researcher during the time this study was being developed, which is why it was not utilized to assess convergent validity.

Shifting as a coping mechanism affecting outcomes. Within the MPRS, the adaptational outcome somatic was conceptualized as cardiovascular health (blood pressure, high sensitivity C-reactive protein), and the adaptational outcome morale was conceptualized as mental health (affect). Another unexpected finding is that there was a lack of significant associations between the "shifting" and the outcome measures chosen for the study. The lack of association between the PRSS and the outcome measures may be a reflection of the measures chosen for the study. For example, the direct evidence linking perceived racism to a hypertension diagnosis is weak (Brondolo et al., 2011). Thus attempting to associate "shifting" with blood pressure readings as an outcome measure may have been a limitation in understanding "shifting" in relationship to cardiac health. However, ambulatory blood pressure has been investigated to measure blood pressure reactivity in relationship to perceived racism (Brondolo, Libby, Denton, Thompson, Beatty, Schwartz, Sweeney, Tobin, Cassells et al., 2008; Smart, Pek, Pascoe, & Bauer, 2010; Tomfohr, Cooper, Mills, Nelesen, & Dimsdale, 2010). There is evidence that supports a

positive relationship between perceived racism and ambulatory blood pressure (Brondolo et al, 2011). Perhaps future assessment of the relationship between the PRSS subscales with 24-hour ambulatory blood pressure monitoring will provide more direct measurement and bring forth different results.

For the purposes of this study, high sensitivity salivary CRP was chosen as opposed to blood spot or serum CRP due to cost and feasibility. There are mixed findings as it relates to how well salivary CRP correlates with serum CRP. Some research has found that salivary CRP correlates with serum levels (Ouellet-Morin et al., 2011). However, significant correlations between serum and salivary CRP were not noted in Dillon's et al., (2010) study.

Although there was no direct relationship between total "shifting" and the Positive Affect Negative Affect Scale (PANAS), the results indicate that "shifting" moderated the effect of experiences of racial discrimination on positive affect (PA); suggesting that in the face of high experiences of discrimination, there is increase shifting and increase positive affect. This interaction supports "shifting" as a coping strategy that may positively influence mental health. Although there have been studies that examine the effects of racism on mental health, there is limited research on the relationship of racism-specific coping on mental health (Pieterse et al., 2012). Therefore, this is a significant finding that needs further research.

Summary of shifting as a coping mechanism. Overall, there was limited support for the PRSS as a measure of "shifting" as a coping mechanism for inter- and intragroup racism. The PRSS was positively and significantly associated with experiences of racial discrimination. This lends support to the idea that "shifting" is a racism-specific coping strategy necessary to manage a dual existence, having to "shift" between a "Black" and

"White" world.   "Shifting" was further supported as a coping strategy, as the PRSS moderated the effect of experiences of racial discrimination on positive affect. Although there was some support for the conceputlaization of "shifting", the PRSS was not signifcianly correlated with the coping items used to assess convergent validty. Additionally, there was a lack of significant associations between the PRSS and the outcome measures. Due to the limited support for the PRSS findings, more research is needed to establish additional evidence of "shifting" as a coping strategy for inter- and intragroup racism.

"Shifting" As It Relates to Other Coping Literature

Clark's (2004) is one of few studies that have explored coping responses used to mitigate perceptions of both intragroup and intergroup racism. Similar to Clark's (2004) study, this study supports the idea that intragroup racism is a perceived reality that some African Americans face and manage. Clark's (2004) work suggests that intergroup and intragroup racism are separate constructs. The findings in this study suggest that although intergroup and intragroup racism may be separate, they intersect to affect the lives of African Americans. Thus, "shifting" is needed as individuals move from one environment to the next ("shifting White" then "shifting Black"). This study also suggests that similar coping styles are used for "shifting White" and "shifting Black". Clark's (2004) study found that the majority of the subjects used all of the categories of coping (problem focused, emotion focused, cognitive, and avoidant) that were measured in the study to manage both inter- and intragroup racism.

In contrast to other studies on coping (Clark, 2004, Swim et al., 2003, Williams, 2003), this study did not find any difference in "shifting" in relationship to gender. Additionally, racial centrality, a dimension of racial identity, was significantly associated

with "shifting" in this study. Although there is a lack of research on racial identity in relationship to racism-specific coping, there is some evidence that racial identity influences coping responses to racism (Brondolo et al., 2009; Sellers et al., 2003). This study lends support more support to this idea.

This study also brought forth similar descriptions of coping as described in Shorter-Gooden's (2004) qualitative work, specifically descriptions such as "scanning" the environment, changing speech, and changing appearance were all strategies identified by the subjects in this study. In contrast, Shorter-Gooden had some emotion-focused coping strategies such as "walling off" emotions that she discussed in her study that were not identified in this study. "Code switching" has not traditionally been studied as it relates to coping with racism. However, this study suggests that it is a strategy used to manage to the "dual existence" as it relates to racism and supports what was found by Garner & Rubin's study (1986). The African American subjects in that study reported that they used Standard English within the context of certain environments (e.g. formal setting) and that it was necessary for survival.

Study Limitations

The limitations to this study will be discussed in terms of statistical conclusion validity, internal validity, construct validity, and external validity.

Statistical conclusion validity

Low statistical power.

The likelihood of making a Type II error increases when sample sizes are small and the alpha is set low (Cook & Campbell, 1979). Although sample size was adequate for the purposes of exploratory factor analysis (EFA), the effect size may have been too small to

show relationships between "shifting" and the outcome measures. A larger sample size may be needed for testing the PRSS in the future. Additionally, "shifting" was conceptualized as its own construct, however, "shifting" may be a concept that exists within in a larger construct (e.g. coping), which is another reason why a larger sample size may be needed to show an effect.

Unreliable Measures. One limitation of the PRSS was the internal consistency of the adaptive shifting (White) subscale. The Cronbach alpha score was .61, which was much lower than the other subscales with Cronbach alpha scores ranging from .79-.89. Measures of low reliability may not register true changes. The low alpha may have been a reflection of the small number of items on the subscale (Polit & Beck, 2008). The subscale consisted of three items. Additional study is needed in an effort to establish items that will improve the reliability of the subscale.

Violation of assumptions of statistical tests. There were no identified violations of statistical assumptions in this study. None of the "shifting" items exhibited extreme skewness or kurtosis. There were no issues with non-linear relationships between "shifting" and the outcome measures.

Internal validity

Participant selection. There are multiple threats to internal validity as identified by Cooks & Campbell (1979) (e.g. participant selection, mortality, testing, instrumentation). Participant selection was a threat to internal validity in this study. This study used a non-probability sampling method. This sampling strategy is considered a limitation because it may introduce selection bias (Polit & Beck, 2008). Selection bias is systematic error causing some members of the population to be less likely to be included than others (Polit & Beck,

2008). Another limitation of the study was the sample criteria. Subjects were included in the study if they experienced racism. However, the criteria did not identify that individuals needed to have experienced both inter- and intragroup racism. Future use of the PRSS must include both forms of racism in the inclusion criteria. In an effort to offset this limitation, subjects were told during the consent process that they would be responding to surveys that asked questions about their experiences with racism from those of a different race, as well as racism experienced from those of the same race.

Mortality. Mortality is a treat to internal validity when an effect may be due to individuals dropping out of a study (Cook & Campbell, 1979). There were no issues with study mortality. Everyone who began the study completed the study.

Study design. The study design used for this study was a limitation. Cross-sectional correlational design limits the ability to show causal relationships between "shifting" and the outcome measures.

Construct validity.

The treats to construct validity identified by Cook & Campbell (1979) are focused mostly on the "fit between constructs and the way the research problem is conceptualized" (p. 64). The threats to construct validity in this study include inadequate operationalization of constructs, mono-method bias, and experimenter expectancies.

Inadequate operationalization of constructs

There was inadequate operationalization of "shifting'" in relationship to cardiovascular health (blood pressure and high sensitivity salivary CRP) and is one of the limitations of this study. Ambulatory blood pressure monitoring is considered the gold standard for achieving a more accurate estimation of blood pressure because it allows

variability in blood pressure to be captured (e.g. over night changes in blood pressure) (Chobanian et al., 2003). Thus, 24-hour ambulatory blood pressure monitoring may have been a more appropriate measure to demonstrate the relationship between cardiovascular health and shifting (Chobanian et al., 2003). The same may be true of serum CRP, there is inconsistent evidence supporting salivary CRP as a reliable marker of systemic inflammation (Ouellet-Morin et al., 2011). Therefore, serum CRP may have been a better measure to operationalize cardiovascular health in relationship to "shifting".

Mono-method bias

Another limitation of this study is that the concept of "shifting", along with the instruments used to measure perceived racism, coping with perceived racism, perceived stress, and racial centrality were all obtained using self-report measures. Although often used in research, self-report measures are limited due to the fact that subjects may have difficulty accurately recalling information from the past (Polit & Beck, 2008).

Researcher expectancies

Another threat to construct validity is that the expectancies of the researcher can bias data that is obtained (Cook & Campbell, 1979). To decrease this threat to construct validity, it is suggested that there be additional researchers involved in the study who have no expectations of the data, or having the data analyzed by someone who did not conduct the study (Cook & Campbell, 1979). This may be considered a limitation for the findings in this study, as one person designed the PRSS, collected, and analyzed all of the data.

External validity. Due to the fact that the sample was not randomly selected, it is difficult to determine if the sample is representative of African Americans who have experienced racism. Thus, these findings can only be generalized to college educated

African Americans. Replication of this study is needed to determine if "shifting" as a coping strategy to manage anticipated intergroup and intragroup racism is utilized in other samples of African Americans.

Strengths

Despite the limitations, important knowledge can be gained from this study. To the author's knowledge the PRSS is the first instrument developed to measure coping strategies associated with both inter- and intragroup racism. This is a major strength of the study, as intragroup racism and coping are currently understudied. One of the themes in Hollier's (unpublished, 2011) qualitative work was that the participants described living a dual existence, in which they experienced racism from people of a different race, as well as, from other African Americans. As a result, they had to "shift White" when they were in one environment and then "shift Black" when they were in another environment. There was a significant correlation between "shifting" and experiences with racial discrimination in this study, which lends support to the idea that some African Americans live a "dual existence" and "shift" in order to manage both inter- and intragroup racism.

Additionally, there are five instruments that have been identified in the literature that measure racism-specific coping. Although coping response questions were included on these measures, four of the five instruments were focused heavily on assessing perceived racism (McNeilly, Anderson, Armstead, et al., 1996; Vines et al., 2001; Sims Wyatt, Gutierrez, Taylor, & Williams, 2009; Paradies & Cunningham, 2008). Only one of the five measures, the Racism-Related Coping Scale developed by Forsyth & Carter (2011), focused solely on racism-specific coping strategies. All of these measures assess situational coping or include

items that measure ways to avoid racism. The PRSS is the first that addresses coping with anticipated racism. Anticipatory discrimination as a stressor is understudied (Williams & Mohammed, 2013). Anticipating discrimination can lead to distress causing increases in blood pressure, activation of the sympathetic nervous system, and negative emotional states (Sawyer, Major, Casad, Townsend, & Mendes, 2012). Furthermore, the interaction of "shifting" and experiences of racial discrimination significantly predicted positive affect (PA) in this study. This is a significant finding as there is evidence that perceived racism is associated with mental distress (Pieterse et al., 2012). This study is one of few studies that have explored the affects of racism-specific coping on mental health.

Future Research Implications

Results from this study have important research implications. The PRSS is a new instrument and requires further study to establish evidence of "shifting" as a coping strategy for inter- and intragroup racism, as well as to identify the effects on health outcomes. Examining cross loading factors, as well as confirmatory factor analysis is needed in the future to examine the factor structure of the PRSS. Future research also needs to include replication of this study using different outcome measures, as there were limitations to the measures utilized in this study. For example, using 24-hour ambulatory blood pressure monitoring and serum C-reactive protein levels as measures of cardiac health. Additionally, the results of this study suggest that "shifting" may have a positive influence on mental health, particularly affect. There is a lack of research on the influence of racism-specific coping on mental health therefore it is an area that needs further exploration. Specifically, the literature supports a significant correlation between racism and depression, as well as

racism and anxiety (Pieterse et al., 2012). Using a depression or anxiety instrument as a measure of mental health, may bring different results in future research.

Additionally, future research designs should include collecting data in the real world environment as individuals live their daily lives, in an effort to maximize ecological validity. For example, developing a study in which the subjects were asked to record how they anticipated racism on a day-to-day basis and journaling the "shifting" strategies utilized, therefore allowing frequency of racial stress and frequency of "shifting" to be measured. The use of a longitudinal research design is also suggested in order to determine the chronic affects of "shifting" on health overtime.

This study consisted of mostly college-educated middle class African Americans. Future research should include use of the PRSS among African Americans with less formal education and lower socio-economic status to determine similarities and differences. Future research may also include the use of the PRSS in other samples of individuals who experience high levels of racial discrimination, such as immigrants from Africa or the West Indies, in an effort to evaluate similarities and differences.

Furthermore, there was a significant association between the PRSS and racial centrality. Additional research is needed to better understand this relationship, as racial centrality was more associated with "shifting White "than" shifting Black". Intragroup racism and coping also continues to be an area that is understudied. In an effort to better understand racism-specific coping as it relates to physical and psychological outcomes, more research on intragroup racism and "shifting" among African Americans is needed.

Theoretical Implications

Results from this study have important theoretical implications. Results of the psychometric analysis support "shifting" as a multidimensional concept consisting of four categories (outward, preparatory, passive, adaptive). However, additional studies will be necessary in order to confirm the factor structure, which influenced the dimensions established in this study. Conceptualized as a coping strategy, "shifting" had significant relationships with measures used to assess appraisal of racial stress as well as perceived general stress. This lends support to the relationship between stress appraisal and coping, which has been identified theoretically as a dynamic process in which the two are intimately associated with one another (Lazarus, 1999), thus shifting may influence stress, but the reverse may also be true, stress may influence shifting. Therefore, increased "shifting" and the need to live a dual existence may actually be a stressor. Additionally, the positive and significant associations between the PRSS and the Experiences of Discrimination Scale lend support to the conceptualization of "shifting" as a racism-specific coping strategy used to measure inter- and intragroup racism.

"Shifting" is an anticipatory strategy used to manage potential racism, thus was originally conceptualized as a problem-focused coping strategy. The results of this study suggest that the PRSS needs additional testing prior to categorizing "shifting" as a problem-focused coping strategy as defined by Lazarus and Folkman (1984). Outward, adaptive, and preparatory "shifting" include strategies aimed at changing the reality of the person-environment transaction (Lazarus, 1999), therefore lends support to being identified as problem-focused coping domains of "shifting". There was an inability to classify the passive "shifting" domain as problem-focused or emotion-focused. The passive domain only

consists of two items and needs further development prior to categorization.

Results suggest that "shifting" may moderate the relationship between experiences of racial discrimination and health, specifically mental health. This is a significant finding because "shifting" was originally conceptualized as a mediator on health outcomes. More research is needed to determine "shifting's" role (mediator vs. moderator) as it relates to racism and health. Furthermore, racial centrality was conceptualized as an antecedent that influences stress appraisal and as a result influences coping (Lazarus & Folkman, 1984). The positive and significant association between "shifting" and racial centrality lends support to this conceptualization. Racial identity has been noted to influence the evaluation of coping options to mange perceptions of racial discrimination (Brondolo et al., 2009; Oyserman et al., 2003; Quintana, 2007). However, the relationship between racial centrality, an aspect of racial identity, and coping is understudied and needs further exploration.

Contribution to The Discipline of Nursing

The development of the PRSS contributes to the discipline of nursing. The discipline of nursing is the body of knowledge that is broader than its science, and broader than knowledge required for clinical practice (Donaldson & Crowley, 1978). This knowledge can be derived from nursing, however is also inclusive of knowledge from other disciplines (Donaldson & Crowley, 1978). From a nursing disciplinary perspective, "nursing studies the wholeness or health of humans, recognizing that humans are in continuous interaction with their environment" (Donaldson & Crowley, 1978, p.119). As recent definitions of the concept of environment have evolved to include sociopolitical and cultural factors (e.g. racism), it is important that nurses include these factors, and the means by which individuals perceive, interact, and cope with these factors, in their health assessments. Research

examining the concept of "shifting" will enhance the discipline of nursing by contributing to knowledge that will lead to a better understanding of the relationship between perceived racism, coping, and health. This is important due to nursing's presence in a variety of settings ranging from hospital institutions to the community.

Conclusion

Perceived racism is a chronic stressor that may be a contributing factor in health disparities among African Americans. African Americans can experience racism from those of a different race (intergroup) as well as from other African Americans (intragroup). As a result, coping strategies are necessary for African Americans to navigate in both a "Black" and "White" world. Hence, African Americans may use "shifting" as a way to cope with their experiences of racism.

Shifting has been defined in this study as the external and internal processes used to manage the anticipation of both inter and intragroup racism. Currently, there is very little known about the relationships between "shifting", perceived racism, and health. This study aimed to address the gaps in the literature by creating and testing the Perceived Racism and Shifting Survey (PRSS). The PRSS is a culturally-sensitive instrument used to operationalize the concept of "shifting" among African Americans. The Model of Perceived Racism and Shifting (MPRS), derived from the stress and coping framework described by Lazarus (1999) and Lazarus and Folkman (1984) guided this study.

Using a sample of 165 African Americans, the PRSS was developed and tested in three phases. Phase 1 included item development and expert content evaluation. Phase 2 included pretesting and pilot testing of the items established as a result of the first phase. Phase 3 included initial psychometric evaluation using evidence of content, internal

structure, and relationships based on other variables.

The preliminary evaluation of the PRSS conducted during the pilot-testing stage indicated that the survey was easily administered. Psychometric testing of the instrument involved conducting an exploratory factor analysis (EFA). The analysis was performed separately for items designed to measure shifting around people of a different race (shifting White) and shifting around other African Americans (shifting Black). The analysis identified seven factors (3 shifting White, 4 shifting Black). The factors were conceptualized as subscales. The majority of the subscales had good reliability. The subscales were combined to form a total scale. The total PRSS was then analyzed in relationship to the study variables. Positive and significant relationships were noted between the PRSS/experiences of discrimination, the PRSS/racial centrality and the PRSS/Perceived Stress Scale. Additionally, the results revealed that "shifting" moderated the effect of experiences of racial discrimination on positive affect.

Overall, the study lends support to the idea that African Americans "shift" in association with experiences of both inter and intragroup racial discrimination. There was limited support for "shifting" as a mediator between perceived racism and health outcomes. Additional testing of the PRSS needs to be done in other samples of African Americans, as this study consisted of mostly college educated subjects. Future research needs to include evaluating the PRSS in relationship to outcome measures that have shown consistent evidence of having an association with perceived racism, such as 24-hour ambulatory blood pressure monitoring or depression. The results of this study also suggests, that further exploration is needed to understand the association between racial centrality and "shifting". Centrality's influence on racism-specific coping is currently understudied. Furthermore, the

researcher believes that using a longitudinal research design will help contribute to a better understanding of the health effects of "shifting" overtime.

This study contributes to the current literature on racial discrimination and coping among African Americans, as it is the first study to quantitatively measure the concept of "shifting" as a coping strategy for both inter and intragroup racism. "Shifting" focuses on coping with anticipated encounters with racism. Research suggests that anticipatory coping can play an important role in determining the negative effects of stressors on health (Baum et al. 1993; Yehuda et al. 2005; Pearlin et al. 2005; Carter 2007; Baum et al. 1993; Dougall et al. 1999). Future use of the PRSS may contribute to a better understanding of racism and the influence of anticipatory coping in relationship to health outcomes.

APPENDIX A

Content Validity Evaluation

Name: _____

Content Expert: _____

The form below has been created in an effort to establish content validity for the Perceived Racism Shifting Survey (PRSS). The purpose of content validity is to determine the representativeness or content relevance of the instrument items. I am requesting that my committee establish content validity by reviewing the items below and evaluating them for <u>relevance</u> and <u>clarity</u> based on the following definition of "shifting": ***"Shifting" is defined as the external and internal processes used to manage the anticipation of both inter and intragroup racism.***

> <u>The external processes</u> are defined as the change in behavioral actions used to manage the stress associated with the anticipation of inter or intragroup racism.
>
> <u>Internal processes</u> are defined as what occurs cognitively in anticipation of inter or intragroup racism, which in turn influences behavior.

In addition, I am requesting that the committee review each item to determine if it represents an external or internal process of "shifting" as defined above. Please evaluate the PRSS using the scales below:

Evaluate <u>relevance</u> to "shifting" | **Evaluate <u>clarity</u> of the item**
1=not relevant | 1= not applicable
2=somewhat relevant | 2= very unclear
3=quite relevant | 3= minor revisions
4= highly relevant | 4= no revisions

Indicate an E or an I
E= External process
I= Internal process

<u>Each item has an area that you can use to make comments. There is also a section at the bottom of the tool that can be used for additional comments. Include in your comments any recommendations for revisions, additions, or items for removal.</u> Once the committee members have evaluated the items, I will calculate the index of content validity (CVI) for each measurement item, as well as, for the entire instrument. The CVI of each item is calculated by establishing the proportion of the committee who deem the item relevant (scores of 3 or 4). To determine the CVI for the entire instrument, the proportion of total items judged as content valid is calculated. Items that are not considered relevant will be removed or revised.

List of items	Content Validity **Relevance** of Item 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Content Validity **Clarity** of Item 1= not applicable 2= very unclear 3= minor revisions 4= no revision	E = External I = Internal	Comments
1. I change the way I speak when I am around: People of a different race				
2. I change the way I speak when I am around: Other African Americans/Blacks				
3. I change the tone (such as: speak softer, speak louder, etc.) of my voice when I am around: People of a different race				
4. I change the tone (such as: speak softer, speak louder, etc.) of my voice when I am around: **O**ther African Americans/Blacks				
5. I am careful to watch what I say around: People of a different race				
6. I am careful to watch what I say around: Other African Americans/Blacks				
7. I am careful not to act "too Black" when I				

am around:
    People of a different
    race			

8. I am careful not to act "too Black" when I am around:
    Other African
    Americans/Blacks			

9. I am careful not to act "too White" when I am around:
    People of a different
    race.			

10. I try not to act "too White" when I am around:
    Other African
    Americans/Blacks			

11. I "straighten" my hair in order to "fit in" with:
    People of a different
    race			

12. I "straighten" my hair in order to "fit in" with:
    Other African
    Americans/Blacks			

13. I wear my hair "natural" in order to "fit in" with:
    People of a different
    race			

14. I wear my hair "natural" in order to "fit in" with:
    Other African
    Americans/Blacks			

15. I change my hairstyle in order to "fit in" with:
    People of a different
    race			

16. I change my hairstyle in order to "fit in" with:
    Other African
    Americans/Blacks			

17. I change the way I dress in order to "fit in" with:
    People of a different
    race			

18. I change the way I dress in order to "fit in" with:
    Other African
    Americans/Blacks			

19. I downplay my knowledge when I am around:
    People of a different
    race			

20. I downplay my knowledge when I am around:
    Other African
    Americans/Blacks			

21. I downplay my talents in order to "fit in" with:
    People of a different
    race			

22. I downplay my talents in order to "fit in" with:
    Other African
    Americans/Blacks			

23. I downplay my level of education when I am around:
    People of a different
    race			

24. I downplay my level of education when I am around:
    Other African
    Americans/Blacks			

178

25. I "show off" my knowledge in order to "fit in" with: 　People of a different race				
26. I "show off" my knowledge in order to "fit in" with: 　Other African Americans/Blacks				
27. I "show off" my talents (such as: things you are good at) when I am around: 　People of a different race				
28. I "show off" my talents (such as: things you are good at) when I am around: 　Other African Americans/Blacks				
29. I "show off" my level of education in order to "fit in" with: 　People of a different race				
30. I "show off" my level of education in order to "fit in" with: 　Other African Americans/Blacks				
31. I change who I am in order to "fit in" with: 　People of a different race				
32. I change who I am in order to "fit in" with: 　Other African Americans/Blacks				
33. I often pay close attention to how I am treated by: 　People of a different race				

34. I often pay close attention to how I am treated by: Other African Americans/Blacks				
35. I closely watch for unfair treatment when I am around: People of a different race				
36. I closely watch for unfair treatment when I am around: Other African Americans/Blacks				
37. I think about ways to avoid unfair treatment when I am around: People of a different race				
38. I think about ways to avoid unfair treatment when I am around: Other African Americans/Blacks				
39. I think about how I will respond to unfair treatment when I am around: People of a different race				
40. I think about how I will respond to unfair treatment when I am around: Other African Americans/Blacks				
41. I plan how I will dress when I know I will be around: People of a different race				

42. I plan how I will dress when I know I will be around: Other African Americans/Blacks				
43. I think about how I should talk when I am around: People of a different race				
44. I think about how I should talk when I am around: Other African Americans/Blacks				
45. I plan what to say when I know I will be around: People of a different race				
46. I plan what to say when I know I will be around: Other African Americans/Blacks				
47. I plan how I will act when I know I will be around: People of a different race				
48. I plan how I will act when I know I will be around: Other African Americans/Blacks				
49. I pay close attention to what is said about me when I am around: People of a different race.				
50. I pay close attention to what is said about me when I am around: Other African Americans/Blacks				
51. I often pay close attention to how people act toward me who are: A different race				

52. I often pay close attention to how people act toward me who are: African American/ Black				
53. I often pay close attention to how people dress who are: A different race				
54. I often pay close attention to how people dress who are: African American/ Black				
55. I often pay close attention to how people talk who are: A different race				
56. I often pay close attention to how people talk who are: African American/ Black				
57. I often pay close attention to what people say who are: A different race				
58. I often pay close attention to what people say who are African American/ Black				
59. I often pay close attention to how people speak to me who are: A different race				
60. I often pay close attention to how people speak to me who are: Other African Americans/Black				

Other comments or other items you think should be added:

APPENDIX B

PRE-TESTING FORM

Research states that African Americans report more experiences with racism than other groups of people. They report experiences with racism from members of other races, as well as from members of their own race. Due to the fact that they experience racism from both sides, many African Americans feel they have to live in two worlds (Black and White) and have to **"shift"** between worlds in order to deal with the stress of racism. **"Shifting"** are the changes in **behavior** that African Americans make when they believe they are in a situation where they <u>may</u> experience racism. **"Shifting"** is also the **thoughts** that African Americans have when they believe they are in a situation where they <u>may</u> experience racism. In this survey, people will be asked about their <u>behaviors and thoughts</u> when they are in a situation in which they believe they <u>may</u> experience racism from <u>people of a different race</u>, as well as <u>from people of the same race (other African Americans/Blacks).</u> The questions below were created to gather information about **"shifting"**.

<u>**Instructions:**</u> Please look at the questions below and rate them based on: **1) relevance** (does the question apply to the term "shifting") **2) Clarity** (is the question easy to understand, or does it need to be changed) **3)** Does the question describe a **behavior/action** or does it describe a **thought.**

Please use these scales to rate the questions:

<u>Relevance</u> to "shifting"	<u>Clarity </u>of the question	Indicate an B or a T
1= not relevant	1= very unclear	B= Behavior/Action
2= somewhat relevant	2= some changes are needed	T= Thought
3= quite relevant	3= no changes needed	
4= highly relevant		

If you would like to make comments about any of the questions, there is an area next to each question for you to do so. Also, please answer the questions that I have written at the bottom of this form.

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
1	I change the way I speak when I am around: People of a different race Other African Americans/Blacks				
2	I change the tone of my voice (such as: change how loud I speak, change the quality or attitude of my voice) when I am around: People of a different race Other African Americans/Blacks				
3	I watch what I say around: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
4	I try not to act "too Black" when I am around: People of a different race Other African Americans/Blacks				
5	I try not to act "too White" when I am around: People of a different race Other African Americans/Blacks				
6	I often wear my hair "natural" in order to "fit in" with: People of a different race Other African Americans/Blacks				
7	I often "straighten" my hair in order to "fit in" with: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
8	I often change my hairstyle in order to "fit in" with: People of a different race Other African Americans/Blacks				
9	I change the way I dress in order to "fit in" with: People of a different race Other African Americans/Blacks				
10	I "down play" my level of education when I am around: People of a different race Other African Americans/Blacks				
11	I "down play" my knowledge when I am around: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
12	I "down play" my talents (such as: things you are good at) when I am around: People of a different race Other African Americans/Blacks				
13	I "show off" my level of education when I am around: People of a different race Other African Americans/Blacks				
14	I "show off" my knowledge when I am around: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
15.	I "show off" my talents (such as: things you are good at) when I am around: People of a different race Other African Americans/Blacks				
16	I act differently than my "true self "when I am around: People of a different race Other African Americans/Blacks				
17	I often take note of how I am being treated by: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
18	I look for ways to avoid unfair treatment when I am around: People of a different race Other African Americans/Blacks				
19	I think about how I will respond to unfair treatment when I am around: People of a different race Other African Americans/Blacks				
20	I plan how I will dress when I know I will be around: People of a different race Other African Americans/Blacks				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
21	I think about how I should talk when I am around: People of a different race Other African Americans/Blacks				
22	I plan what to say when I know I will be around: People of a different race Other African Americans/Blacks				
23	I plan how I will act when I know I will be around: People of a different race Other African Americans/Black				

		Relevance to "Shifting" 1= not relevant 2=somewhat relevant 3= quite relevant 4= highly relevant	Clarity of the Question 1= very unclear 2= some changes are needed 3= no changes are needed	Indicate B or a T B=Behavior T= Thought	Comments
24	I often take note of how people act toward me who are: A different race African Americans/Black				
25	I often take note of how people speak to me who are: A different race African Americans/Black				

1. Did you find the format of the survey easy or difficult? If difficult, please explain.

2. If you found any of the questions not relevant to "shifting" or difficult to understand, how would you change the questions in order to make them better?

3. What does the word "downplay" mean to you in questions #10-12.

4. If this was your survey, are there any questions you would get rid of? If so, which questions and why?

5. If this was your survey, are there any questions you would add? If so, please write them down.

APPENDIX C

PILOT TESTING FORM

African Americans often report racism from people of a different race. They also report racism from other African Americans. Thus, some African Americans feel they live in two worlds, a "Black" world and a "White" world. Some people may feel the need to change the way they behave or think in order to survive in both worlds. This is called "shifting". The questions below ask about whether you "shift" your behaviors or thoughts in order to deal with racism from "Whites" or other "Blacks". Using the scale, please circle the number that best fits your answer.

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
1	I change the way I speak/talk (such as: use slang, use proper English, use larger words, use smaller words, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
2	I change the tone of my voice (such as: how loud I speak, the quality of my voice, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
3	I am careful to think before I speak when I am around:							

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
4	I change the way I normally behave/act in order to "fit in" or to avoid being stereotyped, when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
5	I change the way I normally dress in order to "fit in" or to avoid being stereotyped, when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
6	I change my hair (such as: straighten it, wear it natural, etc.) when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
7	I think carefully about how I should present myself (such as: dress, wear my hair, etc.) when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
8	I "down play" my success (such as: my level of education, my job title, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
9	I "show off" my success (such as: my level of education, my job title, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
10	I think about ways to avoid unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
11	I think about how I will respond to unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans	1	2	3	4	5	6	7
12	I often observe how people act toward me who are:							
	A different race	1	2	3	4	5	6	7
	Other African Americans/Black	1	2	3	4	5	6	7
13	I often observe how people speak/talk to me who are:							
	A different race	1	2	3	4	5	6	7
	African Americans/Black	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
14	I think carefully about how I should behave/act when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	African Americans/Black	1	2	3	4	5	6	7
15	I have my "guard up" in order to prepare myself from unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

APPENDIX D

DATA COLLECTION MEASURES

DATA COLLECTOR ASSESSMENT:

1. Height (nearest half inch) ☐☐.☐ ins. (self-report)

2. Weight (nearest half pound) ☐☐☐.☐ lbs

3. BMI _____

4. BMI Classification
    1. <18.5-Underweight
    2. 18.5-24.99-Normal Range
    3. 25.00-29.99-Pre Obese
    4. 30.00-34.99-Obese Class I
    5. 35.00-39.99-Obese Class II
    6. Greater or equal to 40.00-Obese Class III

5. Blood Pressure   (Cuff : Ped (<24.5) _____ Regular adult (24.5-33 cm) __ Large Adult (>33cm)

    Reading 1 ☐☐☐ Systolic   ☐☐☐ Diastolic

    Reading 2 ☐☐☐ Systolic ☐☐☐ Diastolic

    Average: ☐☐☐ Systolic   ☐☐☐ Diastolic

6. BP Classification

1	Optimal	<120	and	< 80
2	Prehypertensive	120-139	and	80-90
3	Stage I	140-159	or	90-99
4	Stage II	≥ 160	or	≥ 10

7. Sputum CRP collected _____ (checked once collected)

<u>Demographic Data Sheet –</u>

*Please **CIRCLE** the number that best matches your answer:*

1. Sex
    1 Female
    2 Male

2. What is your age today?   _____

3. What is the highest grade of education that you have completed?   (Circle one)
    <u>Grade School</u>   <u>High School</u>   <u>College</u>   <u>Graduate School</u>
    1 2 3 4 5 6 7 8   9 10 11 12   13 14 15 16   17 18 19 20 21
                                         22

Please describe your health history:

4. Do you have a history of high blood pressure (hypertension)?
    1 No
    2 Yes If yes, how long have you had this problem?   _____
    (years)

5. Are you currently taking any pills or medicines?
    1 No
    2 Yes If yes, please list them.
    (Include both prescription and over the counter medications
    taken)

_____

_____

Has a doctor ever told you that you had, or treated you for, any of the following conditions?

Condition	No	Yes
6. Congestive heart failure	1 No	2 Yes
7. Heart attack	1 No	2 Yes
8. Other heart problems	1 No	2 Yes
9. Stroke	1 No	2 Yes
10. Diabetes (high sugar)	1 No	2 Yes

11. Other health problems   1 No   2 Yes

Circle if you have had any of the following in the past 2 weeks.

12.	Fever	1 No	2 Yes
13.	Cold/Flu	1 No	2 Yes
14.	Infection (sinus, bladder, etc.)	1 No	2 Yes
15.	Seasonal Allergies	1 No	2 Yes
16.	Arthritis flare-ups	1 No	2 Yes
17.	Bronchitis/Pneumonia	1 No	2 Yes
18.	Bleeding Gums	1 No	2 Yes
19.	Toothache	1 No	2 Yes
20.	Other health problems	1 No	2 Yes

21.   How many alcoholic beverages do you drink in a typical week?
          1 Less than one
          2 1-7
          3 8-14
          4 15-21
          5 22-28
          6 More than 28

22.   How would you describe your cigarette smoking habits?
          1 I have never smoked
          2 I used to smoke but have not smoked in over a year
          3 I have smoked cigarettes in the past year but do not smoke now
          4 I currently smoke cigarettes

23.   In which of the following categories does the yearly income of your family fall (before taxes)?
          1. Under $10,000
          2. $10,000-$29,999
          3. $30,000-$49,999
          4. $50,000-$69,999
          5. $70,000-$99,999
          6. $100,000-$150,000
          7. Over $150,000

Perceived Racism and Shifting Survey (PRSS)

African Americans often report racism from people of a different race. They also report racism from other African Americans. Thus, some African Americans feel they live in two worlds, a "Black" world and a "White" world. Some people may feel the need to change the way they behave or think in order to survive in both worlds. This is called "shifting". The questions below ask about whether you "shift" your behaviors or thoughts in order to deal with racism from "Whites" or other "Blacks". Using the scale, please circle the number that best fits your answer.

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
1	I change the way I speak/talk (such as: use slang, use proper English, use larger words, use smaller words, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
2	I change the tone of my voice (such as: how loud I speak, the quality of my voice, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
3	I am careful to think before I speak when I am around:							
	People of a different race	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
	Other African Americans/Blacks	1	2	3	4	5	6	7
4	I change the way I normally behave/act in order to "fit in" or to avoid being stereotyped, when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
5	I change the way I normally dress in order to "fit in" or to avoid being stereotyped, when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
6	I change my hair (such as: straighten it, wear it natural, etc.) when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
7	I think carefully about how I should present myself (such as: dress, wear my hair, etc.) when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
8	I "down play" my success (such as: my level of education, my job title, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
9	I "show off" my success (such as: my level of education, my job title, etc.) when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
10	I think about ways to avoid unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7
11	I think about how I will respond to unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans	1	2	3	4	5	6	7
12	I often observe how people act toward me who are:							
	A different race	1	2	3	4	5	6	7
	Other African Americans/Black	1	2	3	4	5	6	7
13	I often observe how people speak/talk to me who are:							
	A different race	1	2	3	4	5	6	7
	African Americans/Black	1	2	3	4	5	6	7

		1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neither Disagree or Agree	5 Slightly Agree	6 Agree	7 Strongly Agree
14	I think carefully about how I should behave/act when I know I will be around:							
	People of a different race	1	2	3	4	5	6	7
	African Americans/Black	1	2	3	4	5	6	7
15	I have my "guard up" in order to prepare myself from unfair treatment when I am around:							
	People of a different race	1	2	3	4	5	6	7
	Other African Americans/Blacks	1	2	3	4	5	6	7

Experiences of Discrimination Scale Modified (Krieger, et al., 2005)

1. "Have you ever experienced discrimination-or been prevented from doing something-or hassled-or made to feel inferior in any of the following situations because of your race or color by someone who is a different race than you? (Circle one answer)

	No	Yes
1. At school	1	2
2. Getting a job	1	2
3. At work	1	2
4. Getting housing	1	2
5. Getting medical care	1	2
6. Getting service in a store or restaurant	1	2
7. Getting credit, bank loans, or a mortgage	1	2
8. On the street or in a public setting	1	2
9. From the police or in the courts	1	2

2. If you feel you've been treated unfairly by someone who is a different race than you, how do you respond- do you usually (circle one)?

1. Accept it as a fact of life

2. Try to do something about it

3. And if you have been treated unfairly by someone who is a different race than you- do you usually (circle one)

1. Talk to other people about it?

2. Keep it to your self?

Experiences of Discrimination Scale Modified (Krieger, et al., 2005)

1. "Have you ever experienced discrimination-or been prevented from doing something-or hassled-or made to feel inferior in any of the following situations by someone who is the same race as you?

	No	Yes
1. At school	1	2
2. Getting a job	1	2
3. At work	1	2
4. Getting housing	1	2
5. Getting medical care	1	2
6. Getting service in a store or restaurant	1	2
7. Getting credit, bank loans, or a mortgage	1	2
8. On the street or in a public setting	1	2
9. From the police or in the courts	1	2

2. If you feel you've been treated unfairly by someone who is the same race as you, how do you respond- do you usually (circle one)?

    1. Accept it as a fact of life

    2. Try to do something about it

3. And if you have been treated unfairly by someone who is the same race as you- do you usually (circle one)

    1. Talk to other people about it?

    2. Keep it to your self?

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month. In each case you will be asked to indicate *how often* you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the choice that seems like a reasonable estimate. Using the scale below, please circle the number that corresponds to your answer

		Never	Almost Never	Some-times	Fairly Often	Very Often
1.	***In the last month……..*** How often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2.	How often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3.	How often have you felt nervous and "stressed"?	0	1	2	3	4
4. ±	How often have you dealt successfully with irritating life hassles?	0	1	2	3	4
5. ±	How often have you felt that you were effectively coping with important changes that were occurring in your life?	0	1	2	3	4
6. ±	How often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
7. ±	How often have you felt that things were going your way?	0	1	2	3	4
8.	How often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
9. ±	How often have you been able to control irritations in your life?	0	1	2	3	4
10. ±	How often have you felt like you were on top of things?	0	1	2	3	4

11.	How often have you been angered because of things that happened were outside of your control?	0	1	2	3	4
12.	How often have you found yourself thinking about things that you have to accomplish?	0	1	2	3	4
13. ±	How often have you been able to control the way you spend your time?	0	1	2	3	4
14.	How often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

± = Reverse scored
* (Cohen, Kamarck, & Mermelstein, 1983)

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer next to that word. Indicate to what extent <u>you generally feel this way, that is, how you feel on the average.</u>

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
(+) 1. Interested	1	2	3	4	5
(-) 2. Distressed	1	2	3	4	5
(+) 3. Excited	1	2	3	4	5
(-) 4. Upset	1	2	3	4	5
(+) 5. Strong	1	2	3	4	5
(-) 6. Guilty	1	2	3	4	5
(-) 7. Scared	1	2	3	4	5
(-) 8. Hostile	1	2	3	4	5
(+) 9. Enthusiastic	1	2	3	4	5
(+) 10. Proud	1	2	3	4	5
(-) 11. Irritable	1	2	3	4	5
(+) 12. Alert	1	2	3	4	5
(-) 13. Ashamed	1	2	3	4	5
(+) 14. Inspired	1	2	3	4	5
(-) 15. Nervous	1	2	3	4	5
(+) 16. Determined	1	2	3	4	5
(+) 17. Attentive	1	2	3	4	5

(-) 18. Jittery	1	2	3	4	5
(+) 19. Active	1	2	3	4	5
(-) 20. Afraid	1	2	3	4	5

*(Watson, Clark, & Tellegen, 1988)

(+)= Positive Affect (PA)   (-)= Negative Affect (NA)

Centrality Scale For The Multidimensional Inventory of Black Identity (MIBI)

<u>Using the scale below, circle the number that corresponds to your answer.</u>

	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
± 1. Overall, being Black has very little to do with how I feel about myself.	1	2	3	4	5	6	7
2. In general, being Black is an important part of my self-image.	1	2	3	4	5	6	7
3. My destiny is tied to the destiny of other Black people.	1	2	3	4	5	6	7
± 4. Being Black is unimportant to my sense of what kind of person I am.	1	2	3	4	5	6	7
5. I have a strong sense of belonging to Black people	1	2	3	4	5	6	7
6. I have a strong attachment to other Black people.	1	2	3	4	5	6	7
7. Being Black is an important reflection of who I am	1	2	3	4	5	6	7
± 8. Being Black is not a major factor in my social relationships	1	2	3	4	5	6	7

*(Sellers et al., 1997)

± = Reverse scored

REFERENCES

Baum, A., Cohen, L., & Hall, M. (1993). Control and intrusive memories as possible
determinants of chronic stress. . *Psychsomatic Medicine, 55*, 274-286.

Borrell, L., Catarina, K., Williams, D., Diez-Roux, A., & Gordon-Larsen, P. (2006). Self-
reported health, perceived racial discrimination, and skin color in African Amricans
in the CARDIA study. *Social Science and Medicine, 63*, 1415-1427.

Borson, S., Scanlan, J., Brush, M., Vitallano, P., & Dokmak, A. (2000). The Mini-Cog: A
cognitive "vital signs' measure for dementia screening in multi-lingual elderly.
International Journal of Geriatric Psychiatry, 15(11), 1021-1027.

Borson, S., Scanlan, J. M., Watanabe, J., Tu, S. P., & Lessing, M. (2006). Improving
identification of cognitive impairment in primary care. *International Journal of
Geriatric Psychiatry, 21*(4), 349-355.

Bowen-Reid, T. B., & Harrell, J. (2002). Racist expeiences and health outcomes: An
examination of spirituality as a buffer. *Journal of Black Psychology, 28*(1), 18-36.

Broman, C. L. (1996). The health consequences of racial discrimination: a study of african
americans. *Ethnicity & Disease, 6*(1), 148-153.

Brondolo, E., Brady, N., Thompson, S., Tobin, J. N., Cassells, A., Sweeney, M., et al.
(2008). Perceived racism and negative affect: Analyses of trait and state measures of
affect in a community sample. *Journal of Social and Clinical Psychology, 27*(2),
150-173.

Brondolo, E., Libby, D. J., Denton, E. G., Thompson, S., Beatty, D. L., Schwartz, J., et al.
(2008). Racism and ambulatory blood pressure in a community sample.
Psychosomatic Medicine, 2008(70), 49-56.

Brondolo, E., ver Halen, N. B., Pencille, M., Beatty, D., & Contrada, R. J. (2009). Coping with racism: a selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine, 32*, 64-88. doi: 10.1007/s10865-008-9193-0

Brondolo, E., Love, E. E., Pencille, M., Schoenthaler, A., & Ogedegbe, G. (2011). Racism and hypertension: A review of the empirical evidence and implications for clincial practice *American Journal of Hypertension, 24*(5), 518-529.

Brondolo, E., Ricardo, R., Kelly, K., & Williams, G. (2003). Perceived racism and blood pressure: A review of the literature and conceptual and methodological critique. *Annals of Behavioral Medicine, 25*(1), 55-65.

Brondolo, E., ver Halen, N. B., Pencille, M., Beatty, D., & Contrada, R. (2009). Coping with racism: a selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine, 32*, 64-88.

Broudy, R., Brondolo, E., Coakley, V., Brady, N., Cassells, A., Tobin, J., et al. (2007). Perceived ethnic discrimination in relation to daily moods and negative social interactions. *Journal of Behavioral Medicine, 30*(1), 31-43.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine, 4*(1), 92-100.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology, 56*, 26-83.

Chatters, L. M., Taylor, R. J., Jackson, J. S., & Lincoln, K. D. (2008). Religious coping amoung African Americans, Caribbean Blacks and Non-Hispanic Whites. *Journal of Community Psychology, 36*(3), 371-386.

Chobanian, A. V., Bakris, G. L., Black, H. R., Cushman, W. C., Green, L. A., Izzo, J. L., . . . Roccella, E. J. (2003). Seventh report of the joint national committee on prevention, detection, evaluation, and treatment of high blood pressure. *Hypertension, 42*, 1206-1252.

Clark, R. (2004). Interethnic group and intraethnic group racism: Perceptions and coping in black university students. *Jouranal of Black Psychology, 30*(4), 506-526.

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans. *American Psychologist 54*(10), 805-816.

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans : A biopsychosocial model. *American Psychology, 54*, 805-816.

Clark, R., & Gochett, P. (2006). Interactive effects of perceived racism and coping responses predict a school-based assessment of blood pressure in black youth. *Annals of Behavioral Medicine, 32*(1).

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, N.J: L. Erlbaum Associates.
Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385-396.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal Of Health And Social Behavior, 24*(4), 385-396.

Cohen, S., Kessler, R., & Gordon, L. (1995). *Measuring stress: A guide for health and social scientists*. New York: Oxford University Press.

Cook, T.D. and Campbell, D.T. Quasi-Experimentation: Design and Analysis Issues for Field Settings. Houghton Mifflin, Boston, 1979

Costello, A. B., & Osborne, J. W. (2005). Best Practices in Exploratory Factor Analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation, 10*(7).

Coussons-Read, M. E., Okun, M. L., & Nettles, C. D. (2007). Psychosocial stress increases inflammatory markers and alters cytokine production across pregnancy. *Brain, Behavior, and Immunity, 21*, 343-350.

Cushman, M., Arnold, A. M., Psaty, B. M., Manolio, T. A., Kuller, L. H., Burke, G. L., et al. (2005). C-reactive protein and the 10-year incidence of coronary heart disease in older men and women: the cardiovascular health study. . *Circulation 112*, 25-31.

Czernichow, S., Kengne, A. P., Stamatakis, E., Hamer, M., & Batty, G. D. (2011). Body mass index, waist circumference and waist-hip ration: which is the better discriminator of cardiovascular disease mortality risk? Evidence from an individual-participant meta-analysis of 82 864 participants from nine cohort studies *Obesity Reviews, 12*, 680-687.

Danoff-Burg, S., Prelow, H. M., & Swenson, R. R. (2004). Hope and life satisfaction in Black college students coping with race related stress. *The Journal of Black Psychology, 30*(2), 208-228.

Davis, K. B., Daniels, M., & See, L. A. (1998). The psychological effects of skin color on African Americans self-esteem. *Journal of Human Behavior in the Social Enviornment, 1*(2), 63-90.

Donaldson, S. K., & Crowley, D. M. (1978). The discipline of nursing. *Nursing Outlook, 26*(2), 113-120.

Dorr, N., Brosschot, J. F., Sollers, J. J., III, & Thayer, J. F. (2007). Damned if you do, damned if you don't: The differential effect of expression and inhibition of anger on cardiovascular recovery in black and white males. *International Journal of Psychophysiology 66*(2), 125-134.

Dressler, W. W. (1996). Social identity and arterial blood pressure in the African American community. *Ethnicity & Disease, 6*(1), 176-189.

Dressler, W. W., Bindon, J. R., & Neggers, Y. H. (1998). John Henryism, gender, and a rterial blood pressure in an African-American community. *Psychosomatic Medicine, 60*, 620-624.

Feagin, J., & Sikes, M. (1994). *Living with racism: The black middle-class experience*. Boston: Beacon.

Fontana, A., & McLaughlin, M. (1998). Coping and appraisal of daily stressors predict heart rate and blood pressure levels in young women. *Behavioral Medicine, 24*, 5-16.

Forsyth, J., & Carter, R., T. (2012). The Relationship Between Racial Identiy Status Attitudes, Racism-Related Coping, and Mental Health Among Black Americans. *Cultural Diversity and Ethnic Minority Psychology, 18*(2). doi: 10.1037/a0027660

Gee, G. C., Spencer, M., Chen, J., Yip, T., & Takeuchi, D. (2007). The association between self-reported racial discrimination and 12 month DSM-IV mental disorders among Asian Americans. *Social Science & Medicine, 64*(10), 1984-1996.

Gorber, S. C., Tremblay, M., Moher, D., & Gorber, B. (2007). A caprison of direct vs. self-report measures for assessing height, weight and body mass index: a systematic review. *Obesity Reviews, 8*, 307-326.

Guyll, M., Matthews, K. A., & Bromberger, J. T. (2001). Discrimination and unfair treatment: relationship to cardiovascular reactivity among African American and European American women. *Health Psychology, 20*(5), 315-325.

Hall, J. C., Everett, J. E., & Hamilton-Mason, J. (2012). Black women talk about workplace stess and how they cope. *Journal of Black Studies, 43*(2), 207-226.

Harrell, S. P. (2000). A multidemensional conceptualization of racism-related stress: Implications for the well-being of people of color. *American Journal of Orthopyschiatry, 70*, 42-57.

Harvey, A. (1995). The issue of color in psychology with African Americans families. *Journal of Contemporary Human Sources 76*, 3-10.

Hill, L. K., Kobayashi, I., & Hughes, J. W. (2007). Perceived racism and ambulatory blood pressure in African American college students. *Journal of Black Psychology, 33*, 404-421.

Holt, C. L., Wang, M. Q., Caplan, L., Schulz, E., Blake, V., & Southward, V. L. (2011). Role of religious involvement and spirituality in functioning among African Americans in cancer: testing a mediational model. *Journal of Behavioral Medicine, 34*, 437-448.

Johnson, J., & Farrel, W. (1995). Race still matters. *Chronical of Higher Education 41*, A-48.

Jones, C., & Shorter-Gooden, K. (2003). *Shifting: The double lives of black women in America*. New York, NY: HarperCollins.

Jones, J. M. (1997). *Prejudice and racism*. New York: McGraw-Hill.

Klag, M. J., Whelton, P. K., Coresh, J., Grim, C. E., & Kuller, L. H. (1991). The association of skin color with blood pressure in US blacks with low socioeconomic status. *Journal of American Medical Association, 265*(5), 599-602.

Klonoff, E. A., & Landrine, H. (2000). Is skin color a marker for racial discrimination? Explaining the skin color-hypertension relationship. *Journal of Behavioral Medicine, 23*(4), 329-338.

Kohlmann, C. W., Weidner, G., & Messina, C. R. (1996). Avoidant coping style and verbal-cardiovascular response dissociation. *Psychological Health, 11*, 371-384.

Krantz, D. S., & Manuck, S. B. (1984). Acute psychophysiolgic reactivity and risk of cardiovascular disease: A review and methodologic citique. *Psychological Bulletin, 96*, 435-464.

Krieger, N. (1999). Embodying inequality: A review of concepts measures and methods for studying health consequences of discrimination. . *International Journal of Health Services, 29*, 295-352.

Krieger, N., & Sidney, S. (1996). Racial discrimination and blood pressure: the CARDIA study of young black and white adults. *American Journal of Public Health, 86*(10), 1370-1378.

Krieger, N., Smith, K., Naishadham, D., Hartman, C., & Barbeau, E. M. (2005). Experiences of discrimination: Validity and reliability of a self-report measure for population health research on racism and health. *Social Science & Medicine, 61*, 1576-1596.

Kucan, L., & Beck, I. L. (1997). Think aloud and reading comprehension research: Inquiry, i nstruction and social interaction. *Review of Educational Research, 67*, 271-299.

Kutner, M., Greenberg, E., Ying, J., Boyle, B., Hsu, Y., & Dunleavy, E. (2007). Literacy in everyday life: Results from the 2003 national assessment of adult literacy (NCES 2007-480). In U. D. o. Education (Ed.). Washington, DC: National Center for Education Statistics.

Landrine, H., & Klonoff, E. A. (1996). The schedule of racist events. A measure of racial discrimination and a study of its negative physical and mental health consequences. *Jouranal of Black Psychology, 1996*(22), 144-168.

LaVeist, T. A., Thorpe, R. J. J., Pierre, G., Mance, G. A., & Williams, D. R. (2014). The Relationships among Vigilant Coping Style, Race, and Depression *Journal of Social Issues, 70*(2), 241-255. doi: 10.1111/josi.12058

Lazarus, R., & Folkman, S. (1984). *Stress appraisal and coping*. New York: Springer.

Lazarus, R. S. (1999). *Stress and emotion: a new synthesis*. New York: Springer.

Lepore, S. J., Revenson, T. A., & Weinberger, S. L. (2006). Effects of social stressors on cardiovascular reactivity in black and white women. *Annals of Behavioral Medicine, 31*(2), 120-127.

Lessig, M., Scanlan, J., Nazemi, H., & Borson, S. (2008). Time that tells: Critical clock-drawing errors for dementia screening. *International Psychogeriatrics, 20*(3), 459-470.

Lewis-Coles, M. E., & Constantine, M. G. (2006). Racism-related stress, africultural coping, and religious problem-solving among African Americans. *Cultural Diversity and Ethnic Minority Psychology, 12*(3), 433-443.

Lewis, T. T., Aiello, A. E., Leurgans, S., Kelly, J., & Barns, L. L. (2010). Self-reported experiences of everyday discrimination are associated with elevated C-reactive protein levels in older African American adults *Brain, Behavior, and Immunity, 24*, 483-443.

Lynn, M. R. (1986). Determination and quantification of content validity. *Nursing Research, 35*(6), 382-386.

Maddox, K. B., & Gray, S. A. (2002). Cognitive represenations of Black Americans: Reexploring the role of skin tone. *28, 2*, 250-259.

Mannisto, T., Mendola, P., Vaarasmaki, M., Jarvelin, M. R., Hartikainen, A. L., Pouta, A., & Suvanto, E. (2013). Elevated blood pressure in pregnancy and subsequent chronic disease risk. *Circulation, 127*, 681-690.

Manuck, S., Kasprowicz, A., & Muldoon, M. (1990). Behaviorally evoked cardiovascular r eactivity and hypertension. Conceptual issues and potential associations. *Annals of Behavioral Medicine, 12*, 17-29.

Mays, V. M., Cochran, S. D., & Barnes, N. W. (2007). Race, race-based discrimination and health outcomes among African Americans. *Annual Review of Psychology 58*, 201-225.

McNeilly, M. D., Anderson, N. B., Armstead, C. A., Clark, R., Corbett, M., Robinson, E. L., et al. (1996). The perceived racism scale: A multidimensional assessment of the

experience of white racism among African Americans. *Ethnicity & Disease, 6*, 154-166.

McNeilly, M. D., Robinson, E. L., Anderson, N. B., & Pieper, C. F. (1995). Effects of racist provocation and social support on cardiovascular reactivity in African American women. *International Journal of Behavioral Medicine, 2*, 321-338.

Merritt, M. M., Bennett, G. G., Wiliams, R. B., & Edwards, C. L. (2006). Percieved racism and cardiovascular reactivity and recovery to personnaly relevant stress. *Health Psychology, 25*(3), 364-369.

Miller, G. E., Rohleder, N., Stetler, C., & Kirschbaum, C. (2005). Clinical depression and regulation of the inflammatory response during acute stress. *Psychosomatic Medicine, 67*, 679-687.

Moghaddam, F. M., Taylor, D. M., Ditto, B., Jacabs, K., & Bianchi, E. (2002). Psychologicial distress and perceived discrimination: A study of women in India. *International Journal of Intercultural Relations, 26*, 381-390.

Mossakowski, K. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *Journal of Health and Social Behavior, 44*, 318-331.

Mwendwa, D. T., Gholson, G., Sims, R., Levy, S., Ali, M., Harrell, J., Campbell, A. (2011). Coping with perceived racism: A significant factor in the development of obesity in African American Women? *Journal of the National Medical Association, 103*(7).

Nijm, J., Kristenson, M., Olsson, A. G., & Jonasson, L. (2007). Impaired cortisol response to acute stressors in patients with coronary disease. Implications for inflammatory activity. *Journal of Internal Medicine, 262*, 375-384.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw Hill.

Ouellet-Morin, I., Danese, A., Williams, B., & Arseneault, L. (2011). Validation of a high-sensitivity assay for C-reactive protein in human saliva. *Brain, Behavior, and Immunity, 25*, 640-646.

Outlaw, F. (1993). Stress and coping: the influence of racism on the cognitive appraisal processing of African Americans. *Mental Health Nursing, 14*, 399-409.

Oyserman, D., Kemmelmeier, M., Fryberg, S., Brosh, H., & Hart-Johnson, T. (2003). Racial-ethnic self-schemas. *Social Psychology Quarterly, 66*(4), 333-347. doi: 10.2307//1519833

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Lawrence Erlbum Association.

Peters, R. (2004). Racism and hypertension among African Americans. *Western Journal of Nursing Reserch, 26*(6), 612-632.

Pickering, T. G., Hall, J. C., Appel, L. J., Falkner, B. E., Graves, J., Hill, M. N., et al. (2005). Recommendations for blood pressure measurement in humans and experimental animals. *Hypertension, 45*, 142-161.

Pieterse, A. L., Carter, R. T., Evans, S. A., & Walter, R. A. (2010). An exploratory examination of the association among racial and ethnic discrimination, racial climate, and trauma-related symptoms in a college student population. *Journal of Counseling Psychology, 57*, 255-263.

Pieterse, A. L., Todd, N. R., Neville, H. A., & Carter, R. T. (2012). Perceived racism and mental health among black american adults: A meta-analytic review. *Journal of Counseling Psychology, 59*(1), 1-9.

Plichta, S. B., & Kelvin, E. (2005). *Munro's statistical methods for health care research* (6th ed.). New York, New York: Wolters Kluwer/Lippincott Williams & Wilkins.

Plummer, D. L., & Slane, S. (1996). Patterns of coping in racially stressful situations. *Journal of Black Psychology, 22*(3), 302-315.

Polit, D. E., & Beck, C. T. (2008). *Nursing Research: Generating and assessing evidence for nursing practice* (8 ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Profant, J., & Dimsdale, J. E. (1999). Race and diurnal blood pressure patterns: a review and meta-analysis. *Hypertension, 33*, 1099.

Quintana, S. M. (2007). Racial and ethnic identity: Developmental perspectives and research. *Journal of Counseling Psychology, 54*(3), 259-270. doi: 10.1037/0022-0167.54.3.259

Ranjit, N., Diez-Rouz, A. V., Shea, S., Cushman, M., Seeman, T., Jackson, S. A., et al. (2007). Psychosocial factors and inflamation in the multi-ethnic study of atheroscelorisis *Archives of Internal Medicine, 167*, 174-181.

Roberts, C. B., Vines, A. I., Kaufman, J. S., & James, S. A. (2008). Cross-sectional association between perceived discrimination and hypertension in African American men and women: the Pitt County study. *American Journal of Epidemiology, 167*(5), 624-632.

Salvatore, J., & Shelton, J. (2007). Cognitive cost of exposure to racial prejudice. *Psychological Science, 18*(9), 810-815.

Sanders Thompson, V. L. (2006). Coping responses and the experience of discrimination. *Journal of Applied Social Psychology, 36*, 1198-1214.

Sawyer, P. J., Major, B., Casad, B. J., Townsend, S. S. M., & Mendes, W. B. (2012). Discrimination and the stress response: Psychological and physiological consquences of anticipating prejudice in interethnic interactions. *American Journal of Public Health, 102*(5), 1020-1026.

Schiller, J. S., Lucas, J. W., Ward, B. W., & Peregoy, J. A. (2012). Summary of health statistics for U.S. adults: National health interview survey, 2010. National center for health statistics. *Vital Health Stat, 10*(252).

Sellers, R. M., Rowley, S. J., Chavous, T. M., Shelton, J. N., & Smith, M. (1997). Multidemensional Inventory of Black Idenity: Prelimnary investigation of reliability and construct validty *Journal of Personality and Social Psychology, 73*, 805-815.

Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology, 84*, 1079-1092.

Sellers, R. M., Caldwell, C. H., Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). Racial identity racial discrimination, perceived stress, and pschological distress among African American young adults. *Journal of Health and Social Behavior, 44*(3), 302-317. doi: 10.2307/1519781

Sesso, H. D., Wang, L., Buring, J. E., Ridker, P. M., & Gaziano, J. M. (2007). Comparison of interleukin-6 and C-reactive protein for the risk of developing hypertension in women. *Hypertension, 49*, 304-310.

Sharp, L. K., Kimmel, L. G., Kee, R., Saltoun, C., & Chang, C. (2007). Assessing the perceived stress scale for African American adults with asthma and low literacy. *Journal of Asthma, 44*(4), 311-316.

Shorter-Gooden, K. (2004). Multiple Resistence Strategies: How African American women cope with racism and sexism. *Journal of Black Psychology, 30*(3), 406-425. doi: 10.1177/0095798404266050

Sims, R., Gordon, S., Garcia, W., Clark, E., Monye, D., Callender, C., et al. (2008). Eating Behaviors. *9, 2*, 137-142.

Smart, R. L., Pek, J., Pascoe, E., & Bauer, D. J. (2010). The effects of perceived discrimination on ambulatory blood pressure and effective responses to interpersonal stress modeled over hours. *Health Psychology 29*, 403-411.

Smriti, S., Gallo, L. C., Crouse, J. R., & Allison, M. A. (2012). The association between chronic stress type and C-reactive protein in the multi-ehnic study of atherosclerosis: does gender make a difference? . *Journal of Behavioral Medicine, 35*, 74-85.

Steffen, P., McNeilly, M., Anderson, N., & Sherwood, A. (2003). Effects of perceived racism and anger inhibition ambulatory blood pressure in African Americans. *Psychosomatic Medicine 65*(5), 746-750.

Tabachnick, B. G., & Fidell, L. S. (2000). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn & Bacon.

Tomfohr, L., Cooper, D. C., Mills, P. J., Nelesen, R. A., & Dimsdale, J. (2010). Everyday discrimination and nocturnal blood pressure dipping in black and white Americans. *Psychosomatic Medicine, 72*, 266-272.

Tomfohr, L., Cooper, D. C., Mills, P. J., Nelesen, R. A., & Dimsdale, J. E. (2010). Everyday discrimination and nocturnal blood pressure dipping in black and white Americans. *Psychometric Medicine, 72*, 266-272.

Vines, A. I., McNeilly, M. D., Stevens, J., Hertz-Picciotto, I., Bohlig, M., & Baird, D. D.

(2001). Development and reliability of a telephone-administered perceived racism scale (TPRS): A tool for epidemiological use. *Ethnicity & Disease, 11*(2), 251-262.

Wagner, C. S., Laken, M. L., Ferguson, M. L., Ferdinand, K. C., & Egan, B. M. (2011). Progresson is accelerated from prehypertension to hypertension in blacks. *Hypertension, 58*(4), 579-587.

Waltz, C. W., & Bausell, R. B. (1981). *Nursing research: Design, statistics and computer analysis*. Philadelphia: F.A. Davis.

Waltz, C. W., Strickland, O. L., & Lenz, E. (2010). *Measurement in nursing and health research* (4th ed.). New York: Springer Publishing Company.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.

Willerson, J. T., & Ridker, P. M. (2004). Inflammation as a cardiovascular risk factor. *Circulation, 99*, 18-28.

Williams, D. R., Neighbors, N. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: findings from community studies. *American Journal of Public Health, 93*(2), 200-2008.

ABSTRACT

DEVELOPMENT AND INITIAL PSYCHOMETRIC TESTING OF THE PERCEIVED RACISM SHIFTING SURVEY (PRSS)

by

SARAN T. HOLLIER

May 2015

Advisor: Dr. Rosalind Peters

Major: Nursing

Degree: Doctor of Philosophy

Perceived racism experienced from those of a different race (intergroup), and those of the same race (intragroup), is a stressor that may be contributing to health disparities among African Americans. As a result, coping strategies are necessary for African Americans to navigate in both a "Black" and "White" world. Hence, African Americans may use "shifting" as a way to cope with inter- and intragroup racism. Shifting has been defined in this study as the external and internal processes used to manage the anticipation of both inter- and intragroup racism**.** The purpose of this study was to develop and test a culturally-sensitive instrument that assessed "shifting" as a strategy to manage the anticipation of interpersonal racism among African Americans. The Model of Perceived Racism and Shifting (MPRS), derived from the stress and coping framework described by Lazarus (1999) and Lazarus and Folkman (1984) guided this study.

The Perceived Racism Shifting Survey (PRSS) was developed and tested in three phases. Phase one included item development and expert content evaluation. Phase two included pretesting and pilot testing of the items established as a result of the first phase.

Phase three included initial psychometric evaluation using evidence of content, internal structure, and relationships based on other variables.

The PRSS was evaluated in a non-probability sample of 145 African American males and females. The instrument utilized a seven-point likert scale to measure "shifting". The results of the exploratory factor analysis (EFA) revealed four domains of "shifting", seven factors conceptualized as subscales, and 29 items. Initial psychometric testing revealed good reliability of the total scale, however there was limited evidence of convergent and concurrent validity.

Key findings in this study indicate that African Americans "shift" in association with experiences of both inter and intragroup racial discrimination. Additionally, the interaction of "shifting" and experiences of racial discrimination significantly predicted positive affect (PA), suggesting that "shifting" may have a positive influence on mental health.

AUTOBIOGRAPHICAL STATEMENT

SARAN T. HOLLIER
holliest@udmercy.edu

EDUCATION
2007-2014	PhD student	Wayne State University, Detroit, MI
1998-2001	MS Nursing Administration	Madonna University, Livonia, MI
1992-1996	BS Nursing	University of Michigan, Ann Arbor, MI

PROFESIONAL LICENSE
Registered Nurse, State of Michigan

PROFESSIONAL EXPERIENCE
2008-Present	Assistant Professor of Nursing, University of Detroit Mercy McAuley School of Nursing
2005-2009	Quality Management Specialist, Oakwood Heritage Hospital, Taylor, MI
2000-2005	Staff Nurse, Coronary Care Unit, Oakwood Hospital, Dearborn, MI
1998-2000	Staff Nurse, Cardiac Step Down, Oakwood Hospital, Dearborn, MI
1997-1998	Staff Nurse, Dialysis Unit, Oakwood Hospital, Dearborn, MI
1996-1997	Nursing Supervisor, Greenary Nursing Home, Farmington, MI
1996-1997	Staff Nurse, Greenary Nursing Home, Farmington, MI

HONORS/AWARDS
2012	**Irene Voglar Academic Scholarship $7,000** Wayne State University, Detroit, MI
2010	**Dean's Academic Scholarship Award $10, 000** Wayne State University, Detroit, MI

FUNDED RESEARCH
2013   Title **"Development and Initial Psychometric Testing of The Perceived Racism and Shifting Survey (PRSS)".** Wayne State University Graduate School Award, Detroit, MI.- *$2000-**Primary Investigator***

2010   Title "**Racism and Coping among Middle-Class African Americans".** Funded by Sigma Theta Tau International Society of Nursing, Lambda Zeta Chapter, University of Detroit Mercy, Detroit MI- *$500-**Primary Investigator.***

PUBLICATION
2013   Hollier, S. (2013). How perceived racism and coping affect cardiovascular disease among African Americans. *Journal of Chi Eta Phi Sorority, Incorporated,* 57(1), 11-16.