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An Evaluation Of The Factor Structure, Reliability And Construct Validity Of The Male Role Norms Inventory-Revised For African American/black Men

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AN EVALUATION OF THE FACTOR STRUCTURE, RELIABILITY AND CONSTRUCT VALIDITY OF THE MALE ROLE NORMS INVENTORY—REVISED FOR AFRICAN AMERICAN MEN

by

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DISSERTATION

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DEDICATION

This dissertation is dedicated with love to my wife

Mary A. Allen

Who has been there with love, patience, and support throughout this arduous journey;

In remembrance of my grandmother

Inez Yopp

A strong and encouraging woman who always said that one day I would do something great;

In remembrance of my parents

Wilfred and Delores Allen

Who unfortunately were not here to see the completion of what was started based on their philosophy of "you can do whatever you make up your mind to do" and "you can be whatever you want to be." Their emphasis on living a God fearing life and obtaining a good education has been invaluable;

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Marlon and Mariah Allen

Who can now see *"A dream doesn't become reality through magic; it takes sweat, determination and hard work."* – Colin Powell

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"It is good to have an end to journey toward; but it is the journey that matters, in the end."

– Ernest Hemingway

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CHAPTER 1

INTRODUCTION

In the United States, on average, men die nearly five years younger than women. Among men, the life expectancy for African American/Blacks is 72.1 years compared to 76.6 years for White/European Americans (Hoyert & Xu, 2012). A variety of factors contributes to the ethnic and gender differences that influence health and longevity. Health behaviors have been cited by many scientists as one of the most important factors influencing health. In the United States, an estimated one third of all deaths could be prevented by engaging in health promotion behaviors and avoiding risky health practices (Danaei et al., 2009).

Non-adherence to treatment regimens is a persistent problem, particularly in the outpatient setting where there is a greater need for patient responsibility and self-care. Failure to appropriately seek professional help, follow treatment plans, and deficiencies in caring for one's self affects the course as well as the outcome of acute and chronic illness, particularly for African American/Black men (Thompson, Talley, Caito, & Kreuter, 2009). These risky health behaviors have been associated with men who endorse a traditional masculinity ideology (Mahalik, Burns, & Syzdek, 2007).

Compared to White/European American men, disparities in the incidence and mortality of chronic diseases are persistently higher in African American/Black men (National Center for Health Statistics, 2004, 2008, 2009). For example, hypertension has a prevalence of 44.4% among African American/Black men and 34.1% among White/European American men (Flack et al., 2010). Hypertension is a major risk factor for cardiovascular disease and stroke which significantly impacts health care costs. The overall estimated annual direct expense for cardiovascular disease and stroke is $313.8 billion in 2009 (Lloyd-Jones et al., 2009). In

addition, chronic diseases such as cancer and diabetes have a higher prevalence in African American/Black men than White/European men. The overall estimated annual expenditure was $89 billion for cancer in 2007 (American Cancer Association, 2008) and $116 billion for diabetes in 2004 (American Diabetes Association, 2008). The prevalence of chronic disease among African American/Black men along with the rising costs for care argues persuasively the need for an exploration of factors that may influence health behaviors that could possibly affect the development and progression of chronic diseases. While there are various socio-cultural factors that may influence the decisions of men regarding health-related behaviors, masculinity ideology has been identified as being significantly influential (Connell, 1995; Courtenay, 2000; Mahalik et al., 2007; Wade, 2009).

In the exploration of health behaviors among African American/Black men, consideration must be given to the prior research that indicates that health behaviors are influenced by cultural beliefs which includes racial identity (Oyserman, Fryberg, & Yoder, 2007). Racial identity is a socio-cultural orientation which is an individual's beliefs or attitudes regarding one's own race and the degree to which one feels connected to that particular racial group (Parham & Helms, 1981; Phinney, 1990). Earlier studies show that environmental and social factors can have a negative or positive effect on the development of racial identity thereby giving direction to decisions made regarding personal behaviors (Parham & Helms, 1981). Having a better understanding of one's racial identity perception may provide insight to factors that weigh in on decisions regarding health behaviors.

Masculinity ideology is the internalized systems of beliefs and attitudes that generate and coordinate an individual's expectations, goals, and behaviors in congruence with their culturally defined standards of the male role (Pleck, Sonenstein, & Ku, 1993, p.88; Levant & Richmond,

2007). In light of this definition, it should not be assumed that this is an all-encompassing universal standard. Masculinity ideology is a reflection of one's culture and thus is believed to vary from culture to culture (Levant et al., 2003). There is no predetermined biological essence that contributes to the development of masculinity ideology. Differences in socioeconomic status, education, age, and race are among some of the factors that influence the development of masculinity ideology (Kimmel & Messner, 1992). Although differences in masculinity ideology may exist among men of various cultures, the seminal work of Pleck (1995) indicates that there are commonalities in expectations and standards for traditional masculinity ideology in the Western world. Some of these common dimensions include achievement, being strong, competitiveness, authoritative leader, and aggressiveness. Men who closely adhere to these cultural norms are viewed as having a traditional masculinity ideology.

There are multiple measures that have been developed to explore the relationships of, and the variations in masculinity ideology among men and women (Thompson & Pleck, 1995; Thompson, Pleck, & Ferrera, 1992). It is reasonable to examine masculinity ideology among both genders since masculinity ideology within one's culture is learned by females as well as males. Learned masculinity ideology among females is known to have an influence on the expectations that girls and women have regarding the way boys and men should behave (Levant et al., 2012). Prior studies have suggested that men and women differ in their endorsements of masculinity ideology (Levant, Hall, & Rankin, 2013). For example, a review of four studies using the MRNI with participants of African American/Black, Latino, and White/European American origin (Levant et al., 2003; Levant & Majors, 1997; Levant, Majors, & Kelley [2 studies], 1998) found that men have a higher endorsement of traditional masculinity ideology than women on the MRNI total scale. However; these findings were obtained using the original

MRNI scale which has since been revised due to inadequate reliability of some of the subscales (Levant et al., 2007).

A further review of the literature included two studies (Levant, Rankin, Williams, Hasan, & Smalley, 2010; Levant et al., 2007) that used the MRNI-R. As with prior research that has used the MRNI, these two studies using the MRNI-R found more of an endorsement of traditional masculinity ideology among men than women. Furthermore, Levant and colleagues (2010) included an evaluation of the factor structure and construct validity through factor analysis which provided evidence for the reliability and validity of the MRNI-R. Although these results provide support for the possibility that masculinity ideology has a different meaning for men than it does for women, there were limitations to these studies stemming from the sample which necessitates further investigation.

The first limitation regarding the sample is that the participants were all college students from the same geographical location for each study. Next, the Levant et al. (2007) study had only 38 men and 132 women of which the ethnic diversity was more in favor of White/European Americans (50.6%) followed by African American/Blacks (27.1%), Asians (6.6%), and those who identified themselves as "other" (15.8%). The follow-up study by Levant et al. (2010) included 593 participants (58% men, 42% women) of which the majority were White/European Americans (83%) with no mention of the distribution among other ethnic groups.

Despite the limitations of this prior research, the importance of including women in future studies of masculinity ideology has been recognized. This study took the first step in exploring masculinity ideology among gender and cultural differences by evaluating the reliability and validity of the MRNI-R in a diverse group of African American/Black men.

Traditional masculinity ideology has a long culturally established history of what it means to be a man. It restricts men from exhibiting behavior or having thoughts attributed to the female role and supports a variety of specific behaviors and self-perceptions that men are supposed to hold fast (Wade, 2008). For example, restrictive emotionality is a central norm of traditional masculinity ideology thus, a man seen crying in public would be violating this norm according to those who endorse traditional masculinity ideology (Eisler & Skidmore, 1987). Achievement, self-reliance, less willingness to consult medical and mental health care providers (Addis & Mahalik, 2003), and less utilization of preventive health care (Mahalik, Lagan, & Morrison, 2006) have been associated with a traditional masculinity ideology. Research suggests that men who endorse a traditional masculinity ideology are more likely to have health behaviors that are risky (Mahalik et al., 2007). Since health behaviors have been identified as crucial to the prevention and management of chronic illness (Becker, Gates, &Newsom, 2004) such as hypertension, diabetes, and cancer, masculinity ideology's influence on health behaviors may affect health outcomes. In addition, studies have found that African American/Black men endorse traditional masculinity ideology more than White/European American men which may coincide with differences in health behaviors (Courtenay, 2000; Levant et al., 1992; Levant & Majors, 1997; Pleck, Sonenstein, & Ku, 1994). Because of the gaps in the literature more research is needed to understand which aspects of masculinity ideology among African American/Black men, in particular, has the most influence on one's motivation and willingness to perform self-care.

Statement of the Problem

Although there are a variety of factors that influence health and longevity, it is believed that health behaviors play a significant role in the morbidity and mortality amongst all

individuals. Since it is known that engaging in self-care practices is critical to the management and outcomes of chronic illnesses (Becker et al., 2004), and that health promotion behaviors may decrease the rates of mortality (Danaei et al., 2009), there is a need to explore potential underlying factors that may affect one's engagement in self-care.

Men have fewer physician visits, spend less time during physician visits, perform fewer preventive health behaviors, engage in more risky health behaviors, have poorer diets, poorer patterns of sleep, and worse weight management than women (Levant, Wimer, & Williams, 2011). Masculinity ideology has often been cited as having an influence on the self-care behaviors of men (Courtenay, 2000). Insufficient self-care behaviors are problematic for African American/Black men who are known to experience disease with an earlier onset, increased severity, and more prevalent complications than White/European American men (Barnett et al., 2001). With masculinity ideology having the potential to affect self-care behaviors and ultimately health outcomes, it is necessary for researchers to examine which aspects of masculinity ideology is most influential on self-care. However, in order to assess the relationship between masculinity ideology and self-care behaviors among African American/Black men, this study was needed to establish a valid and reliable instrument to measure masculinity ideology for this specific racial-ethnic group.

Based on Brannon's (1976) analysis of America's culture of what a man is supposed to be, wants to be, and wants to succeed at doing, Brannon and Juni (1984) developed the Brannon Masculinity Scale (BMS). This 110-item scale measures an individual's approval of the norms and values that define the male role. Masculinity ideology was conceptualized using four norms for this scale. The norms defined by David and Brannon (1976) were: (1) "no sissy stuff" – men should not engage in feminine things; (2) "the big wheel" – achievement and success should be

the focus of a man; (3) "the sturdy oak" – men should not show indications of weakness; and (4) "give 'em hell" – men should search for adventure despite any risks of violence.

Although Brannon's masculinity scale was developed early on, there have been numerous scales developed since that time by psychologists to measure masculinity ideology (Thompson & Pleck, 1995). However, Whorley and Addis (2006) noted that the two most commonly used measures have been the Male Role Norms Scale (MRNS; Pleck et al., 1994) and the Male Role Norms Inventory (MRNI; Levant et al., 1992). Even with their avid use by researchers examining masculinity ideology, both of these scales in their original forms have limitations. The MRNS, a 26-item scale that was empirically derived by the factor analysis of the Short Form of the Brannon Masculinity Scale (BMS-S; Brannon & Juni, 1984) has one less traditional masculinity norm than the BMS-S. Although the MRNS has three basic norms underpinning traditional masculinity: status, toughness, and anti-femininity, many researchers of men's studies have considered traditional masculinity ideology as having more than three norms (Thompson & Pleck, 1986).

The BMS was also investigated by Levant et al. (1992) during which time redundancies were found between the subscales within the measure. Following their analysis suggestions were made to append the norms of fear and hatred of homosexuals and non-relational attitudes toward sexuality so that masculinity ideology could be more extensively measured (Levant et al., 1992). After Levant and colleagues (1992) reviewed earlier measures of masculinity ideology, they developed the Male Role Norms Inventory (MRNI). The MRNI has eight theorized normative standards of masculinity ideology: avoidance of femininity, fear and hatred of homosexuals (homophobia), focus on achievement/status, one's attitude toward sex, restriction of emotions, self-reliance, aggression, and nontraditional attitudes towards masculinity (Levant et al., 1992).

An important limitation of the MRNI is the finding by Levant et al. (1992) that the structure of the subscales did not have adequate support by factor analysis. In addition, a review of the literature found deficiencies in the reliability of some of the subscales in various studies resulting in subscale deletions and subsequent loss of data (Levant & Richmond, 2007). Upon further evaluation of the MRNI, it has been determined that some of the language within the subscales is dated and throughout the years the clarity and conceptualization of some of the definitions of the male role may not have been adequate (Levant et al., 2007). With these limitations in mind, the MRNI was revised to address these issues thus leading to the development of the Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007).

The MRNI-R was developed to assess only traditional masculinity ideology, unlike the MRNI which also measured non-traditional masculinity. By eliminating and revising some of the subscales, and updating the language used within the remaining subscales the new scale was formed. The initial validation of the MRNI-R and its subscales has shown improved reliability scores with Cronbach alphas ranging from .73 to .96 compared to alphas ranging from .51 to .88 in prior studies using the MRNI (Levant et al., 2007).

Although the initial validation of the MRNI-R (Levant et al., 2007) reported evidence for improved reliability and validity compared to the original MRNI, the revised measures factor structure and its relationship to other scales that measure masculinity ideology and related constructs were not studied at that time. In a follow-up study (Levant et al., 2010) the factor structure and construct validity of scores on the MRNI-R were tested. There was support for internal consistency of the MRNI-R total score and seven factor scores. A significant positive correlation of the MRNI-R with the Male Role Attitudes Scale (MRAS; Pleck et al., 1994), which is another measure of traditional masculinity ideology, granted support for convergent

validity; the nonsignificant correlation with the Personal Attributes Scale (PAQ-M; Spence & Helmreich, 1978) provided evidence for divergent validity; significant positive correlation with the Gender Role Conflict Scale (GRCS; O'Neil, Helms, Gable, David, & Wrightsman, 1986), Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003), and the Normative Male Alexithymia Scale offered support for concurrent validity (Levant et al., 2006). Despite these findings, there were limitations in that study that must be considered for future research.

One of the limitations that is of concern to this researcher stems from the study sample. Participants of the study by Levant and colleagues (2010) were all university students from one geographical region; most (94.8%) were heterosexual and predominantly White/European American (82.9%). Among the participants, women represented 42% while the men represented 58%. In the initial validation of the MRNI-R (Levant et al., 2007), the participants were 170 university students of which 132 were women and 38 were men. Among those participants 50.6% reported to be White/European American, 27% reported to be African American/Blacks, 6.5% reported as Asian American and 16% reported as other groups. Based on the participant distribution in these two landmark studies by the developers of the MRNI-R, it is unclear as to the extent to which the MRNI-R is able to measure traditional masculinity ideology among African American/Blacks, particularly those from the general population who are not college students.

Statement of Purpose

Men who adhere to traditional masculinity ideology have been associated with fewer health promoting behaviors and more health risks than those with a less traditional endorsement (Mahalik et al., 2006). This is of particular concern for African American/Black men due to differences in life expectancy when compared to their White/European American male

counterparts. Just to reiterate, the life expectancy for African American/Black men is 72.1 years compared to 76.6 years for White/European American men (Hoyert & Xu, 2012). Therefore, there is a need to expand our understanding of factors that may be useful in narrowing this life expectancy gap.

The primary purposes of this study were to: (1) assess the factor structure of the MRNI-R, (2) assess its reliability using Cronbach's alpha, and (3) assess the construct validity using Pearson's *r* correlation for convergent, concurrent, and discriminant validity among a sample of African American/Black men. In addition, correlations between racial identity, traditional masculinity ideology, and health behaviors were assessed. Since masculinity ideology has been identified as having a significant influence on one's health-related behaviors, this study was needed to set the foundation for future research involving masculinity ideology as a potentially alterable attitude/ideology that influences the health behaviors among this high-risk group.

CHAPTER 2

THEORETICAL FRAMEWORK

The overarching theoretical framework that guided this study was taken from the theory of self-care described by Orem (2001). The theory of self-care is a general theory of what nursing is and should be as it is produced in situations of nursing practice. There are three related theories within the self-care deficit nursing theory (SCDNT) which includes: (a) the theory of self-care which provides a description and explanation of why and how individuals care for themselves; (b) the theory of self-care deficit which explains why individuals can be helped through nursing; and (c) theory of nursing system which provides an explanation and description of relationships that must be created and maintained for nursing to be produced (Orem, 2001). Although the SCDNT has three related theories, the theory of self-care with its overall explanation of how specific human factors may influence self-care was the focus of this study as shown in Figure 1 (see Appendix A). It is believed that information obtained from this study, using the theory of self-care as a theoretical guide, will provide new knowledge for future research that examines how individuals can be helped through nursing and the relationships that must exist for nursing to be produced. The following theoretical assumptions (Table 1) and propositions (Table 2) served as principles and guides for further development of this theory.

Table 1. ***Theoretical Assumptions***

- Traditional masculinity ideology, specifically conceptualized as a foundational disposition, is an influential factor affecting estimative, transitional, and production operations.
- Conditions and factors within the culture of an individual affect the development of self-care agency.
- Cultural conditions and factors that contribute to the development of self-care agency change over time just as the needs of the individual.

Table 2. ***Theoretical Propositions***

- Men who take action to provide their own self-care possess specialized capabilities for action.
- The abilities of men to engage in self-care are conditioned by age, developmental state, racial identity, life experiences, socio-cultural orientations, health, and available resources.
- Cultural conditions and factors that contribute to the development of self-care agency change over time, just as the needs of the individual.

Theoretical Overview: Self-Care Deficit Nursing Theory

The self-care deficit nursing theory (Orem, 2001) is a complex, multidimensional concept that has been widely researched and used by nurses. As a general theory, the SCDNT is an articulation of three related theories; the theory of self-care, the theory of self-care deficit, and the theory of nursing system. The theory of self-care identifies self-care as a regulatory function that individuals deliberately perform themselves or have performed by another to maintain life, health, development, and well-being. Self-care is an action system that must be learned and deliberately performed on a continuous and timely basis to remain in conformity with the regulatory requirements of an individual. The individual performing these deliberate actions is labeled as "agent" (Orem, 2001, p.65). The theory of self-care deficit proposes that an individual must take action to maintain life, health, and well-being. A self-care deficit exists when an individual's limitations prevent the performance of actions required to adequately meet all or part of the requisites for regulatory care. The theory of nursing system proposes that sufficiently educated nurses are needed to design and implement plans of care for individuals whose demands for self-care exceed their ability to perform the required actions (Orem, 2001).

Although the SCDNT has three related theories, the theory of self-care with its overall explanation of how specific human factors may influence self-care was examined in this study.

Basic Conditioning Factors

Basic conditioning factors (BCFs) are defined as "personal conditions or environmental circumstances" that have the potential to influence a person's competence for engagement in self-care actions (Orem, 2001, p. 514). The ten factors, known as basic conditioning factors include: age, gender, developmental state, health state, socio-cultural orientation, health care system, family system factors, pattern of living, environmental factors, and resource availability and adequacy (Orem, 2001). These factors which involve environmental, cultural, socioeconomic conditions and other conditions of humans, affect the value of a person's self-care agency at a specific time (Orem, 2001). Although Orem (2001) named ten basic conditioning factors, she acknowledges that they "should be amended whenever a new factor is identified" (p.245).

The development and operability of self-care agency can be influenced by basic conditioning factors (e.g., age, sociocultural orientation, gender, health state, family system factors) thus, it is essential that these factors are understood when assessing the ability to perform self-care activities. An in depth knowledge of these factors is needed for a more complete understanding of the influences they may exert on self-care agency. The nine BCFs that this study measured included age, gender, health state (presence of acute or chronic illnesses), developmental state (education), sociocultural orientation (racial identity), health-care system factors (primary care provider), family system factors (marital status, children, individuals living in the home), environmental (where lived), and resource availability and adequacy (employment, income, insurance).

These are the factors that are believed to affect the value of self-care agency of African American/Black men. Information regarding basic conditioning factors was collected via a demographic data sheet. In addition, racial identity was conceptualized as a basic conditioning factor and measured to explore the relationship between other basic conditioning factors and with masculinity ideology. This study provides information that will enhance the understanding of BCFs from the exploration of racial identity as an influential factor in the development of one's self-care agency.

Age as a Basic Conditioning Factor

The aging process differs from one person to the next. Some individuals are able to participate in a variety of activities such as golf, tennis, and driving a car at 80 years old, while others may be frail and somewhat dependent at 60 years of age. The state of physical and mental health, social interaction, life experiences, and genetics all contribute to the aging process (Allender & Spradley, 2005). The aging process has the potential to affect one's ability or willingness to engage in self-care. For example, a 40 year old individual who has experienced a stroke with residual focal deficits may be more willing and able to perform self-care behaviors than an 80 year old with the same condition. According to Orem (2001), an individual's ability to engage in self-care begins as a child reaches maturity in adulthood and declines with old age.

Racial Identity as a Basic Conditioning Factor (Sociocultural Orientation)

Racial identity is developed through cultural socialization, personal experiences, and life-long learning and thus, may have an influence on the development of masculinity ideology thereby affecting one's SCA. The influence of racial identity may be an underlying phenomena as a result of the way in which it was conceptualized during socialization. Therefore, the internal element of racial identity is considered a BCF because the sociocultural orientation may affect an

individual's engagement in self-care. Although there are many basic conditioning factors, this study provided a closer examination of racial identity as a basic conditioning factor under the umbrella of socio-cultural orientation.

Previous studies (Callaghan, 2006; Denyes, Orem, & Bekel, 2001; Sousa, Zauszniewski, Musil, Lea, & Davis, 2005) have used demographic questionnaires to assess basic conditioning factors, including race, to identify potentially significant relationships between these factors and the relevant concepts of the study. Among studies using a demographic questionnaire to assess race as a basic conditioning factor participants were asked to identify their racial origin. Although race is an important component to consider when assessing basic conditioning factors, asking participants to identify their racial origin alone may project the assumption that members of a specific racial group all homogeneously identify with that group. For example, that would mean the beliefs and attitudes regarding African American/Blacks and the significance of being an African American/Black would be the same for all members who self-identify as being African American/Black. Given that racial identity is developed through cultural socialization, it is reasonable to expect differences among members of the same racial group thus necessitating the need to explore the dimensions of racial identity as a basic conditioning factor. Since racial identity has dynamic properties that influence behavior (Sellers, Smith, Shelton, Rowley, & Chavous, 1998) there is a potential for the influence of health behaviors as an outcome of the influence racial identity has on the development of masculinity ideology.

Self-Care Agency

Self-care agency is defined as "the complex acquired capability to meet one's continuing requirements for care of self that regulates life processes, maintains or promotes integrity of human structure and functioning and human development, and promotes well-being" (Orem,

2001, p. 254). As people develop from childhood to old age, the self-care agency of individuals will vary. Variations can occur with factors that influence health state and educability as well as life experiences and cultural differences. Self-care agency is conditioned by factors that affect its development and operability. Self-care agency encompasses the capacity of individuals to learn from life experiences, acquire knowledge of appropriate courses of action, to make decisions about what to do, and take action to achieve change. Self-care agency has been described as having a three tier structure that includes foundational capabilities and dispositions, and a set of 10 power components which enable the performance of self-care operations, and the operations needed for self-care (Orem, 2001).

Foundational Capabilities and Dispositions

Foundational capabilities of knowing and doing affect one's ability to reason and make adequate judgments and decisions regarding life situations. This also includes skills that are learned which affect communication, investigative, and production type operations. Foundational dispositions that affect goals sought articulate conditions that affect individuals' willingness to look at themselves and accept the role of self-care agent, to accept that they need a particular self-care measure, or to be able to perform specific self-care measures. Significant orientative capabilities and dispositions influence habits and interests, willingness to engage in self-care, concerns about health, and the ability to engage in self-care.

Masculinity Ideology as a Foundational Disposition

Masculinity ideology is the internalized cultural belief system and attitude one has towards masculinity and the roles of men. It provides the expectation for the socially sanctioned behaviors for which boys and men adhere (Levant & Richmond, 2007). Masculinity ideology

differs for men of different social classes, races, ethnic groups, sexual orientations, and life stages (Levant, 1996).

Masculinity ideology has been recognized as influencing behaviors (Hamilton & Mahalik, 2009; Mahalik et al., 2007; Wade, 2009) as a result of cultural expectations for the ways in which boys and men should think, feel and behave (Levant & Pollack, 1995). The internalization of cultural beliefs and attitudes may not only affect the willingness to evaluate one's self and accept the role as self-care agent, but also judgments and decisions regarding the ability to perform self-care, and the actual engagement in self-care. Therefore masculinity ideology, as defined, was conceptualized as a foundational disposition for this study.

The power to engage in self-care is a human capability of self-care agency. There are variations in the self-care agency among individuals with respect to health state, educability, life experiences, and cultural influences. A foundational disposition (masculinity ideology) affects a person's willingness to self-evaluate and accept the role as self-care agent while recognizing oneself as needing a particular self-care measure or needing to perform specific self-care measures (Orem, 2001). Motivation is conceptualized as a power component of self-care agency for which human capabilities are empowered to engage in the operations of self-care. The estimative operations are conceptualized as operations of inquiry that search for knowledge, both empirical and technical, to gain an understanding of what is, what can, and what should be addressed in regard to caring for oneself. Transitional operations is the judging and deciding of self-care matters based on an individual's knowledge and experience regarding self-care requisites and measures for meeting them. Productive operations are actions taken by individuals to meet self-care requisites (Orem, 2001). Although power components, estimative operations,

transitional operations, and productive operations are discussed for clarity of self-care agency, an in depth exploration was beyond the scope of this study.

Within this study, masculinity ideology was conceptualized as a foundational disposition of self-care agency. Specifically it was viewed as the disposition that reflects the perception of self-image (e.g., self-concept, self-concern, and self-acceptance) in men (see Appendix B). Since masculinity ideology is comprised of beliefs and attitudes that reflect the culture in which they are developed, there may be differences among men in the amounts and kinds of self-care behaviors performed. Therefore, there is a need for a reliable and valid measure of masculinity ideology that can assess which aspects of masculinity have the most influence on behaviors. This study assessed the factor structure of the MRNI-R along with its reliability and validity for a sample of African American/Black men.

The human endeavor of self-care is produced when individuals take deliberate action to care for themselves. These actions occur over time and are performed in the stable or changing environments of an individual's pattern of living (Orem, 2001). According to Orem (2001), self-care is a direct and deliberate action that varies among individuals based on ability to perform self-care activities. This study attempted to bring clarity to the health promoting and risk behaviors of African American/Black men using the Health Behavior Inventory-20 (HBI-20). In a broader sense, the HBI-20 projects the willingness to follow health recommendations and to engage in the appropriate uses of health resources (Levant et al., 2011).

Self-Care Operations

Self-care operations are capabilities needed for people to engage in self-care (Orem, 2001, p. 258). The deliberate actions of individuals engaging in self-care are delineated in three operational phases, namely, estimative operations, transitional operations, and production

operations. Estimative operations involve a quest for empirical and technical knowledge regarding self-care requisites and an understanding of what can and what should be done to meet them. Transitional operations involve the judgments and decisions regarding self-care matters that is based on what an individual knows about the self-care situation, their experiences and knowledge about self-care requisites and ways to meet them, and their self-concepts and willingness. Production operations are the preparation of one's self, materials, or environmental settings for the performance of self-care (Orem, 2001).

Knowledge and Experience

Knowledge and experience is usually required to take appropriate actions to achieve goals sought. Self-care is referred to as a deliberate action that is performed with the intention of seeking a specific goal or result. Individuals will identify the meaning of the desired result prior to taking action. For example, a person who is feeling ill seeks medical attention from a physician. The physician informs the individual that there is a medication that has made others with similar symptoms feel better. The person is then prescribed and instructed to take the same medication in order to feel better. The deliberate action of taking the medication is to achieve a specific result associated with the individual's meaning of the result; feeling better. In this example, the knowledge that the medication will facilitate feeling better is required for the judgment and decision of what should be done after which, a deliberate action will or will not be performed. When a self-care agent does not have knowledge regarding a particular situation or event, that person will not know what action is most appropriate. As people mature their experiences over time provide knowledge regarding results achieved from prior actions. Through knowledge and experience individuals can make decisions regarding deliberate actions to

perform to achieve goals sought. By gaining new knowledge from experiences, self-care agents may revolutionize their deliberate actions when presented with specific situations or events.

The theory of self-care has been amended in such a way that racial identity was conceptualized as a basic conditioning factor and masculinity ideology was conceptualized as a foundational disposition. Figure 2 (see Appendix A) depicts the theoretical framework at the theoretical level for this study.

Specific Aims and Research Questions

This study had five specific aims and six research questions.

Specific Aim 1: Assess the factor structure of the MRNI-R.

To achieve the specific aim of assessing the factor structure of the MRNI-R a principle component factor analysis was used to identify the underlying relationships between the measured variables.

Research Question 1.0: What is the factor structure and item placement for the MRNI-R?

Specific Aim 2: Assess reliability of the MRNI-R among a sample of African American/Black men.

To achieve the goal of this specific aim, reliability was assessed using Cronbach's alpha to evaluate internal consistency of the retained items of the MRNI-R; the extent to which the items of the MRNI-R are measuring masculinity ideology.

Research Question 2.0: What is the internal consistency reliability of the factors in the total MRNI-R scale for this study?

Specific Aim 3: Assess the relationship of the MRNI-R with other measures of masculinity ideology.

To achieve the goal of this specific aim, Pearson's *r* correlation technique was used to assess for evidence of convergent validity, concurrent validity, and discriminant validity.

Research Question 3.0: Is there a correlation between the MRNI-R and the MRAS?

Research Question 3.1: Is there a correlation between the subscale Restrictive Emotionality of the MRNI-R and the TAS total scale?

Research Question 3.2: Is there a correlation between the MRNI-R and the PAQ-M?

Specific Aim 4: Assess the relationship between the MRNI-R and the MIBI.

To achieve the goal of this specific aim Pearson's *r* correlation was used to assess the correlations between racial identity (MIBI) and masculinity ideology (MRNI-R).

Research Question 4.0: Is there a correlation between the MRNI and the MIBI?

Specific Aim 5: Assess the relationship between the MRNI and the HBI-20 while accounting for specific basic conditioning factors, including racial identity.

To achieve the goal of this specific aim, a hierarchical multiple regression was performed using all factors of the MRNI-R, selected basic conditioning factors, including racial identity, and the HBI-20.

Research Question 5.0: Is there a relationship between the MRNI-R and the HBI-20 while accounting for specific basic conditioning factors?

Significance

Within their professional practice, nurses are continuously evaluating the reasons why individuals can be helped through nursing. In this evaluation process nurses must diagnose the abilities of an individual to engage in self-care at the time of the initial assessment as well as for the future. These abilities must be adequately appraised in relation to the person's therapeutic self-care demand. Nurses must accurately assess self-care agency in order to establish a rationale

for (a) making judgments regarding the current or future self-care deficits and the reasons for their existence, (b) choosing a reliable and valid method of helping, and (c) designing and implementing plans of care (Orem, 2001).

Given that this is a new era of healthcare in which the promotion of health and the prevention of disease is emerging as a priority, the reactive stance of focusing on the treatment of disease will no longer dominate healthcare systems (Pender, 1996). In these times of healthcare crisis, it is time for nurses to take an aggressive approach to the promotion of health through knowledge acquired from research. Although many studies have examined the phenomena of masculinity ideology as it relates to healthcare behaviors, no studies were found that incorporated masculinity ideology within the realm of nursing.

There is a need for the continuous flow of new information so that nurses may experience a consistent growth in the knowledge that will enrich their nursing practice. By building on Orem's widely accepted theory, nurses will have a conceptual frame of reference by which they can examine masculinity ideology as it relates to self-care behaviors among men of various cultures. This study provides new knowledge that will enhance the understanding of cultural differences among men. Knowledge gained from this research may be useful in guiding nurses in their development of new comprehensive assessment tools and nursing plans of care with scientific evidence. Data from this study has the potential for important implications in nursing and health care for high risk groups of African American/Black men.

Although the literature has indicated that the rates of mortality and morbidity are influenced by personal health behaviors, consideration must be given to factors that influence health behaviors. Among men, masculinity ideology has been cited as a major influence in the amount and kinds of self-care that individuals will perform (Lynch, Brouard, & Visser, 2010;

Millar & Houska, 2007; Wade, 2009). Since African American/Black men, compared to White/European men, experience higher rates of mortality (Arias, 2014) and conditions of more severe morbidity, e.g. nonfatal strokes, fatal strokes, end stage renal disease (Go et al., 2014), it is imperative that health care providers have an understanding of specific aspects of masculinity ideology that have the potential to affect self-care behaviors.

Self-care is crucial to the promotion of health and the prevention of complications during the treatment, recovery, and rehabilitation from disease. Information obtained from this study will provide new knowledge to the discipline of nursing from the assessment of the factor structure of a critical dispositional variable in African American/Black men, masculinity ideology. In order to better understand the influence of this critical variable, the factor structure needed to be confirmed in a sample of sufficient size and variability that matches the general population of African American/Black men, rather than the small and restricted sample used in previous studies by the primary developer of the instrument (Levant et al., 2010; Levant et al., 2007). This level of testing also adds to the existing literature by providing data from the validity and reliability assessment of the MRNI-R. Other measures of masculinity ideology were used to assess convergent, concurrent and discriminant validity. The sum of item scores on the MRNI-R was used for the measurement of internal consistency reliability. Correlations with self-care were examined with a measure of health behaviors.

In addition, through the theoretical testing of relationships between variables using Orem's nursing theory of self-care, this study was able to better understand the relationships between BCFs, including racial identity, masculinity ideology and health behaviors in an understudied population of men at high risk for morbidity and mortality. At the theoretical level of this model, Figure 2 (see Appendix A), testing articulated the relationships between basic

conditioning factors, self-care agency, and self-care. Empirical level testing, Figure 3 (see Appendix B) explores the strengths of relationships between basic conditioning factors, the foundational disposition of self-care agency, and self-care.

Masculinity ideology is a component of self-care agency that is conceptualized as a foundational disposition. A foundational disposition (masculinity ideology) affects a person's willingness to self-evaluate and accept the role as self-care agent while recognizing themselves as needing a particular self-care measure or needing to perform specific self-care measures (Orem, 2001). Results of this inquiry provide a new insight regarding the aspects of masculinity ideology that may affect the person's willingness to self-evaluate and accept the role as self-care agent while recognizing themselves as needing a particular self-care measure and the performance of self-care in African American/Black men. In addition, knowledge obtained from this study will contribute to the science of nursing by expanding the current state of Orem's theory of self-care.

Significance to Healthcare and Society

This research provides new knowledge that may facilitate community interventions such as the development of race/gender specific programs and public service announcements that associate sociocultural orientations about masculinity ideology with caring for one's health. Nurses, as part of their holistic practice, will be able to develop and implement theoretically based nursing interventions that focus on the promotion of health and self-care behaviors for African American/Black men. In addition, this research potentially increased the awareness in African American/Black men about specific aspects of their masculinity ideology which may in turn provide a pathway for discussion and possible modification of their cultural beliefs regarding masculinity and ultimately their health behaviors.

Definitions

Basic conditioning factors: internal or external factors that affect an individual's ability to engage in self-care, the kinds of self-care engaged in, or the amount of self-care actions needed (Orem, 2001).

Culture: the behavioral patterns, beliefs, values, and customs of a population of people that guide their worldview and decision making (Purnell & Paulanka, 2003).

Foundational disposition: expresses conditions that affect persons' willingness to look at themselves as self-care agents, to accept themselves as in need of particular self-care measures, or to perform certain self-care measures (Orem, 2001, p. 261).

Masculinity ideology: the internalized systems of beliefs and attitudes that generate and coordinate an individual's expectations, goals, and behaviors in congruence with their culturally defined standards of the male role (Pleck et al., 1993, p.88; Levant & Richmond, 2007).

Power components: enables individuals to perform actions required for self-care (Orem, 2001).

Racial identity: the significance and qualitative meaning that individuals attribute to their membership within a racial group within their self-concepts (Sellers et al., 1998).

Self-care: the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being (Orem, 2001, p. 43).

Self-care agency: the complex acquired capability to meet one's continuing requirements for care of self that regulates life processes, maintains or promotes integrity of human structure and functioning and human development, and promotes well-being (Orem, 2001, p. 254).

Self-care agent: the person taking action (Orem, 2001, p. 43).

CHAPTER 3

REVIEW OF THE LITERATURE

This literature review addresses masculinity ideology in relation to differences within and across cultural boundaries. The definition for masculinity ideology adopted for this study was compared with other conceptualizations of masculinity ideology. There are two constructs that will be discussed in reference to their contribution to the development of masculinity ideology. In addition, the theory of self-care is presented as an overarching theoretical framework for this study. Within the theory of self-care racial identity is introduced as a basic conditioning factor that may influence the development of masculinity ideology as a foundational disposition within the theoretical framework. Furthermore, this review explicates the associations between masculinity ideology and health behaviors thereby clarifying the need for a valid and reliable measure of masculinity ideology.

Masculinity Ideology

The differences between males and females are basic to all human cultures. Preferences, beliefs, attitudes, behaviors, and personal attributes are learned as a child and continue through adulthood. The classic work of Barry, Bacon, and Child (1957) identified the existence of social pressure towards nurturance, obedience, and responsibility for females and pressure towards achievement and self-reliance among males.

Men have traditionally been raised to be strong, silent and good providers for their families while avoiding vulnerability, tender emotions and anything feminine. These characteristics were operationalized into a set of seven traditional male role norms: avoiding femininity, restriction of emotions, focus on achievement and status, self-reliance, aggression, homophobia, and non-relational attitudes toward sexuality (Levant et al., 1992). The degree to

which these characteristics are instilled within a man is vastly determined by the culture (e.g., societal, racial-ethnic and familial) in which he is raised. As men develop, they learn to evaluate their adequacy as a man by matching their preferences, beliefs, attitudes, behaviors, and personal attributes with the norms of the culture to which they belong. The classic work of Bem (1981) suggests that during each developmental phase, men form internalized motivational factors that prompt them to regulate their behavior so that it conforms to the culture's definition of masculinity. The formulation of these internalized factors is what constitutes one's masculinity ideology.

Masculinity ideology has been defined as the "endorsement and internalization of cultural belief systems about masculinity ideology in the male gender, rooted in the structural relationship between the two sexes" (Pleck et al., 1993, p.88). Levant and Richmond (2007) define masculinity ideology as "an individual's internalization of cultural belief systems and attitudes toward masculinity and men's roles." Although the wording has a slight variation, the underlying theme is consistent in regard to the internalization of beliefs about the roles of men. The definition of masculinity ideology adopted for this research is an internalized system of beliefs and attitudes that generate and coordinate an individual's expectations, goals, and behaviors in congruence with their culturally defined standards of the male role. In light of this definition, it should not be assumed that this is an all-encompassing universal standard. Since masculinity ideology is reflective of the culture in which it is developed, it is reasonable to expect that differences will exist for different cultural groups based on differences in characteristics; e.g., race, ethnicity, age, and historical era (Brod, 1987; Lazur & Majors, 1995; Levant et al., 2003).

Traditional Masculinity Ideology

Although there are variations of masculinity ideology, there are a set of standards that the Western world associates with a traditional male role (Pleck, 1995). Such expectations and standards are referred to as traditional masculinity ideology. Traditional masculinity ideology follows the dominant view of the male role before the feminist deconstruction of gender roles and rules during the 1960s and 70s here in the United States (Levant & Richmond, 1996). To emphasize the dominance of the male role, traditional masculinity ideology has been referred to as being a hegemonic masculinity ideology. Hegemonic masculinity ideology represents a strong male role through the dominance of White heterosexual men over women, racial and ethnic minorities, sexual minorities as well as other masculinities (Connell, 1995). This definition has been universally accepted among studies on men and masculinities (Wilson, Parmenter, Stancliffe, Shuttleworth, & Parker, 2010).

A growing body of research focused on traditional masculinity ideology has indicated that there are men with limitations on thoughts and behaviors that are attributed to the female role (Wade, 2009). Men with a traditional ideology have been shown to adhere to specific behaviors and self-perceptions such as toughness and aggression, high achievements, self-reliance, and homophobia. In addition, research indicates that one's restriction of emotion, also known as alexithymia, is significant to the endorsement of traditional masculinity ideology (Levant, 1996; Levant et al., 1992; Wade, 2009).

Alexithymia is a term used to describe one's inability to express emotions in the form of words and is commonly found among boys and men (Levant & Kopecky, 1995). In a clinical sense, alexithymia is an array of symptoms including the inability to recognize the psychological components of emotions, difficulty communicating one's current emotions, trouble with the

process of social interaction, and a thought process that focuses primarily on the external facts (Franz et al., 2008). Research has indicated that a higher level of alexithymia exists in African American/Black men compared to White/European American men (Levant et al., 2003). Furthermore, alexithymia has been shown to be significantly associated with various medical illnesses (Parker, Keefer, Eastabrook, & Wood, 2010) such as chronic pain (Lumley et al., 2005), depression (Bratis et al., 2009), and hypertension, which is a major risk factor for cardiovascular disease and stroke (Go et al., 2014; Jula, Salminen, & Saarijarvi, 1999) .

Masculinity Ideology Differences

Since masculinity ideology, including traditional masculinity ideology, is reflective of the culture in which it is developed, a reasonable expectation is that differences will exist for different cultural groups based on characteristics such as race, ethnicity, age, and sexual orientation (Brod, 1987; Lazur & Majors, 1995). In a study that replicated Levant and Majors (1997), Levant and colleagues (1998) found that there was a weaker effect for race. However, when an aggregate data set was created by combining the data reported in the replicated study with the data reported by Levant and Majors (1997), the effect of race was due to the moderating effect of geographical location. This moderating effect was found to be the greatest among the African American/Black men (Levant et al., 1998). The Southern African American/Black men (Levant & Majors, 1997) were found to have more masculine attitudes than the White/European American men on four of the traditional subscales (Achievement/Status, Attitudes toward Sexuality, Restrictive Emotionality, and Self Reliance), the total traditional scale, and the Non-Traditional subscale. The African American/Black men from the Northeast-Mid-Atlantic were found to only be more traditional than the White/European American men on the Self-Reliance subscale (Levant et al., 1998). The results from these studies lend support to not only differences

in masculinity ideology among various cultures based on race, ethnicity, age, and sexual orientation, but also geographical location. A difference in masculinity ideology is also noted to be the result of the continuous evolution of beliefs and attitudes in accord with maturation, life experiences, and social interactions (Levant & Pollack, 1995) which are congruent with Orem's (2001) basic conditioning factors.

Beliefs

Beliefs represent the likelihood that the knowledge one has acquired about an object of attention (e.g., people, places, events, situations) is true, although not necessarily factual (Eagly & Chaiken, 1993; Fishbein & Ajzen, 1975). A belief is one's inner feeling and provides a framework for the interpretation of the environment. According to Ajzen (1991), there are three types of beliefs: behavioral, normative, and control.

Behavioral beliefs take into consideration the consequences of a specific behavior and through deliberate appraisal; a positive or negative attitude toward performing the behavior is produced. When the advantages are perceived to outweigh the disadvantages, a positive attitude is formulated and the behavior is likely to be performed. Conversely, if the disadvantages are perceived to outweigh the advantages, a negative attitude is formed and the behavior will more than likely not be performed (Albarracin, Johnson, & Zanna, 2005). Normative beliefs are concerned with the support or condemnation of behaviors by others within the social context of the individual performing the behavior (Ajzen, 1985). When individuals believe that a cultural expectation is for a specific behavior to be performed and/or others are already performing the behavior, there is a perceived social pressure which will likely result in the behavior being performed. On the other hand, if the normative beliefs are antagonistic, there will be pressure to not perform the behavior (Albarracin et al., 2005). The belief that there are factors that influence

the ease or difficulty to which a behavior is performed is termed control beliefs (Ajzen, 1991). Individuals who believe that they possess the skills and resources to overcome any barriers to performing a specific behavior are more apt to develop a strong sense of behavioral control as opposed to those that perceive a lack of skill and resources.

Attitudes

An attitude is "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993). For the purpose of this study, the term attitude object was used to describe entities that were evaluated. A psychological tendency is a form of bias that influences a positive or negative evaluative response which is the basis for the development of an attitude. An attitude is not developed until there is an evaluative response affectively, cognitively or behaviorally. When an individual has a covert or overt evaluative response, there is a psychological tendency to respond with a scrupulous degree of evaluation when confronted with a particular attitude object. Once that tendency to respond is solidified, the individual has formed a specific attitude toward that attitude object which is stored in memory and may be reactivated by the reemergence of the attitude object or cues that are related to it (Eagly & Chaiken, 1993). For example, an individual realizes that it is time for an annual physical exam with the physician who performed the exam in the previous year. During the last exam, this individual had an unpleasant experience with the physician. In this case, the individual is confronted with an attitude object (annual physical exam) for which a mental representation of an attitude has been stored in memory (unpleasant experience). The stored memory (attitude) will be reactivated in the presence of the attitude object resulting in a negative or positive evaluative response.

There are various degrees in which attitudes can be activated in the presence of an attitude object. The ease or difficulty activating an attitude in the presence of an attitude object is referenced as attitude accessibility. Attitude accessibility is a structural property of an attitude and is viewed as the strength of the associated link between an attitude object and evaluation. When attitude objects are encountered and an evaluation is automatically activated from memory, the attitude is considered highly accessible (Fazio, Sanbonmatsu, Powell, & Kardes, 1986). The frequency in which an attitude is activated contributes to determining the degree of accessibility. The more exposure an individual has to the same attitude object, the stronger the associations between the attitude object and evaluations, thereby increasing the ease of retrieval of the evaluation from memory (Fazio, Chen, McDonel, & Sherman, 1982; Powell & Fazio, 1984). When individuals have a direct experience with an attitude object (Regan & Fazio, 1977) and/or are highly motivated to think about the object (Cacioppo, Petty, Kao, & Rodriguez, 1986), attitudes become easily accessible.

When attitudes are easy to retrieve from memory, they are more apt to guide decisions regarding behavior (Fazio, 1989). The more that an individual thinks about an attitude object, the easier it is to access the attitude. Direct behavioral experiences and the repeated expression of attitudes are associated with increased attitude accessibility and attitude-behavior associations (Fazio et al., 1982; Powell & Fazio, 1984; Regan & Fazio, 1977).

Attitude-Behavior Association

Attitude theorists have a common assumption that individuals have beliefs about racial identity attitudes and these beliefs contribute to the formulation of attitudes from which an evaluative response is derived (Eagly & Chaiken, 1993). Social scientists have divided attitudes into three categories; cognitive, affective, and behavioral. The cognitive category refers to the

way an individual thinks about an attitude object. The affective category holds the emotions or feelings that an individual has in relation to an attitude object. The behavioral category consists of the actions of an individual in regard to an attitude object (Eagly & Chaiken, 1993). Likewise, the evaluative responses are referred to as cognitive responses, affective responses, and behavioral responses.

The way an individual thinks about an attitude object is considered a cognitive response in which the thoughts about the object are conceptualized as a belief. Individuals use beliefs to make associations between an attitude object and positive, negative or neutral attributes (Fishbein & Ajzen, 1975). For example, some people believe that getting a childhood vaccination causes autism. This belief associates an attitude object with a negative attribute. Others believe that childhood vaccinations prevent future illness. This belief associates an attitude object with a positive attribute.

Evaluative responses that involve feelings and emotions in relation to an attitude object are considered affective responses. Affective responses have a range from extremely positive to extremely negative. For example, considering the administering of childhood vaccinations, some individuals may have feelings of varying degrees of anger, while others may experience various degrees of optimism. A favorable evaluation of an attitude object will likely produce positive affective responses while an unfavorable evaluation will likely produce a negative affective response (Eagly & Chaiken, 1993).

Evaluative responses consisting of overt actions in relation to an attitude object are referred to as behavioral responses. Behavioral responses, like affective responses, may range from extremely positive to extremely negative. For example, in relation to childhood vaccination, some individuals may choose to organize boycotts against vaccination centers,

while others may arrange for transportation for individuals to get to vaccination centers. Those individuals who have a favorable evaluation of the attitude object, in this case vaccinations will tend to have supportive behaviors, while others with an unfavorable evaluation will tend to engage in opposing behaviors (Eagly & Chaiken, 1993).

Masculinity Ideology, Race and Culture, and Basic Conditioning Factors

Race and culture have accounted for many of the differences in the way men endorse masculinity ideology (Brod, 1987; Kimmel & Messner, 1992). Assumptions have been made that the socialization of men is congruent with the standards of masculinity for their culture (Carter, Williams, Juby, & Buckley, 2005). There are factors that influence the socialization of men from different racial and ethnic groups. The notion that the socio-political histories in combination with the particular relationships these groups have with the dominant race and culture, creates variation in the racial identity development (Carter, 1995; Helms, 1996; Sue & Sue, 2003). These variations could influence the unique way men with various racial identities understand and express masculinity (Carter et al., 2005). Therefore, as researchers explore the behaviors of men as it relates to their masculinity ideology, racial identity must be viewed as a sociocultural orientation (BCF) that could influence the relationship between an individual's masculinity ideology and the behaviors performed.

Racial Identity

Development of Racial Identity

During the developmental phase of adolescence, youths progress through stages of negotiating racial identity. Situations and experiences tend to illuminate race and heavily influence the personal significance and meaning of race (Fischer, Wallace, & Fenton, 2000; Sellers, Copeland-Linder, Martin, & Lewis, 2006; Tatum, 1997). Identity in itself has been

conceptualized in many ways in the past. Marcia (1980) describes identity as being an internal, self-structured, dynamic organization of drives, abilities, beliefs, and individual history. Waterman (1984) talks about identity as being comprised of goals, values, and beliefs to which a person develops an unequivocal commitment over time. He further explains that these commitments are chosen because they are judged worthy of giving a direction, purpose, and meaning to life. In the past, the Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1998) has provided a conceptual framework that has been used to advance our knowledge of African American racial identity.

Racial identity, as a basic conditioning factor, is an individual's beliefs or attitudes regarding one's own race and the significance of being a member of a particular racial group (Parham & Helms, 1981; Phinney, 1990). Past research has indicated that there are significant implications for well-being associated with the beliefs about the racial group for which one is a member (Iwamoto & Liu, 2010). Among African American/Blacks, the heterogeneity of life experiences has been noted to attribute to variability in the meaning and significance of membership of the Black racial group (Sellers et al., 1998). In light of the varied experiences among African American/Blacks, Sellers and colleagues introduced the MMRI to provide a conceptual framework to better understand African American/Black racial identity. The model explores how individuals define themselves in relation to race and their personal interpretations of what it means to be Black (Neblett, Smalls, Ford, Nguyen, & Sellers, 2009).

Dimensions of Racial Identity

There are four proposed dimensions of racial identity within the MMRI model that address racial identity and African American/Blacks: racial salience, the centrality of identity, the regard the person holds for the group associated with the identity, and the ideology associated

with the identity. The first two dimensions, racial salience and centrality of identity, deal with an individual's self-definition in relation to the significance placed on race; while racial regard and ideology deal with perceptions of what it means to be Black (Sellers et al., 1998).

Racial salience is the dynamic part of racial identity that refers to the relevance of race as part of defining oneself in a specific point in time. Centrality of identity is similar to salience in reference to how individuals define themselves with regard to race; however, the difference rests in the relative stability of centrality across situations. Racial regard refers to positive and negative feelings toward being Black and being a member of that racial group. Finally, racial ideology is a summation of an individual's beliefs, opinions, and attitudes about the ways in which members of their racial group should live and interact with society (Sellers et al., 1998; Neblett et al., 2009).

Racial ideology has been further separated into four philosophies that seem to be prevalent among African American/Blacks: (1) the nationalist philosophy, (2) an oppressed minority philosophy, (3) an assimilationist philosophy, and (4) a humanistic philosophy. Although individuals may be labeled as subscribing to a particular ideology, it is more likely that many will possess more than one and may vary according to the situation (Sellers et al., 1998).

The nationalist philosophy is a viewpoint in which African American/Blacks place emphasis on the uniqueness of being black and their preference for African American/Black social environments. This philosophy supports the idea that African American/Blacks should control their own destiny with little or no input from other groups. An oppressed minority philosophy is one in which African American/Blacks view similarities of their oppression and the oppression of other minority groups. Individuals of this philosophical viewpoint are more likely to see coalition building as an effective strategy for social change. The assimilationist

philosophy is one in which African American/Blacks accentuate the similarities between themselves and the rest of American society. Subscribers of this philosophy recognize their status as an American and will make attempts to enter into the mainstream. This does not mean that the importance of being Black is being negated however; African American/Blacks with this philosophical viewpoint may believe in the importance of interacting socially with White/European Americans. Those with the humanist philosophy place emphasis on the similarities among all humans and tend not to think in terms of race, gender, class, or any other outstanding characteristics (Sellers et al., 1998).

Parental Influence on Racial Identity

African American/ Black families have been important in the formation of their adolescents' view of the significance and meaning of race (Hughes et al., 2006). The racial identity of one's parents frequently shapes racial socialization messages. The more salient the view of race among the parents, the stronger the convictions will be regarding the types of racial, cultural, and ethnic knowledge they will desire for their children. In addition, Hughes has noted the importance of three of the dimensions of the MMRI (Sellers et al., 1998): centrality, ideology, and regard. An example of the importance of these dimensions is parents who view race as a central part of their social identity (i.e., high centrality) while believing that their group is valued negatively by others (i.e., low public regard) may be more inclined to discuss discrimination with their children. On the other hand, parents with high centrality and positive views of their racial group (i.e., high private regard) may be more likely to convey messages in relation to group pride (Hughes et al., 2006).

Racial Socialization

Racial socialization is defined as the attitudes and behaviors of parents that subtly, overtly, and deliberately passed on as worldviews about race and ethnicity to their children (Hughes, 2003). More recently racial socialization has been conceptualized as parental strategies that communicate explicit messages regarding intergroup protocol and relationships, including instructing youths on being aware of racial barriers, coping with racism and race-related discrimination, and the promotion of cross-racial relationships (Brown & Krishnakumar, 2007). Both definitions capture the element of racial identity development through functions of the family and parenting. Although parental influence on racial identity and racial socialization has been discussed, measurement of these two elements is beyond the scope of this study.

Family Constellation

Prior studies have determined that the development of racial identity is heavily influenced by the family (Hughes et al., 2006; Lytton & Romney, 1991). Although it may be a commonality among African American/Blacks for families to influence the development of racial identity, the way in which messages are being conveyed may be different within and across family structures. Differences can occur from one family to the next based on situations and prior life experiences. In addition, differences have been found in the parenting behaviors of mothers and fathers within the same family. Some of the differences include time spent with children, types of activities participated in, levels of parental involvement, and time spent caring for the child (Hofferth, Pleck, Stueve, Bianchi, & Sayer, 2002).

In reference to parent gender, racial socialization and racial identity development, African American/Black women are more likely than the men to provide influential messages to the children (Thornton, Chatters, Taylor, & Allen, 1990). As Thorton points out, mothers tend to

take more responsibility for the socialization of children and focus more on the intellectual and emotional aspects of parenting than men. A more recent study has shown that African American/Black mothers participate in more cultural socialization of their children than fathers; however, the cultural socialization messages provided by the fathers are directed more at their sons versus their daughters (McHale et al., 2006). Further findings reveal that fathers better prepared youths for racial bias than mothers. This variance may mean that fathers have more reason than mothers to place emphasis on bias preparation due to more frequent exposure to discrimination (McHale et al., 2006). Adequately preparing youths for bias builds awareness of and provides strategies for coping with prejudice and discrimination (McHale et al., 2006). The implication regarding the father's role in racial socialization is that any deficiencies in participation may contribute to the development of ineffective coping strategies, which may in essence affect one's willingness to seek help.

Socioeconomic Status/Educational Background

Another consideration in racial identity development is variances in racial socialization as it relates to socioeconomic status and educational background. Parents from different occupational, educational and socioeconomic backgrounds may have different ideas about race and experiences related to them (Hughes et al., 2006). African American/Blacks who are more educated and in higher income brackets perceive more prejudice and discrimination than those with lower income and less education (Williams, 1999). Thus, there is a reasonable expectation that differences in socioeconomic status (SES) would be reflected as variances in racial socialization (Hughes et al., 2006). Research has indicated that racial socialization with preparation for bias is higher among parents with professional and managerial jobs than parents with clerical, sales, or service jobs (Hughes & Chen, 1997). Studies that have used income and

education as socioeconomic indicators revealed that parents within the middle range of SES are more likely to convey messages regarding discrimination and mistrust than those with lower or higher SES, which means they may also convey more racial centrality to their children (Caughy, O'Campo, Randolph, & Nickerson, 2002; Thornton, 1997).

Masculinity Ideology, Racial Identity, BCFs and Health Behaviors

In the past, health-related attitudes and behaviors have been associated with masculinity ideology (Wade, 2008). More specifically, traditional masculinity ideology has been associated with a focus on achievement, self-reliance, reluctance to consult medical and mental health care providers (Addis & Mahalik, 2003), and an under utilization of preventive health care services (Mahalik et al., 2006). In addition, there is a growing body of research indicating that the perception of social norms, such as traditional masculinity ideology norms, does influence health behaviors thereby affecting health outcomes (Mahalik et al., 2007).

Self-Care

Self-care is described by Orem, (2001) as learned behavior that is purposeful with patterned and sequenced actions. These actions are initiated and performed by individuals on their own behalf to maintain life, health, and well-being. The capacity for self-care is acquired by individuals during childhood, principally in the family, where cultural standards are learned and transmitted from one generation to the next (Orem, 2001). Cultural standards pertaining to health may affect the decisions one makes to perform self-care and the amount of self-care to be performed. Examples of self-care behaviors include but are not limited to, seeking health promotion information (e.g., reading literature, internet searches, attending seminars), scheduling physician visits regularly, medication compliance, exercising, and maintaining a healthy diet.

African American/Black men share a disproportionate burden of incidence and mortality of chronic illness compared to White/European American men (National Center for Health Statistics, 2004, 2008, 2009). Since it is known that engagement in self-care behaviors is critical to the prevention and management of chronic illnesses (Becker et al., 2004), then self-care behaviors may be a factor in the management and outcomes in African American/Black men. Prior studies have indicated that African American/Black men have lower adherence rates to medication (Kales et al., 2013), less healthy diets (Rodriguez et al., 2006), fewer health risk screenings (Griffith et al., 2007)), and lower health care utilization rates (Whitley, Samuels, Wright, & Everhart, 2005) than their White/European American counterparts. Understanding factors that may influence the judgments and decisions African American/Black men make regarding self-care is an important step in addressing behavior modification.

CHAPTER 4

METHODS

The primary purposes of this study were to: (1) assess the factor structure of the MRNI-R using a principle component factor analysis, (2) assess reliability using Cronbach's alpha, and (3) assess for convergent, concurrent, and discriminant validity of the MRNI-R scores. In addition, correlations between traditional masculinity ideology and health behaviors were explored. This chapter addresses research design, sample, setting, study variables, instrumentation, data collection procedures, data management, statistical analysis by specific aim and research questions, and protection of human subjects.

Specific Aims and Research Questions

This research had five specific aims and six research questions.

Specific Aim 1: Assess the factor structure of the MRNI-R.

To achieve the specific aim of assessing the factor structure of the MRNI-R a principle component factor analysis was used to identify the underlying relationships between the measured variables.

Research Question 1.0: What is the factor structure and item placement for the MRNI-R for this study?

Specific Aim 2: Assess the reliability of the MRNI-R for a sample of African American/Black men.

To achieve the goal of this specific aim, reliability was assessed using Cronbach's alpha to evaluate internal consistency, the extent to which the items of the MRNI-R are measuring masculinity ideology.

Research Question 2.0: What is the internal consistency reliability of the factors and the total scale?

Specific Aim 3: Assess the validity of the MRNI-R for a sample of African American/Black men.

To achieve the goal of this specific aim, Pearson's *r* correlation technique was used to assess for evidence of convergent, concurrent, and discriminant validity.

Research Question 3.0: Is there a correlation between the MRNI-R and the MRAS?

Research Question 3.1: Is there a correlation between the subscale Restrictive Emotionality of the MRNI-R and the TAS total scale?

Research Question 3.2: Is there a correlation between the MRNI-R and the PAQ-M?

Specific Aim 4: Assess the relationship between the MRNI-R and the MIBI.

To achieve the goal of this specific aim Pearson's *r* correlation was used to assess for correlations between masculinity ideology (MRNI-R) and racial identity (MIBI).

Research Question 4.0: Is there a correlation between masculinity ideology (MRNI-R) and racial identity (MIBI)?

Specific Aim 5: Assess the relationship between selected basic conditioning factors, masculinity ideology (MRNI-R) and health behaviors (HBI-20).

To achieve the goal of this specific aim, a hierarchical multiple regression was performed using selected basic conditioning factors, factors of the MRNI-R, and the HBI-20.

Research Question 5.0: Is there a correlation between selected basic conditioning factors, the MRNI-R and the HBI-20?

Research Design

A non-experimental, correlational research design was used for this study. There was no manipulation of independent variables, treatments rendered or interventions employed. The correlational aspect of this study design explored relationships among variables, and in doing so, masculinity ideology was assessed as it relates to the health behaviors of African American/Black men.

According to Polit and Beck (2008), non-experimental research is essential to the planning of an experimental study. A non-experimental study clarifies the scope of a problem and describes the significant relationships between pertinent variables. The data obtained from this type of research is necessary for the development of strong experimental interventions thereby increasing the confidence with which causal relationships can be inferred.

Research Setting

This research took place at multiple community based sites in the metropolitan Detroit area. Participants were recruited from, but not limited to, locations such as shopping malls, churches, barber shops, college campuses, outpatient clinics, and community centers. A letter of support was obtained from each prospective location prior to the start of recruitment. Due to physical differences that may exist among the recruitment sites, it was not possible to detail the layout of every prospective site. However, the constant was that participants were seated in an area that was not included in the mainstream traffic. There was enough distance between seats to provide a comfortable amount of privacy for each participant. In the case of limited space, participants were offered the option of waiting until enough space was available for their privacy. When space was limited or unavailable, participants were offered another time at which they could participate in the study.

Sample Size

Although there have been many recommendations regarding sample size for factor analysis, Kass and Tinsley (1979) recommended that researchers have between 5 and 10 participants per variable up to a total of 300. As a general guide, sample sizes of 50 have been rated as very poor, 100 as poor, 200 as fair, 500 as very good, and 1000 as excellent (Comrey & Lee, 1992). In more recent literature, Tabachnick and Fidell (2007) noted that "solutions that have several high loading marker variables (>.80) do not require such large sample sizes (about 200 cases should be sufficient) as solutions with lower loadings" (p. 613).

In the previous two studies of the MRNI-R (Levant et al., 2007 & 2010), the sample sizes were 170 (38 male) and 593 (344 male) participants respectively. The latest study (Levant et al., 2010) found several factor loadings that were considered strong (>.70) considering that the minimum loading allowable for this study was .35. Taking into account the number of participants in the two aforementioned studies, the strong factor loadings, and the suggestion of Tabachnick and Fidell (2007), it was reasonable to have 300 participants for this study.

Sample Characteristics and Sampling Plan

In order to achieve the specific aims of this study, data was collected from a convenience sample of 300 men aged 18 to 81 who self-identified as African American/Black, living in the Detroit metropolitan area, and able to read/write English at a seventh grade level. The exclusion criteria for this study included: men who did not self-identify as being African American/Black, born outside of the United States, women of any race, reading level below seventh grade, overt signs of uncontrolled psychiatric disorders, obvious intoxication and/or incoherence as evidenced by inability to complete the initial screening measure (Rapid Estimate of Adult Literacy in Medicine – Short Form; Arozullah et al., 2007). Recruitment was conducted from multiple

community sites (e.g., churches, and outpatient clinics) within the Detroit metropolitan area. Recruitment was achieved through flier advertisements, direct contact, and word-of-mouth. A convenience sample from multiple community sites increased the likelihood of recruiting African American/Black men from various socioeconomic backgrounds.

Controlling for Confounding Variables

Confounding variables are extraneous variables that can affect the measurement of study variables as well as the relationships among those variables (Burns & Grove, 2007; Polit & Beck, 2008). In order for quantitative findings to be interpretable, sample characteristics need to be controlled (Polit & Beck, 2008). Polit and Beck (2008) describe six ways in which the confounding characteristics of a sample may be controlled in an effort to avoid competing explanations for cause-and-effect relationships. The six methods are listed here followed by a brief explanation; they are: (a) randomization, (b) repeated measures, (c) homogeneity, (d) stratification, (e) matching, and (f) statistical control.

Randomization has been shown to be the most effective way to control for individual confounding variables by functioning to secure comparable groups. When comparing other control methods, random assignment has the advantage of controlling for all possible sources of extraneous variation without worry about which variables need to be controlled. Repeated measures is especially powerful in the context of randomization in which a group of participants is exposed to more than one condition or treatment in a random order; however, this is not appropriate for all studies due to the problem of carry-over effects. Carry-over effects occur when a participant's exposure to two different conditions in which the first condition experience may influence the second condition.

Homogeneity is used when a randomization and repeated measures are not feasible. This method uses participants that are homogeneous with respect to the variables, meaning that confounding variables are not allowed to vary. Stratification of participants ensures that sub-groups are allocated equally to treatment conditions. This method is used to increase the chances of detecting differences between experimental and control groups. Matching uses prior knowledge of participant characteristics to create comparable groups. In order to adequately match, researchers must know the confounding variables in advance. When more than two variables are identified, it becomes more difficult to effectively match. Statistical control is a method of controlling confounding variables through statistical analysis (Polit & Beck, 2008).

Although the aforementioned methods are alternatives to control confounding characteristics of study participants, there are limitations as well as benefits for each. Homogeneity, stratification, matching, and statistical control require the researcher to know or predict in advance relevant confounding variables. This puts the researcher at a disadvantage; however, these are acceptable methods in correlational and quasi-experimental studies when randomization is not possible. Despite the repeated measures method being the strongest possible approach if done with randomization, there are limitations regarding possible carry-over effects from one condition to the next which makes this difficult to apply to nursing research problems. Randomization with random assignment of participants to groups is a most effective method of managing confounding variables by eliminating individual differences on extraneous variables. This method also does not require advanced knowledge of which variables should be controlled (Polit & Beck, 2008).

Instruments and Measures

Although there have been a number of scales developed to measure masculinity ideology, the most commonly used measure has been the Male Role Norms Inventory (MRNI; Levant et al., 1992) which has been revised into what is now known as the Male Role Norms Inventory – Revised (MRNI-R; Levant et al., 2007). After revision, the MRNI-R was tested for validity by Levant et al. (2010) using a principle-axis factor analysis. This analysis revealed seven factors with eigenvalues > 1.0 and a total variance accounted for was 62.71%. A direct oblimin rotation was used to calculate the degree to which the items loaded upon the factors. Loadings of less than .35 were eliminated. From this calculation 43% to 100% of the items were retained by their respective factors. A total of 13 items was eliminated due to low loadings (< .35; 5-items), cross loaded items with loadings of .32 or greater (3-items), and items that loaded on a factor that had no similarities to the original subscale (5-items). After completion of the analysis, the MRNI-R total scale consisted of 40 items (Levant et al., 2010).

The authors (Levant et al., 2010) used three different criterion related validity types: concurrent, convergent, and discriminant to check the performance of the operationalization of the constructs. A multiple regression was conducted to examine the relationships of factors across the various scales. Support for concurrent validity of the total factored scores were shown by the significant correlations with the Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003) (r = .60, p < .01), the Gender Role Conflict Scale (GRCS; O'Neil et al., 1986) (r =.54, p < .01), and the Normative Male Alexithymia Scale (NMAS; Levant et al., 2006) (r = .51, p < .01).

Convergent validity was supported by the significant correlation of the MRNI-R factors with the Male Role Attitudes Scale (MRAS; Pleck et al., 1994) (r = .37-.54, p < .01). Spearman's

rank order correlation was used to examine the correlations between the one factor of the MRAS and each of the seven arranged factors of the MRNI-R. There was also support for discriminant validity through nonsignificant correlations between the men's scores on the MRNI-R total factored scale and those on the Personal Attributes Questionnaire-Masculinity Scale (PAQ-M; Spence & Helmreich, 1978) (r = .08, p = .29). Both the MRNI-R and the PAQ-M measure masculinity; however, they do it from different theoretical orientations (Levant et al., 2010). Masculinity ideology is conceptualized using a set of set of sex-typed instrumental personality traits of the PAQ-M while the MRNI-R conceptualizes masculinity ideology by using a set of culturally defined normative expectations for behavior (Levant et al., 2010). Convergence and discriminability work together and when both are present, there is evidence for construct validity (Polit & Beck, 2008).

Instrument Selection

Although there was support for the hypothesized factor dimensionality and item placement, a preponderance of participants were identified as White/European American (83%). This leaves to question the generalizability to other ethnic groups, particularly African American/Blacks. One of the main purposes of this study was to assess the reliability and validity of the MRNI-R in a sample of African American/Black men. Although the aforementioned study used five instruments to evaluate the construct (primarily criterion related) validity of the Male Role Norms Inventory-R, this study used three instruments to achieve the specific aims.

Consistent with the research of Levant et al. (2010), the Male Role Attitudes Scale (Pleck et al., 1994) and the Personal Attributes Questionnaire-Masculinity Scale (Spence & Helmreich, 1978) was utilized for the assessment of validity. More specifically, the MRAS, another measure

of masculinity ideology was used to assess convergent/concurrent validity. The PAQ-M measures masculinity ideology from a different theoretical orientation than the MRNI-R and thus was used assess discriminant validity.

In order to provide evidence for concurrent validity, Levant et al. (2010) used the Conformity to Masculinity Norms Inventory (Mahalik et al., 2003), Gender Role Conflict Scale (O'Neil et al., 1986) and the Normative Male Alexithymia Scale (Levant et al., 2006) to show a relationship to masculinity ideology. Conformity to masculinity ideology was measured by the CMNI, the negative consequences that result from the internalization of masculinity ideology norms was measured by GRCS, and the effects of adherence to the Restrictive Emotionality norm was assessed by NMAS.

Although the CMNI, GRCS, and NMAS were used for the study by Levant et al. (2010), this researcher recognizes that all three scales had the same measurement purpose. As such, this study used one measure for concurrent validity to decrease the likelihood of introducing the limitation of participant burden. Lengthy measures may be cumbersome for participants and could jeopardize the validity of the results (Maloney, Grawitch, & Barber, 2011). There is also concern that as completion times become extended there is a more likely risk of missing data, lower response rates (Stanton, Sinar, Balzer, & Smith, 2002) and increased random or systematic error associated with fatigue and/or boredom (Galesic & Bosnjak, 2009; Herzog & Bachman, 1981). In consideration of participant burden, a reasonable approach for this study was to use a systematic a priori process to reduce the number of items used to assess the same construct (Maloney et al., 2011). Essentially, the NMAS is a more recent scale used to predict masculinity ideology than the CMNI and the GRCS. The 20 items of the NMAS are considerably less than the 94 items of the CMNI and the 37 items of the GRCS.

Despite the apparent feasibility of using the NMAS, this study used the Toronto Alexithymia Scale-20 (TAS-20) to measure the relationship of Restrictive Emotionality and masculinity ideology. Even though the NMAS is recognized as a more recent measure of alexithymia, the TAS-20 is the most widely used measure of alexithymia in adults (Parker et al., 2010).

Instruments

Screening Measure

Rapid Estimate of Adult Literacy in Medicine – Short Form

The Rapid Estimate of Adult Literacy in Medicine – Short Form (REALM-SF; Arozullah et al., 2007) is a seven-item word recognition test for the assessment of adult literacy. Scoring is based on a scale from 0 to 7 where the numerical values are correlated with reading at various grade levels. The score to grade equivalents are: 0 = third grade and below reading level, 1-3 = fourth to sixth grade reading level, 4-6 = seventh to eighth grade reading level, and 7 = high school reading level (Arozullah et al., 2007). This instrument was used as a preliminary screening tool for participant inclusion.

Study Measures

Personal Data Questionnaire

A personal data questionnaire was used to capture information related to basic conditioning factors (BCFs). Demographic data included race, age, education, employment status, income, family system factors, patterns of living, religious participation, health history, health promotion, and whether or not the participant has any health insurance.

Multidimensional Inventory of Black Identity

Another aspect of BCFs is racial identity to measure the impact of sociocultural orientation. The Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997; Sellers et al., 1998) is a 56-item instrument used to assess African American/Black racial identity (Sellers et al., 1998). The MIBI uses a 7-point Likert scale ranging from 1(strongly disagree) to 7 (strongly agree). The MIBI is a theoretically derived instrument based on the constructs within the Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1997). The MMRI was intended to reconcile "the inconsistencies in the research literature on racial identity" (Sellers et al., 1997) by taking the qualitative meaning of being an African American/Black and combining it with the universal properties associated with ethnic and racial identities (Sellers et al., 1998). The MIBI was developed to operationalize the MMRI model with three dimensions that measure centrality, ideology, and regard (Sellers et al., 1997; Sellers et al., 1998).

Centrality. Centrality is a dimension of racial identity that refers to the extent to which an individual normatively defines themselves with regard to race. It is a measurement of the degree to which race forms a core part of an individual self-concept (Sellers et al., 1997). The MMRI had an additional dimension, salience, which refers to the extent to which one's race is a relevant part of their self-concept at a particular point in time. Although this dimension was not included in the MIBI due to its susceptibility to situational influences, centrality and salience have a relationship in the sense that the more often racial identity is salient, the more prone it is to becoming a normative way in which individuals define themselves. At the same time, the more central the person's racial identity, the more prone it is to becoming salient in racially ambiguous situations (Sellers et al., 1997).

Ideology. Ideology consists of the beliefs, opinions, and attitudes of individuals with regard to the way they feel members of their race should act. This is a dimension representing one's philosophy about the ways in which African American/Blacks should live and interact within society (Sellers et al., 1997). There are four philosophies under the dimension of ideology: (a) nationalist philosophy, emphasizes the importance and uniqueness of being of African American/Black descent; (b) oppressed minority philosophy, places emphasis on the commonalities between African American/Blacks and other oppressed groups; (c) assimilation philosophy, focuses on the commonalities between African American/Blacks and the rest of American society; (d) humanist philosophy, characterized by placing emphasis on the commonalities of all humans (Sellers et al., 1997).

Although the MIBI scale was included in this study, not all subscales were used. The ideology dimension of the MIBI was eliminated. This concept represents the beliefs, opinions, and attitudes about how individuals of one's race should act which overlaps the measure of ideology within the MRNI-R scale.

Regard. Regard refers to the self-perception and the perceptions of others of African American/Blacks. The regard dimension consists of a private and the public component. Private regard "refers to the extent to which individuals feel positively or negatively towards African American/Blacks and their membership in that group" (Sellers et al., 1997, p. 807). Public regard refers to the degree to which individuals believe that others positively or negatively view African American/Blacks (Sellers et al., 1997).

Male Role Norms Inventory – Revised

The Male Role Norms Inventory–Revised (MRNI-R; Levant et al., 2007) is a 53 item instrument that was derived from the original MRNI (Levant et al., 1992) which measured both

traditional and nontraditional masculinity ideology. In its original form, the MRNI was found to have language that was dated along with unclear definitions and inadequate conceptualizations of some of the male role norms. Furthermore, the subscales were not supported through factor analysis (Levant et al., 1992) and there were subscales with less than adequate reliabilities, resulting in their nonuse across various studies causing a forfeiture of data (Levant et al., 2007).

In response to concerns regarding the MRNI, a revised version (MRNI-R) was developed through the generation of 107 items written as normative statements about how men should or should not behave. These items were arranged in seven traditional subscales: Avoidance of Femininity, Fear and Hatred of Homosexuals, Extreme Self-Reliance, Aggression, Dominance, Non-relational Attitudes Towards Sexuality, and Restrictive Emotionality (Levant et al., 2007). The expulsion of items with low correlation with their respective subscale was done by the repetitive analysis of item-to-subscale correlations. The revised scale contained 53 items (including 22 from the original scale) scored using a 7-point Likert scale. Higher scores are indicative of the endorsement of traditional masculinity ideology (Levant et al., 2007).

Although the principal-axis factor analysis done by Levant and colleagues (2010) resulted in the MRNI-R being reduced to 40 items, this study used the 53-item MRNI-R version to achieve the specific aim. Levant et al. (2010) acknowledged limitations that included a sample that was drawn from one geographical location (university campus); 83% of the participants were White/European American. In recognition of these limitations, it was the belief of this researcher that it would be reasonable to use the MRNI-R in its 53-item form to investigate masculinity ideology in a group of African American/Black men.

Male Role Attitudes Scale

The Male Role Attitudes Scale (MRAS; Pleck et al., 1993) is a measure of traditional masculinity ideology comprised of eight items in which participants indicate their degree of agreement or disagreement on a four-point Likert-type scale ranging from 1 [strongly disagree] to 4 [strongly agree]. The higher scores are indicative of the endorsement of traditional masculinity ideology (Levant et al., 2007).

Seven of the eight items were adapted from the 26-item Male Role Norms Scale (MRNS; Thompson & Pleck, 1986) (Pleck et al., 1993). The eighth item which concerns sexuality ("Men are always ready for sex") is from the 60-item Stereotypes About Male Sexuality Scale (SAMSS; Snell, Belk, & Hawkins, 1986) (Levant & Pollack, 1995). Although the coefficient alpha for the MRAS was .56 for Pleck et al. (1994), for Levant et al. (2010), it was found to be .67 for men.

Personal Attributes Questionnaire

The Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978) is an instrument containing 24 items that assess how strongly individuals rate themselves as having stereotypical masculine and stereotypical feminine personality traits. Measurements are obtained on a 5-point Likert scale that is anchored by two distinct personality characteristics. At one end of the scale is an adjective and at the other end is its presumed opposite (e.g., "Very passive – Very active") or with a negation at the opposite end (e.g., "Not at all competitive – Very competitive") (Spence & Helmreich, 1978). The original scale was divided into three subscales with 8 items (Personal Attributes Questionnaire – Masculinity scale [PAQ-M], instrumental) describing personality traits such as independent and self-confidence; 8 items (Personal Attributes Questionnaire – Femininity scale [PAQ-F], expressive) describing personality traits pertaining to gentleness and kindness; and 8 items (Personal Attributes Questionnaire –

Masculinity-Femininity scale [PAQ-MF], androgyny) which is a mixture of instrumental and expressive items that are scored in the masculine direction (Spence & Helmreich, 1978). Items from the PAQ-M and the PAQ-F were representative of socially desirable characteristics for both sexes while the PAQ-MF was representative of socially desirable characteristics for one sex or the other (Ward, Thorn, Clements, Dixon, & Sanford, 2006). Although the PAQ-MF has generally been abandoned by researchers (Ward et al., 2006), the PAQ-M and PAQ-F scales have been used to assess masculinity and femininity in research examining gender roles and sex differences (Dade & Sloan, 2000; Toller, Suter, & Trautman, 2004; Levant et al., 2010). The PAQ-M (alpha .67), used by Levant et al. (2010), measured self-described stereotypical male personality traits.

Toronto Alexithymia Scale – 20

The Toronto Alexithymia Scale – 20 (TAS-20; Bagby, Parker, & Taylor, 1994) is a 20-item instrument most commonly used for the measurement of alexithymia (Parker et al., 2010). Considerable empirical support has been demonstrated in favor of the internal consistency (α = .81, Bagby et al., 1994; α = .85, Mattila et al., 2008; α = .87, Mattila, Luutonen, Ylinen, Salokangas, & Joukamaa, 2010). Alexithymia is measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score is the sum of the responses to all of the 20 items, while the subscale score is derived from the sum of the responses in that particular subscale. The TAS-20 uses a cutoff method for rating alexithymia: scores less than or equal to 51 indicate non-alexithymia, scores equal to or greater than 61 indicate alexithymia, and scores of 52 to 60 indicate possible alexithymia.

The TAS-20 is comprised of three subscales: difficulty describing feelings (DDF; e.g., I find it hard to describe how I feel about people), difficulty identifying feelings (DIF; e.g., I have

feelings that I can't quite identify), and externally oriented thinking (EOT; e.g., I feel close to someone, even in moments of silence). There are five items that are reversed scored, four of which are in the EOT subscale and one within the DDF subscale.

Health Behavior Inventory–20

The Health Behavior Inventory–20 (HBI-20; Levant et al., 2011) is a 20-item scale used to measure the health behaviors of men. The scale was derived as a modification of the 21-item Health Risks Inventory (HRI; Courtenay, 1998) which was also designed to investigate men's health behaviors; however, problems were recognized within the scale (Levant et al., 2011). The HRI used complex sentences and many of the items were comprised of two questions (e.g., "I am over 40 and get a rectal or gynecological exam each year") (Courtenay, McCreary, & Merighi, 2002; Mahalik et al., 2006).

Changes to the HRI included the elimination of items that asked two questions, the simplifying of complex questions, and the reverse scoring of items concerning risky behaviors so that higher scores would indicate higher degrees of health promoting behaviors. In addition, the masculinity items of the scale were eliminated due to the authors' belief that masculinity could be covered by other measures (Levant et al., 2011). These revisions to the HRI resulted in the HBI-20 which contained 20-items divided into five subscales. Health promoting behaviors such as diet, preventive care, and medical compliance are reflected in three of the subscales. The remaining two subscales reflect behaviors considered a risk to one's health such as anger, stress, and substance abuse (Levant et al., 2011). Evidence for internal consistency reliabilities were found through a Cronbach's analysis with alphas ranging from .68 to .79 for the subscales and .72 for the total scale.

Data Collection Procedures

Recruitment for the Study

Recruitment for the study began following approval from the IRB. Participants were recruited from multiple community sites (e.g., churches and outpatient clinics) within the Detroit metropolitan area. African American/Black men in the community were recruited by the researcher through flyer distribution, word-of-mouth (snowballing techniques), and direct contact. A convenience sample was recruited from multiple community sites to increase the likelihood of acquiring a sample of African American/Black men of various ages, educational backgrounds, and socioeconomic levels. Upon initial contact, prospective participants were presented with a brief overview about the nature of the study, screened for exclusion criteria and offered the opportunity to voluntarily participate in the study. Those individuals who agreed to participate and meet the inclusion criteria were escorted to a designated area in which the questionnaires could be completed. When necessary, arrangements were made for the completion of questionnaires at a later time for those who were unable to participate at the time of initial contact.

Procedure

Appropriate protocols for effective and ethical research were followed at all locations where questionnaires were completed. All participants received a standardized verbal introduction. The written information sheet included the name of the principal investigator, a brief description of the study, the risks and benefits, a confidentiality statement, a right to withdraw statement, and a voluntary consent statement. In addition, the principal investigator answered any questions regarding the study.

In order to protect privacy and anonymity, a protocol for participation was developed and set forth as follows:

1. Participants who agreed to be included in the study and who were physically present were initially presented with an introduction form and a consent form.
2. Participants who read the consent were pre-screened for literacy by completing the REALM-SF. Participants who scored 4 or better were able to read at a seventh to eighth grade level (Agency for Healthcare Research and Quality, 2009) which was sufficient for the questionnaires in this study. After completion of the REALM-SF, those participants who scored 4 or better received a questionnaire packet that had been numbered for the purposes of data collection. Those participants who scored less than 4 on the REALM-SF were informed that they did not qualify for further participation in the study and would not receive the $10.00 gratuity that was based on completion of the study.
3. Upon presentation of the questionnaire packet the principal investigator verbally reviewed the instructions for completing the packet and at that time it was reiterated that participation was voluntary in nature and they had the right to withdraw at any time.
4. Upon completion of the questionnaire, participants returned the completed questionnaires to the researcher in a closed folder. Those participants who returned their questionnaires in the closed folder received a $10.00 gift card as a gratuity for their time.

Plan for Data Management

Each questionnaire was numbered (001 – 300) for the purposes of data entry and was not used to identify individual participants. Data was entered using the Statistical Package for the Social Sciences (SPSS v. 22). Data was entered with the identifying study number to ensure that all questionnaires that had been completed were entered. To ensure data entry accuracy, random

questionnaires of participant raw data were screened on the days of data entry and compared to the entered computer files by the principal investigator. If more than 1% of the items in a participant file were inaccurately entered, all questionnaires from the current data entry day were checked against the computer files. All questionnaires, demographic forms, and any other raw data will be shredded and destroyed five years after completion of the study.

Data Screening Plan

Prior to data analysis, the principal investigator screened for the accuracy of data entry, missing data, and normality by using the FREQUENCIES command within the SPSS software program (Tabachnick & Fidell, 2007). If there were inaccuracies in data entry despite using the plan described for data management, all raw data that was entered into the computer files was rechecked and compared to those computer files. After screening for data entry accuracies, missing data, and normality, the data was checked for outliers which may have an impact on the outcome of statistical analysis if not addressed when detected.

Missing Data

Since the patterns of missing data are more important than the amount that is missing, a missing values analysis (MVA) was run using the SPSS software program to highlight patterns of missing values. Missing values were approached through imputation. This approach consisted of calculating an estimate of the missing value and replacing it with the estimate (Polit & Beck, 2008). Deletion of cases with missing values only occurred if the missing values were concentrated in a few cases or in a particular pattern of the whole sample thus avoiding a substantial loss of subjects from cases with missing values that were scattered throughout. After methods to address missing data were completed, a repeat analysis was performed.

Normality

The screening of continuous variables for normality is an important step with almost all multivariate analysis. Even under circumstances where normality is not required for analysis, there is increased strength if the variables are all normally distributed (Tabachnick & Fidell, 2007). There are two aspects of a normality distribution, skewness and kurtosis, which must be tested before normality can be established. Failures in normality may require the consideration of data transformations.

Skewness. Skewness should have a value of zero in a normal distribution. Positive values of skewness occur when there is a cluster of scores on the left of the distribution; whereas negative values indicate a cluster on the right (Field, 2009). The DESCRIPTIVES/EXPLORE command in SPSS provides a value for skewness and a standard error for skewness as a default. The skewness value from this calculation was divided by the standard error for skewness to obtain a Z score for skewness. An absolute Z score value greater than 1.96 is significant at $p <$ .05, above 2.58 is significant at $p <$ .01, and above 3.29 is significant at $p <$ .001 (Field, 2009).

Kurtosis. Kurtosis, like skewness, should have a value of zero in a normal distribution. A pointy and heavy-tailed distribution is indicative of positive values of kurtosis. This occurs when a cluster of scores are piled-up on or around the mean. A flat and light-tailed distribution is indicative of negative values of kurtosis. The SPSS command DESCRIPTIVES/EXPLORE provides a value for kurtosis and a standard error for kurtosis. The kurtosis value from this calculation was divided by the standard error for kurtosis to obtain the Z score for kurtosis. The absolute value for the calculated Z score was assessed at the same levels of significance as a Z score for skewness (Field, 2009).

Transformation. Although data transformations can be used as a remedy for failures of normality, is not universally recommended due to the added difficulty in interpreting a transform variable. However, there are three common types of transformations that can be calculated using the COMPUTE command in SPSS: (a) log transformation, (b) square root transformation, and (c) reciprocal transformation (Field, 2009). Given the number of transformations that can be performed, a systematic approach of using one transformation method at a time followed by a re-check of normality is prudent. In the case of continued failure of normality, other transformations can be used one at a time with a rechecked of normality until a transformation is found that produces the skewness and kurtosis values nearest zero (Tabachnick & Fidell, 2007).

Outliers

Case scores that are extreme relative to the majority of the scores in the distribution were considered outliers. Possible sources of outliers may be: (a) an error in data entry, (b) a data collection failure such as not following sampling criteria, (c) participants not following instructions on a questionnaire, or (d) an actual extreme value from an unusual participant (Munro, 2005). Testing for univariate outliers included using a simple boxplot and simple histogram for visual identification of cases that may be more than 3 standard deviations from the mean. As an additional check, Z scores can be calculated and used to identify outliers using the absolute score of 3.29 ($p < .001$) as an identifier (Munro, 2005). If univariate outliers are detected the decision can be made to either delete the case or perform a transformation. Transformations tend to pull outliers closer to the center of the distribution thereby reducing their impact. If a transformation is done and acceptable, then the search for multivariate outliers can be conducted (Tabachnick & Fidell, 2007).

Cases with unusual combinations of scores are considered multivariate outliers. To determine if multivariate outliers exist the distances of cases from the mean of all other cases can be assessed by evoking Mahalanobis scores through the use of the SPSS REGRESSION command (Tabachnick & Fidell, 2007). The screening of scores can be done in the same manner as with univariate outliers. Case deletion can occur if it is believed that the case is not from the population that was intended to be sampled. If an outlier case is retained, the value of the variable(s) may be transformed so that the impact of the case will be diminished (Tabachnick & Fidell, 2007).

Data Analysis

The SPSS (v. 22) software program was used for data processing and initial analysis. Descriptive analysis was used to report the means, ranges, and standard deviations for all measures. The multivariate and principle component analyses are discussed by specific aim and research question.

Specific Aim 1: Assess the factor structure of the MRNI-R.

To achieve this specific aim of assessing the factor structure of the MRNI-R a principle component factor analysis was used to identify the underlying relationships between the measured variables.

Research Question 1.0: What is the factor structure and item placement for the MRNI-R for this study?

Principle Component Factor Analysis

The first step in pursuing a principle component factor analysis was used to determine if the sample data is appropriate for this type of factor analysis. To determine the appropriateness, a Kaiser-Meyer-Olkin measure of sampling adequacy (KMO; Kaiser, 1970) was calculated. The

KMO represents the ratio of the squared correlation between variables to the squared partial correlation between variables (Field, 2009). Values closer to 1 show that partial correlations are small and thus; it is recommended that values of .6 and above are required for a good principle component factor analysis (Tabachnick & Fidell, 2007). Should the values fall below .6, consideration should be given to either collect more data or rethink which variables to include (Field, 2009). Despite the KMO measure of sampling adequacy which returned a value of .97 for Levant et al. (2010), this measure of sampling adequacy was redone to assure the consistency across studies.

Levant et al. (2010) used a principle-axis factor analysis for their study; however, the conclusions reached from this method are restricted to the sample collected and generalization of the results can only be achieved if analysis is done using different samples reveals the same factor structure (Field, 2009). This study was the first study of this kind, known to this investigator, to use the MRNI-R in a sample comprised solely of a diverse group of African American/Black men, which in turn has added data to prior studies for the MRNI-R. This study potentially adds to the generalizability of the tool to African American/Blacks.

To aid in the interpretation of factors, the degree to which the factors are allowed to correlate, a promax rotation was used since it is a faster procedure designed for large data sets (Field, 2009). Orthogonal rotation was not used because of the belief that it is not very realistic for naturalistic data and data involving humans.

After the factor structure was determined, the decision was made as to which variables make up which factors. According to Field (2009) factor loadings are a gauge of substantive importance of a given variable to a given factor. However; since there is no universal criterion for the size of factor loadings (Smyth & Yarandi, 1996), the researcher must choose an arbitrary

cut point. It has been recommended that only factors with a loading value greater than 0.4 be used for interpretation which would explain approximately 16% of the variance in the variable (Stevens, 2002). Although Levant and colleagues (2010) use loadings greater than .35 for interpretation, this study used .30 as a cut point for interpretation.

Specific Aim 2: Assess the reliability of the MRNI-R among a general population sample of African American/Black men.

To achieve the goal of this specific aim, reliability was assessed using Cronbach's alpha to evaluate internal consistency of the retained items of the MRNI-R; the extent to which the items of the MRNI-R measure masculinity ideology.

Research Question 2.0: What is the internal consistency reliability of the factors in the total MRNI-R scale for this study?

Reliability

The internal consistency of the MRNI-R was assessed through a reliability analysis. Cronbach's alpha is the most widely used method for evaluating internal consistency with values ranging between .00 and +1.00. The higher the value, the higher the internal consistency (Polit & Beck, 2008). In general, it is most desirable to have an alpha coefficient of greater than 0.7 which would indicate a relatively strong relationship among the responses to the different items on any particular scale (Macnee & McCabe, 2008). However; it would not be unreasonable to expect values below 0.7 when dealing with psychological constructs due to the diversity of the constructs being measured (Kline, 1999). Prior to running the reliability analysis, items that were reversed phrased in a questionnaire were reversed scored and a separate analysis was performed.

Specific Aim 3: Assess the relationship of the MRNI-R with other measures of masculinity ideology.

To achieve the goal of this specific aim, Pearson's *r* correlation technique was used to assess for evidence of convergent validity, concurrent validity, and discriminant validity.

Research Question 3.0: Is there a correlation between the MRNI-R and the MRAS?

Research Question 3.1: Is there a correlation between the subscale Restrictive Emotionality of the MRNI-R and the TAS total scale?

Research Question 3.2: Is there a correlation between the MRNI-R and the PAQ-M?

Validity

Following the principle component factor analysis, steps were taken to assess for the construct validity of the MRNI-R using Pearson's *r* correlation technique. The use of Pearson's *r* correlation technique provides a means to assess for evidence of convergent validity, discriminant validity, and concurrent validity that will grant support for construct validity. Using this technique is an efficient way to express relationships by computing a correlation coefficient. The correlation coefficient is an index with values ranging from -1.00 for a perfect negative correlation to a +1.00 for a perfect positive correlation (Polit & Beck, 2008). An index of zero indicates that there is no relationship between variables. The higher the absolute value of the coefficient, the stronger the relationship. The correlation coefficients are reported in tables displaying a two-dimensional correlation matrix with every variable displayed in both a row and a column and coefficients displayed at the intersections (Polit & Beck, 2008). The matrix also has underneath each correlation coefficient the significant value of the correlation and the sample size on which it is based (Field, 2009). In addition, correlations were graphed on a scatter plot diagram to better illustrate the correlations and their direction. Although correlation techniques are being used for the second and third specific aims, it is prudent to mention that correlations only reveal relationships and not causality.

Specific Aim 4: Assess the relationship between the MRNI-R and the MIBI.

To achieve the goal of this specific aim Pearson's *r* correlation was used to assess for correlations between racial identity (MIBI) and traditional masculinity ideology (MRNI-R).

Research Question 4.0: Is there a correlation between the MRNI-R and the MIBI?

Specific Aim 5: Assess the relationship between selected basic conditioning factors, the MRNI-R, and the HBI-20.

To achieve the goal of this specific aim, a hierarchical multiple regression was performed using selected basic conditioning factors, the factors of the MRNI-R, and the HBI-20.

Research Question 5.0: Is there a correlation between selected basic conditioning factors, the MRNI-R and the HBI-20?

Regression Analysis

A hierarchical multiple regression was conducted to examine the contribution of the established masculinity factors of the MRNI-R to health behaviors (total HBI-20 score) while accounting for the demographic basic conditioning factors of age, education, and income. This was done by entering the demographic in the first step followed by adding the MIBI into the second step with the MRNI-R factors as a constant. Hierarchical multiple regression is similar to standard multiple regression in that several independent variables are used to predict a dependent variable. In standard multiple regression, all the independent variables are entered into the equation at one time. In contrast, with hierarchical multiple regression, the independent variables are entered in different steps. The important distinction comes from the fact that regression reveals how well each independent variable predicts the dependent variable, controlling for all the other independent variables in the regression equation.

Statistical Test for a Mediator Effect

A mediator effect was tested due to the presence of a significant direct association between masculinity ideology and health behaviors. To test for statistically significant mediation the following three regression equations were used: (a) regression of the mediator on the independent variable to observe if the independent variable significantly predicts the mediator, (b) regression of the outcome variable on the independent variable to observe if the independent variable significantly predicts the outcome variable, and (c) regression of the outcome variable on both the independent variable and on the mediator variable. There are two conditions that must be met from the regression of the outcome variable on the independent and mediator variable to establish if a mediator effect is present: (a) the mediator(s) must significantly predict the outcome variable, and (b) the significance of the relationship of the independent variable to the outcome variable is less than when the dependent variable was regressed on the independent variable (Baron & Kenny, 1986).

Protection of Human Subjects

Persons who agreed to participate in this study had their rights as subjects in research protected in the following manner. Wayne State University's Institutional Review Board (IRB) approval was obtained before any subjects were recruited for the study. All information was kept strictly confidential, and will be destroyed by shredding five years following completion of the study. The participants were assigned a code number that was the only identification that was used on any of the data collection instruments. The number on the survey packet was in no way linked to the participant completing the questionnaire. Data from the study has been reported in aggregate format only. No individual personal information is reported.

There was no physical harm involved in participating in this study. None of the participants reported experiencing any anxiety while answering questions regarding their beliefs. Although no participants reported experiencing anxiety, it must be noted that the principle investigator is a professional, master's prepared nurse practitioner who was able to answer any questions, allay anxiety, and/or refer to a free or low-cost clinic if the participant did not have a primary care provider for follow-up care.

The College of Nursing at Wayne State University provided facility and resource support for this study including meeting space, office equipment, and a secure storage space for research files and supplies.

CHAPTER 5

RESULTS OF DATA ANALYSIS

The participant demographics and the results of the statistical analysis of the study variables will be presented in this chapter. This chapter is separated into three sections. The first section describes the sample demographics. The second section includes the psychometric testing of the instruments. The statistical analysis used to answer the research questions is presented in the third section. The primary purposes of this study were to (1) assess the factor structure of the MRNI-R, (2) assess the reliability, and (3) assess for the convergent, concurrent, and discriminant validity of the MRNI-R scores. In addition, there was an exploration of the correlation between traditional masculinity ideology and health behaviors.

Description of the Sample

A convenience sample of 300 urban dwelling African American/Black men from the Detroit metropolitan area were recruited and screened to participate in this study. A total of 318 participants were screened for participation. Eighteen of the participants had reading levels that did not meet the inclusion criteria. The 300 participants that met the inclusion criteria were enrolled in the study. Following informed consent, all participants received a survey packet which included a demographic information questionnaire. The demographic characteristics of the sample (gender, age, marital status, educational level, work status, income status) are summarized using frequency distributions and are presented in Table 3.

Table 3. ***Frequencies and Percentages of Sample Demographics (N = 300)***

Sample demographics	Number	Percentages
Gender	300	100
Male		
Age (years)		
18-29	73	24.3
30-49	112	37.4
50-69	110	36.8
70-81	5	1.5
Marital status		
Single, never married	147	49.0
Single, in committed relationship	55	18.3
Married	44	14.7
Widowed	4	1.3
Divorced	35	11.7
Separated	15	5.0
Education level		
6th – 12th grade	188	62.6
Post high school	109	37.4
REALM-SF scores		
7th – 8th grade level	41	14.0
≥ 9th grade level	259	86.0
Work status		
Full-time	93	31.1
Part-time	57	19.1
Unemployed	73	24.4
Disabled	46	15.4
Retired	30	10.0
Annual income		
0 – 4,999	109	36.3
5,000 – 14,999	62	20.7
15,000 – 49,999	82	27.3
50,000 +	44	14.7
Undisclosed	3	1.0

All of the participants were male and self-identified as African-American/Black. Participants ranged in age from 18 to 81 years with a mean age of 43.4 (SD = 14.45). Most of the participants ranged in age from 30 to 49 (37.4%, *n* = 112) followed by 50 to 69 (36.8%, *n* = 110) and 18 to 29 (24.3%, *n* = 73). The majority of the participants reported their marital status as being single and never married (49%, *n* = 147), followed by those in a committed relationship (18.3%, *n* = 55) and those who were married (14.7%, *n* = 44). The mean educational level was 12.51 (*SD* = 2.4) with the largest group of participants (62.6%, *n* = 188) self-reporting as being educated at levels ranging from middle school to high school graduate followed by those (37.4%, *n* = 109) who reported having attended/graduated college.

Although no effort was made to stratify by work status, the sample was almost equally split between the participants who were working (50%; full-time [31.1%, *n* = 93], part-time [19.1%, *n* = 57]) and those who were not (49.8%; unemployed [24.4%, *n* = 73], disabled [15.4%, *n* = 46], retired [10%, *n* = 30], unidentified work status [0.2%, *n* = 1]). Most of the participants (42.7%, *n* = 128) classified themselves as being laborers. Annual income for the participants were reported as less than $5000.00 (36.3% *n* = 109), $5000.00 - $14,999.00 (20.7%, *n* = 62), $15,000.00 - 49,999.00 (27.3%, *n* = 82), and greater than $50,000.00 (14.7%, *n* = 44). Three of the participants did not disclose their income.

In response to questions regarding childhood experiences in the home, more than half (56.3%, *n* = 169) were raised by both parents, 34.7% (*n* = 104) were raised by their mother, 4.3% (*n* = 13) were raised by their father, and 4.7% (*n* = 14) were raised by someone other than a parent. The majority of the parents of the participants were married (58%, *n* = 174), followed by parents who never lived together (18.3%, *n* = 55), separated (12.3%, *n* = 37), and divorced (11%,

n = 33). Over half (66.3%, *n* = 199) of the participants reported that race was discussed in their home. The frequency distribution is represented in Table 4.

Table 4. ***Frequencies and Percentages of Childhood Experiences (N = 300)***

Childhood experiences	Number	Percentage
Raised by:		
Both parents	169	56.3
Mother	104	34.7
Father	13	4.3
Other	14	4.7
Marital status of parents		
Married	174	58.0
Divorced	33	11.0
Separated	37	12.3
Never lived together	55	18.3
Race discussed in the home		
Yes	199	66.3
No	101	33.7

In addition, participants addressed a series of questions regarding their health state, self-perceptions of their health, their health behaviors, insurance status, and trust in healthcare provider. The analysis of their responses is summarized using frequency distributions in Table 5. Most of the participants (94.8%, *n* = 284) self-reported as being told that they had, or were being treated for at least one health problem. The top three reported health problems were cardiac related (15.7%, *n* = 47), depression (15.7%, *n* = 47), and alcohol or drug problems (15.0%, *n* = 45). Sixty-five participants (21.7%) self-reported having a health problem that was not specifically identified. Although 94.8% of the participants reported having or had been treated for at least one health problem, almost half (49.3%, *n* = 147) had the perception that their health was somewhat more to much more healthy compared to others. Most of the participants (45.3%,

n = 135) perceived having stress levels of 1-3 followed by stress levels of 4-6 (29.5%, *n* = 88), and 7-10 (25.2% *n* = 75).

Table 5. ***Frequencies and Percentages of Health Matters*** **(*N* = 300)**

Health matters	**Number**	**Percentage**
Health conditions		
CHF	9	3.0
Heart attack	11	3.7
Heart problems	27	9.0
Stroke	11	3.7
Vascular disease	4	1.3
Lung disease	13	4.3
Kidney disease	8	2.7
Diabetes	24	8.0
Severe eye problem	20	6.7
Depression	47	15.7
Alcohol or drug problems	45	15.0
Other health problems	65	21.7
Rate your health compared to others		
I am much less healthy	20	6.7
I am somewhat less healthy	46	15.4
I am about the same	85	28.5
I am somewhat more healthy	96	32.2
I am much more healthy	51	17.1
No response	2	.7
Level of stress		
1-3	135	45.3
4-6	88	29.5
7-10	75	25.2
Health behaviors		
Exercise 30 minutes or more		
None	41	13.8
Occasional (1 to 2 days)	92	30.9
Some (3 to 4 days)	77	25.8
Often (5 or more days)	88	29.5

Table 5. ***Frequencies and Percentages of Health Matters*** **(*N* = 300)**

Health matters	Number	Percentage
Drinks per week		
Less than one	150	50.2
1 – 7	99	33.1
8 – 14	29	9.7
15 – 21	14	4.7
22 – 28	7	2.3
Smoking habits		
Never smoked	91	30.3
Smoked but not in past year	35	11.7
Smoked in past year but not now	28	9.4
Currently smoke	145	48.5
Health insurance		
HMO	23	7.7
Medicare	45	15.2
Medicaid	77	25.8
Medicaid HMO	9	3.0
Blue Cross/Blue Shield	52	17.4
Other	30	10.1
Shared culture is important		
Strongly agree	91	30.5
Agree	110	36.9
Disagree	79	26.5
Strongly disagree	18	6.0
More trust with shared culture		
Strongly agree	65	21.8
Agree	105	35.2
Disagree	103	34.6
Strongly disagree	25	8.4

Regarding health behaviors, participants addressed three specific behaviors (exercise, drinking alcohol, smoking tobacco). The majority of the participants reported engaging in some form of exercise for 30 minutes or more 1-2 days a week (30.9%, *n* = 92), 3-4 days a week (25.8%, *n* = 77), or 5-7 days a week (29.5%, *n* = 88). Only 13.8% (*n* = 41) reported no days of exercise. Half of the participants (50.2%, n = 150) consumed less than one alcoholic beverage

per week followed by 1-7 drinks per week (33.1%, *n* = 99), 8-14 drinks per week (9.7%, *n* = 29), 15-21 drinks per week (4.7%, *n* = 14), and 22-28 drinks per week (2.3%, *n* = 7%). Most of the participants (48.5%, *n* = 145) reported being current smokers, while others reported as never smoked (30.3%, *n* = 91), smoked but not in the past year (11.7%, *n* = 35), and smoked in the past year but not now (9.4%, *n* = 28).

Participants also indicated their thoughts in regards to sharing the same culture as their healthcare provider. More than half (67.4%) of the participants agreed (36.9%, *n* = 110) or strongly agreed (30.5%, *n* = 91) that it was important to have a provider who shared the same cultural background while 26.5% (*n* = 79) disagreed or strongly disagreed 6.0% (*n* = 18). In addition, the majority of the participants agreed (35.2%, *n* = 105) or strongly agreed (21.8%, *n* = 65) that they were more likely to trust the advice of a provider from the same cultural background. On the contrary, participants disagreed (34.6%, *n* = 103) or strongly disagreed (8.4%, *n* = 25) that their level of trust regarding a provider's advice had any association with cultural background.

Psychometric Analysis of the Instruments

Psychometric analysis of the instruments is focused on the reliability of each of the instruments using Cronbach's alpha coefficient. The results of the psychometric analysis of the instruments are discussed in this section and presented in Table 6.

Male Role Norms Inventory–Revised (MRNI-R). The instrument's reliability was analyzed using the 53 items used by Levant et al. (2007). In comparison, the internal consistency for the MRNI-R total scale found in this study (.95) is similar to the aforementioned study by Levant et al. (2007) which had an alpha of .96 for the total scale. Although the alphas are similar in both studies, it must be noted that the participants in the Levant et al. (2007) study included

both male (n = 38) and female (n = 132). The alpha for the total scale for the men only was .95 which is consistent with this study; however, using only men in the analysis significantly reduced the sample size.

The Multidimensional Inventory of Black Identity (MIBI). Reliability was assessed for the three subscales included in this instrument using Cronbach's alpha. Cronbach's alpha was computed for each subscale individually after the appropriate items were reversed scored. The three subscales included centrality (α = .51), private regard (α = .81), and public regard (α = .55). The weak internal consistency for centrality and public regard may be associated with the perceptions of local media coverage regarding political and racial issues at the time of the study.

Male Role Attitudes Scale (MRAS). In order to assess the reliability of the MRAS Cronbach's alpha was computed. The internal consistency was found to be .67 for the total scale which is consistent with the findings of Levant et al. (2010) where the total scale alpha was reported as .67 for men.

Personal Attributes Questionnaire–Masculinity scale (PAQ-M). Cronbach's alpha was used to confirm the reliability of this instrument. The internal consistency of the entire instrument was .63 which is slightly lower than the .67 found by Levant et al. (2010).

Toronto Alexithymia Scale–20 (TAS-20). Reliability of the TAS-20 was confirmed using Cronbach's alpha. The internal consistency of the total scale for this study was .80 which is in line with the empirical support demonstrated in prior studies (α = .81, Bagby, Parker, & Taylor, 1994; α = .85, Mattila et al., 2008; α = .87, Mattila et al., 2010).

Health Behavior Inventory–20 (HBI-20). Reliability of the HBI-20 was confirmed using Cronbach's alpha. The internal consistency of the total scale for this study was .78 which is slightly above the .72 found in a recent study by Levant et al. (2011).

Table 6. ***Cronbach's Alphas for the Instruments***

Scale	Cronbach's Alpha
Male Role Norms Inventory	.95
Multidimensional Inventory of Black Identity	
Centrality	.51
Private regard	.81
Public regard	.55
Male Role Attitude Scale	.69
Personal Attributes Questionnaire–Masculinity	.63
Toronto Alexithymia Scale–20	.80
Health Behavior Inventory–20	.78

Specific Aims and Research Questions

This section presents the results that provide answers to the research questions. There are six research questions based on five specific aims from which this study was derived.

Specific Aim 1: Assess the factor structure of the MRNI-R.

To achieve this specific aim of assessing the factor structure of the MRNI-R, a principle component factor analysis was used to identify the underlying relationships between the measured variables.

Research Question 1.0: What is the factor structure and item placement for the MRNI-R for this study?

In order to answer this research question the first step was to assess the suitability of data for factor analysis. The sample size of 300 allowed for 5.7 participants per item, which is considered sufficient (Kass & Tinsley, 1979; Tabachnick & Fidell, 2007). An assessment of the correlation matrix, displayed in Table 7, revealed the existence of numerous coefficients of .30

and higher which meets the condition that a factor matrix should include several sizable correlations (Tabachnick & Fidell, 2007). The Kaiser-Meyer-Olkin value was .91, which is more than the recommended value of .5 (Kaiser, 1974), and is considered superb by Hutcheson & Sofroniou (1999). Additional support for the factorability of the correlation matrix was Bartlett's test for sphericity which was statistically significant at < .001 (Field, 2009).

Table 7. ***Component Correlation Matrix for the MRNI-R***

Component	1	2	3	4	5	6
1	1.000	.523	.329	.305	.400	.423
2	.523	1.000	.530	.483	.417	.419
3	.329	.530	1.000	.387	.393	.338
4	.305	.483	.387	1.000	.415	.257
5	.400	.417	.393	.415	1.000	.339
6	.423	.419	.338	.257	.339	1.000

Extraction Method: Principle Component Factor Analysis
Rotation Method: Promax with Kaiser Normalization

The next step in answering the research question was a principal component factor analysis. To assist in determining how many factors to retain, the scree plot and eigenvalue table were reviewed. An examination of the scree plot of the eigenvalues shown in Figure 4, for an elbow shaped change of direction suggests that six factors may exist.

Figure 4. **Analysis of the MRNI-R Factor Scree Plot**

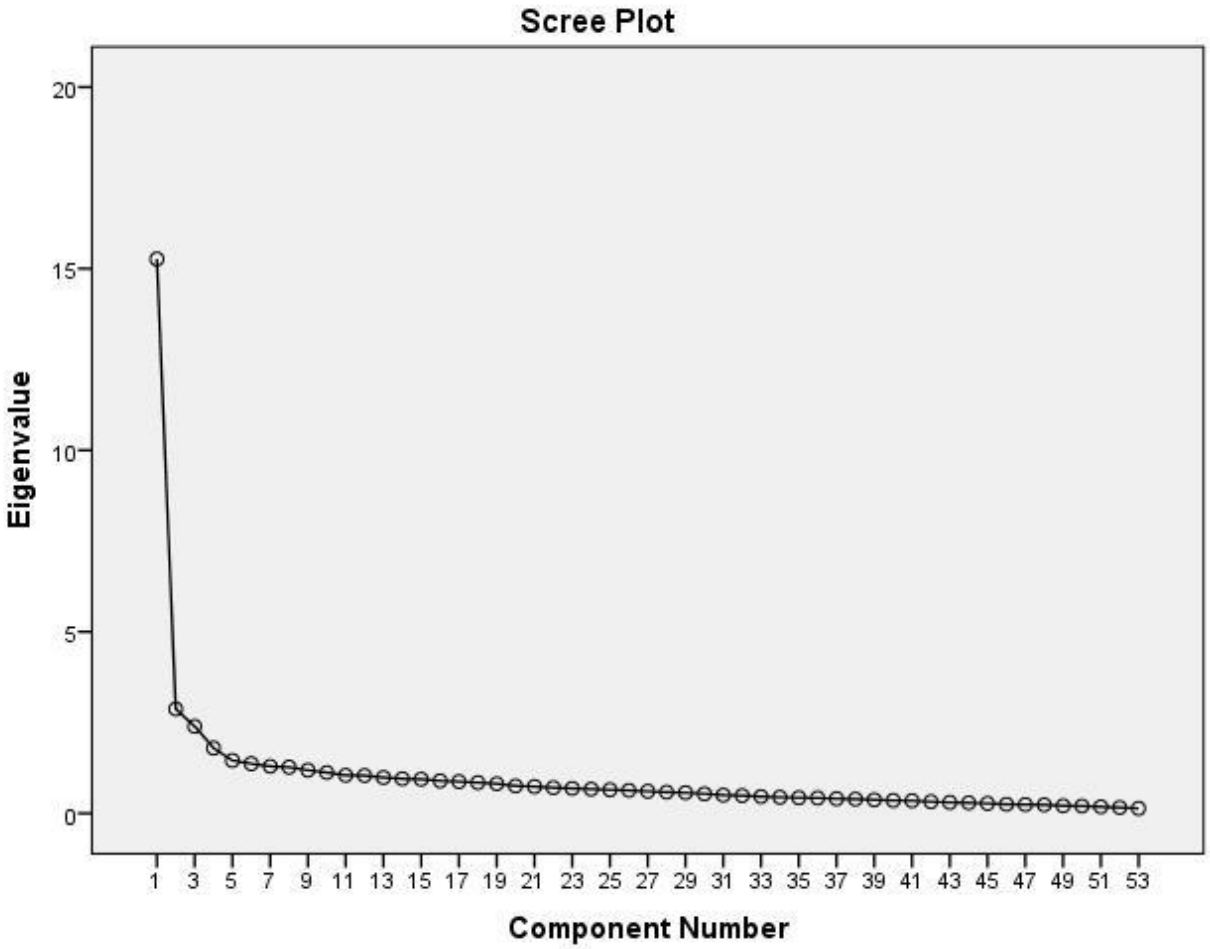


Table 8 displays the eigenvalue, percent of variance explained, and cumulative variance explained for each factor. Six factors with eigenvalues exceeding 1.0, accounted for 28.80%, 5.42%, 4.52%, 3.40%, 2.74%, and 2.58% of the variance, respectively. The cumulative total variance accounted for was 47.46%. The promax rotation was used to assist with the interpretation of these factors. Loadings higher than .30 were allowable which resulted in the elimination of two items.

Table 8. ***Eigenvalues and Percentages of Variance Associated with Each Component***

Component	Eigenvalue	Percentage of explained variance	Accumulated percentage of explained variance
1	15.26	28.80	28.80
2	2.87	5.42	34.22
3	2.39	4.52	38.74
4	1.8	3.40	42.13
5	1.46	2.75	44.88
6	1.37	2.58	47.46

Table 9 displays six factors with a number of strong loadings and answers the research question regarding the factor structure and item placement for the MRNI-R for this study. Results of the analysis for this study revealed a factor structure that is different from the original MRNI-R. For example, there are some items that were retained from the original instrument that have settled with a different placement within the instrument and occasionally settling within a different subscale. In addition, there were six factors found instead of the original seven, the arrangement of the six factors has changed, and two of the factors have been renamed. Factor 1, Self Reliance Through Mechanical Skills, retained three items (100%), acquired two items that had been removed in the prior study (Levant et al., 2010), and was renamed Self Reliance. The placement of this factor has changed from Factor 2 in the original instrument to Factor 1 in this study. Factor 2, Dominance, was placed as Factor 7 in the prior study (Levant et al., 2010). Five (71%) of the seven items were retained with the two remaining items loading onto a different factor. Restricted Emotionality was changed from Factor 1 to Factor 3. Eight (67%) of the 12 original items were retained. Of the remaining four items, two loaded onto different factors and the other two were removed due to loadings of less than .30. Factor 4 emerged as a new factor

that was named Machismo. Machismo is defined as a strong sense of masculine pride. For this study Machismo is conceptualized as being acutely in tune with one's masculine pride and having a high regard for characteristics culturally associated with masculinity and the denigration of characteristics associated with femininity (Machismo, n.d.). Items contained in Factor 4 include two items from Factor 7 of the original instrument, one item from Factor 4 of the original instrument, and two items that were removed from the original instrument. Factor 5, Negativity Towards Sexual Minorities, which was Factor 3 in the original instrument, was renamed Negativity Towards Homosexuals to adequately reflect the language used within the instrument. All nine items (100%) were retained from the original instrument with the remaining item being removed due to a loading of less than .30. Factor 6, Avoidance of Femininity, which was Factor 4 in the original instrument, retained its name along with six (67%) of the nine factors. Two the remaining items loaded on other factors and one item was removed because it did not conceptually fit with the factor that it loaded on.

The pattern matrix for the MRNI-R in this study revealed 13 items that were cross loaded on two factors. Although these items cross loaded onto factors, the loadings were greater than .30. The decision was made to retain 10 of the 13 items that were cross loaded. Six of the retained items remain on the factor upon which they had higher loadings. Four of the retained items were transitioned to the factor that they were most closely related to conceptually for clearer interpretation although their loadings were lower for that factor. Even though the remaining three of the items loaded on a factor greater than .30, they were removed because there appeared to be no conceptual relationship to the factor onto which they loaded. For example, the item "a man should not turn down sex" loaded on the factor labeled dominance.

This item is more appropriate for a factor that addresses how one feels about sex rather than sex as a dominant action.

Table 9. ***MRNI-R Factors and Loadings from Principal Component Factor Analysis***

Factors and items	**Loading**
Factor 1: Self-Reliance	
13. Men should have home improvement skills	.80
14. Men should be able to fix most things around the house	.69
27. A man must be able to make his own way in the world	.66
36. A man should know how to repair his car if it should break down	.52
29. A man should never count on someone else to get the job done	.50
Factor 2: Dominance	
22. A man should provide the discipline in the family	.34
21. A man should always be the boss	.62
44. A man should always be the major provider in his family	.61
51. Men should make the final decision involving money	.50
49. In a group, it is up to the man to get things organized and moving ahead	.36
Factor 3: Restrictive Emotionality	
47. Fathers should teach their sons to mask fear	.35
41. Men should be detached in emotionally charged situations	.56
38. A man should never admit when others hurt his feelings	.53
53. Men should not be too quick to tell others they care about them	.53
46. I might find it a little silly or embarrassing if a male friend of mine cried over a sad love story	.47
31. A man should react when other people cry	.46
40. A man shouldn't bother with sex unless he can achieve orgasm	.44
33. Being a little down in the dumps is not a good reason for a man to act depressed	.37
Factor 4: Machismo	
2. The President of the U.S. should always be a man	.81
3. Men should be the leader in any group	.75
9. Men should not be interested in talk shows such as "Oprah"	.53
4. A man should be able to perform his job even if he is physically hurt	.47
12. Men should not borrow money from friends or family members	.43

Table 9. ***MRNI-R Factors and Loadings from Principal Component Factor Analysis***

Factors and items	Loading
Factor 5: Negativity Towards Homosexuals	
18. Men should never compliment or flirt with another male	.72
17. Homosexuals should be allowed to serve in the military	.67
25. Homosexuals should never kiss in public	.66
52. It is disappointing to learn that a famous athlete is gay	.63
1. Homosexuals should never marry	.47
23. Men should never hold hands or show affection toward another	.39
32. A man should not continue a friendship with another man if he finds out the other man is homosexual	.39
8. All homosexual bars should be closed down	.33
37. Homosexuals should be barred from the teaching profession	.33
Factor 6: Avoidance of Femininity	
11. Boys should play with action figures not dolls	.62
6. Men should not wear makeup, cover-up, or bronzer	.62
7. Men should watch football instead of soap operas	.57
19. Boys should prefer to play with trucks rather than dolls	.49
10. Men should excel at contact sports	.45
15. A man should prefer watching action movies to reading romantic novels	.33

Specific Aim 2: Assess reliability of the MRNI-R among a sample of African American/Black men.

To achieve the goal of this specific aim, reliability will be assessed using Cronbach's alpha to evaluate internal consistency of the retained items of the MRNI-R; the extent to which the items of the MRNI-R measure masculinity ideology.

Research question 2.0: What is the internal consistency reliability of the factors in the MRNI-R total scale for this study?

In order to answer this research question an analysis was performed to assess the reliability of the subscales as well as the total scale. Cronbach's alphas were calculated. Table 10

displays the results. The coefficient for the six subscales were .70 (Machismo), .80 (self-reliance, dominance, restricted emotionality, and avoidance of femininity), and .82 (avoidance of femininity). The coefficient for the total scale was .93. The coefficients of greater than .80 are highly desirable while the coefficient of .70 can be considered adequate at this upscale level (Polit & Beck, 2008).

Table 10. ***Cronbach's Alphas for the MRNI-R (38-item) for this Study***

Scale	Cronbach's Alpha
Self Reliance	.80
Dominance	.80
Restricted Emotionality	.80
Machismo	.70
Negativity Towards Homosexuals	.82
Avoidance of Femininity	.80
MRNI-R Total Scale	.93

Specific Aim 3: Assess the relationship of the MRNI-R (38-item) with other measures of masculinity ideology.

Research Question 3.0: Is there a correlation between the MRNI-R in the MRAS?

In order to answer this research question, Pearson's *r* correlation technique was used to assess the correlation between the total scales of the MRNI-R and the MRAS. Scores on the MRNI-R showed a significant positive correlation ($r = .56$, $p < .01$) with the other measure of masculinity ideology as displayed in Table 11. This result suggests support for the convergent/concurrent validity of the MRNI-R.

Table 11. ***Correlation of the MRAS with the MRNI-R (38-item)***

		MRAS	MRNI-R
MRAS	Pearson's *r*	1	.556**
	Sig. (2-tailed)		.000
	N	299	281
MRNI-R (38-item)	Pearson's *r*	.556**	1
	Sig. (2-tailed)	.000	
	N	281	299

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

Research Question 3.1: Is there a correlation between the subscale (Restrictive Emotionality) of the MRNI-R (38-item) and the TAS total scale?

In order to answer this research question, Pearson's *r* correlation technique was used to assess the correlation between the Restrictive Emotionality subscale of the MRNI-R and the TAS total scale for concurrent validity. Prior to using Pearson's *r* correlation technique, items that were marked for reverse scoring in the TAS-20 were assigned reverse scoring values. Scores on the Restrictive Emotionality subscale showed a significant positive correlation ($r = .40$, $p < .01$) with the TAS total scale as displayed in Table 12. This result suggests support for the concurrent validity of the MRNI-R.

Table 12. ***Correlation of the TAS-20 with the Restricted Emotionality Subscale of the MRNI-R***

		TAS–20	Restricted emotionality
TAS–20	Pearson's *r*	1	.40**
	Sig. (2-tailed)		.000
	N	291	284
Restricted emotionality	Pearson's *r*	.40**	1
	Sig. (2-tailed)	.000	
	N	284	293

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

Research Question 3.2: Is there a correlation between the MRNI-R (38-item) and the PAQ-M?

In order to answer this research question, Pearson's r correlation technique was used to assess the correlation between the MRNI-R and the PAQ-M total scale for discriminant validity. Scores on the MRNI-R showed a no significant correlation with the PAQ-M (r = .12, p = .05) as displayed in Table 13. This result suggests support for discriminant validity.

Table 13. ***Correlation of the MRNI-R (38-item) with the PAQ-M***

		MRNI-R	PAQ-M
MRNI-R (38-item)	Pearson's *r*	1	.116
	Sig. (2-tailed)		.053
	N	282	279
PAQ-M	Pearson's *r*	.116	1
	Sig. (2-tailed)	.053	
	N	279	296

Specific Aim 4: Assess the relationship between the MRNI-R (38-item) and the MIBI.

Research Question 4.0: Is there a correlation between the MRNI-R (38-item) and the MIBI?

In order to answer this research question, Pearson's *r* correlation technique was used to assess the correlation between the MRNI-R (38-item) and three subscales (centrality, private regard, public regard) of the MIBI. Given that the MIBI is based on a multidimensional conceptualization of racial identity, a composite score from the entire scale would not be suitable (Sellers et al., 1997). Prior to using Pearson's *r* correlation technique, items that were marked for reverse scoring in the original instrument were assigned reverse scoring values. Table 14 displays scores on the MRNI-R (38-item) that showed a positive significant correlation ($r = .20$, $p < .01$) with private regard, no significant correlation with public regard ($r = .10$, $p = .12$), and no significant correlation ($r = .02$, $p = .759$) with centrality. Since private regard had the only positive significant correlation with the MRNI-R (38-item) scale, further analysis of racial identity will be specific to private regard.

Table 14. ***Correlation of the MIBI subscales with the MRNI-R (38-item)***

		MRNI-R (38-item)	Centrality	Private regard	Public regard
MRNI-R (38-item)	Pearson's *r*	1	.018	.197**	.094
	Sig. (2-tailed)		.759	.001	.121
	N	282	279	280	275
Centrality	Pearson's *r*	.018	1	.502**	.056
	Sig. (2-tailed)	.759		.000	.346
	N	279	296	295	289
Private regard	Pearson's *r*	.197**	.502**	1	.182**
	Sig. (2-tailed)	.001	.000		.002
	N	280	295	298	292

Table 14. ***Correlation of the MIBI subscales with the MRNI-R (38-item)***

		MRNI-R (38-item)	Centrality	Private regard	Public regard
Public regard	Pearson's *r*	.094	.056	.182**	1
	Sig. (2-tailed)	.121	.346	.002	
	N	275	289	292	292

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

Specific Aim 5: Assess the relationship between the MRNI-R (38-item) and the HBI-20 while accounting for specific basic conditioning factors, including racial identity.

Research Question 5.0: Is there a correlation between the MRNI-R (38-item) and the HBI-20 while accounting for specific basic conditioning factors?

In order to answer this research question, Pearson's *r* correlation technique was used to assess the correlation between the MRNI-R (38-item) and the HBI-20. In addition, a hierarchical multiple regression was performed using the factors of the MRNI-R (38-item), specific basic conditioning factors, and the HBI-20. Table 15 displays scores on the MRNI-R (38-item) that show a positive significant correlation ($r = .21$, $p < .001$) with the HBI-20.

Table 15. ***Correlation of the MRNI-R (38-item) with the HBI-20***

		MRNI-R	HBI-20
MRNI-R (38-item)	Pearson's *r*	1	.212**
	Sig. (2-tailed)		.000
	N	282	280
HBI-20	Pearson's *r*	.212**	1
	Sig. (2-tailed)	.000	
	N	280	298

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

In addition, a hierarchical multiple regression was performed to investigate the ability of specific basic conditioning factors (age, marital status, education, health insurance, employment, income, health care provider, racial identity, and health state) to influence the levels of masculinity ideology. Correlations among the predictor variables (basic conditioning factors) included in the study were examined with the results presented in Table 16. All of the correlations are weak to moderately strong, ranging between $r = .09$, $p < .05$ and $r = .49$, $p < 01$.

There were no correlations above .90 within the correlation matrix among the predictor variables which indicates that multicollinearity is unlikely to be a problem (Tabachnick & Fidell, 2007). Four of the predictor variables (age, education, employment, and racial identity as represented by the MIBI [private regard]) were statistically correlated with the MRNI-R (38-item). This indicates that these four statistically correlated predictor variables were suitably correlated with the dependent variable for examination through hierarchical multiple regression. The correlations between the predictor variables and the dependent variable were weak to moderately strong, ranging from $r = -.14$, $p < .05$ to $r = .16$, $p < .01$.

Table 16. ***Correlations and Reliability for Dependent Variable and Predictor Variables***

Variables	**MRNI-R**	**Age**	**MS**	**ED**	**HI**	**Emp**	**Income**	**Provider**	**MIBI**	**Health state**
MRNI-R (38-item)	1									
Age	-.18**	1								
Marital status	-.06	.32**	1							
Education	-.14*	-.01	.07	1						
Health insurance	-.02	.20**	.10	.18**	1					
Employment	-.02	.43**	.07	-.27**	.07	1				
Income	-.16**	.07	.12*	.49**	.21**	-.32**	1			
Healthcare provider	-.08	-.09	.08	-.07	-.19**	-.13*	.04	1		

Table 16. ***Correlations and Reliability for Dependent Variable and Predictor Variables***

Variables	MRNI-R	Age	MS	ED	HI	Emp	Income	Provider	MIBI	Health state
MIBI private regard	.20**	.07	.00	.06	.20**	.03	.07	.02	1	
Health state	-.03	.38**	.11	-.11*	.20**	.27**	-.10*	.01	.10	1

Note. Statistical significance: *$p < .05$; ** $p < .01$

In the first step of the hierarchical multiple regression, three predictors were entered: age, education, and income. This model was statistically significant F (3, 274) = 5.861; $p < .01$ and explained 6% of variance in masculinity ideology (MRNI-R). After entry of racial identity (MIBI-private regard) in the second step, the total variance explained by the model as a whole was 11% (F (4, 273) = 8.417; $p < .001$) as displayed in Table 17. The introduction of racial identity (private regard) explained an additional 5% variance in masculinity ideology (MRNI-R) after controlling for age, education, and income (R^2 Change = .05; F (1, 273) = 15.177; $p < .001$).

Table 17. ***Hierarchical Regression Model Relating Specific Basic Conditioning Factors, Racial Identity and Masculinity Ideology***

			Change statistics				
Hierarchical step	**Predictor variables**	**R square**	**Δ R^2**	**Δ F**	**df1**	**df2**	**Sig. Δ F**
1	Age Income Education	.06	.06	5.90	3	274	.001
2	Age Income Education Racial identity (private regard)	.11	.05	15.20	1	273	.000

Constant: MRNI-R (38-item)

In the final model two of the four predictor variables were statistically significant; racial identity (private regard) had a positive significant relationship (β = .22, $p < .001$) and age (β = -.17, $p < .05$) had a negative significant relationship as displayed in Table 18.

Table 18. ***Coefficients for Predictor Variables and the Dependent Variable***

Hierarchical step	Predictor variables	B	Std. Error	β	Sig.
1	(Constant)	206.40	15.74		.000
	Age	-.50	.17	-.17	.005
	Education	-2.12	1.22	-.12	.083
	Income	-1.61	1.31	-.08	.219
2	(Constant)	156.51	19.98		.000
	Age	-.50	.17	-.17	.003
	Education	-2.20	1.20	-.12	.068
	Income	-2.03	1.28	-.11	.114
	Racial identity (MIBI) private regard	1.44	.40	.22	.000

Constant: MRNI-R (38-item)

Mediation Analysis

In addition, a mediation analysis was performed to assess for a mediating effect of masculinity ideology on the relationship between racial identity (private regard) and health behaviors as measured by the HBI-20. The results of this analysis are displayed in Table 19.

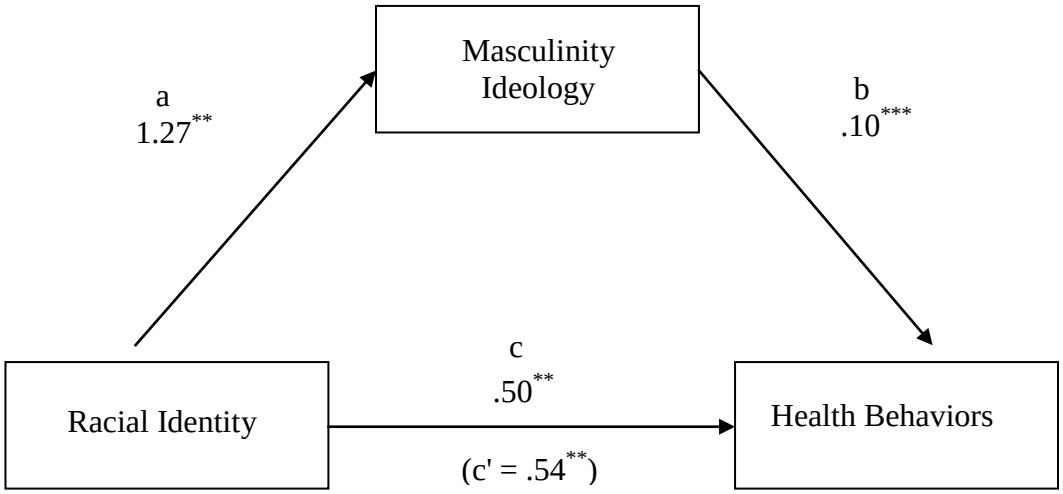
Table 19. ***Mediation Analysis - Mediation Role of Masculinity Ideology on the Relationship Between Racial Identity and Health Behaviors***

Predictor	Outcomes	B	Std. Error	β	Sig.
Step 1					
Racial identity (private regard)	Health behaviors	.54	.16	.19	< .01
Step 2					
Racial identity (private regard)	Masculinity ideology	1.27	.38	.20	< .01
Step 3					
Masculinity ideology	Health behaviors	.10	.03	.21	< .001
Step 4					
Masculinity ideology	Health behaviors	.08	.03	.17	< .01
Racial identity (private regard)	Health behaviors	.50	.17	.17	< .01

Sobel Test = 2.10, $p < .05$

The relationship between racial identity (private regard) and health behaviors was mediated by masculinity ideology. As Figure 5 illustrates, the standardized regression coefficient between racial identity (private regard) and masculinity ideology was statistically significant, as was the standardized regression coefficient between masculinity ideology and health behaviors. To test the significance of this indirect effect a Sobel test was calculated. The result of this test was statistically significant ($p < .05$), indicating that masculinity ideology partially mediates the relationship between racial identity (private regard) and health behaviors.

Figure 5. ***Standardized Path Coefficients***



*$p < .05$, **$p < .01$, ***$p < .001$

Since age was the other variable that had a statistically significant relationship with masculinity ideology, an additional mediation analysis was performed to assess for a mediating effect of masculinity ideology on the relationship between age and health behaviors as measured by the HBI-20. The results of this analysis are displayed in Table 20.

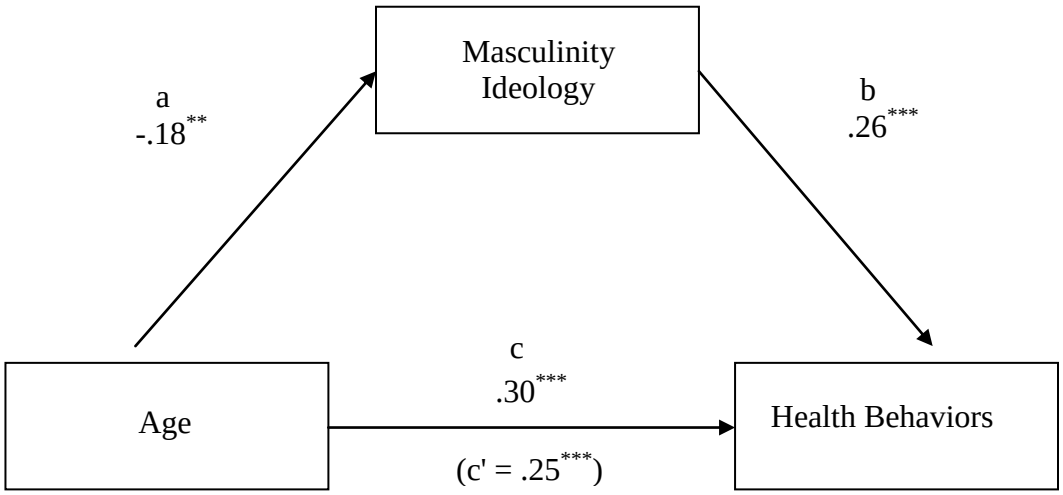
Table 20. ***Mediation Analysis - Mediation Role of Masculinity Ideology on the Relationship between Age and Health Behaviors***

Predictor	Outcomes	B	Std. Error	β	Sig.
Step 1					
Age	Health behaviors	.33	.07	.25	< .001
Step 2					
Age	Masculinity ideology	-.52	.17	-.18	< .01
Step 3					
Masculinity ideology	Health behaviors	.10	.03	.21	< .001
Step 4					
Masculinity ideology	Health behaviors	.12	.03	.26	< .001
Age	Health behaviors	.38	.07	.30	< .001

Sobel Test = -2.43, $p < .05$

Figure 6 shows the inconsistent mediation from the analysis. The relationship between age and health behaviors is presumably mediated by masculinity ideology. The direct effect is positive (the higher the age, the more favorable the health behaviors). However, the effect of age on masculinity ideology is negative (the lower the age, the higher the masculinity ideology) and the effect of masculinity ideology on health behaviors is positive (the higher the masculinity ideology, the more favorable the health behaviors) making the overall indirect effect negative. Therefore the total effect of age on health behaviors is likely to be very small if not zero, because the direct and indirect effects tend to cancel each other out As a result of this inconsistent mediation consideration should be given for an alternative theoretical model, such as the model with masculinity ideology showing a mediating effect on the relationship between racial identity (private regard) and health behaviors.

Figure 6. **Standardized Path Coefficients**



*$p < .05$, **$p < .01$, ***$p < .001$

Summary of Results

The principle component factor analysis of the African American/Black men's scores on the MRNI-R provided support for redesigning the scale. More specifically, six of the original seven factors were retained, two of the six retained factors had a name change, and the order of the factors were rearranged according to the results of the analysis. The new arrangement for the six factors are as follows: self-reliance, dominance, restrictive emotionality, machismo, negativity towards homosexuals, and avoidance of femininity respectively. The name for factor one was changed from self-reliance through mechanical skills to self-reliance and machismo was added as the fourth factor.

There also were 38 of the original 53 items retained. The item placement was determined by the factors on which they loaded at .30 or higher. There were 13 items removed because they did not conceptually fit with their factors and two were removed because they had loadings of less than .30. Evidence for internal consistency reliability was found for scores on each of the factors with alphas ranging from .70 to .82, and the total scale with an alpha of .93. Evidence

was found for concurrent/convergent validity of the MRNI-R (38-item) scores through the significant positive correlation with the MRAS, which is another measure of masculinity ideology. Evidence for discriminant validity was found through the nonsignificant correlation with the PAQ-M, which is a measure of masculinity ideology from a different conceptual perspective than the MRNI-R (38-item). Evidence for concurrent validity was demonstrated through the significant positive correlation of the restrictive emotionality subscale of the MRNI-R (38-item) with the TAS-20.

In addition, relationships were found between basic conditioning factors (racial identity and age), masculinity ideology and health behaviors. However, an expected significant relationship between income and masculinity ideology was not found nor was a significant relationship between education and masculinity ideology. The results do provide evidence that basic conditioning factors influence masculinity ideology which thereby influences health behaviors.

The results of the statistical analyses that were used to describe the sample and answer the research questions have been presented in this chapter. A discussion of the findings, implications for nursing, and recommendations for further research are presented in Chapter 6.

CHAPTER 6

DISCUSSION

This study was a cross-sectional descriptive correlational design. Participants were from the Detroit Metropolitan area and the surrounding suburbs. The purposes of this study were to: (1) assess the factor structure of the MRNI-R using a principle component factor analysis, (2) assess its reliability using Cronbach's alpha, and (3) assess construct validity for convergent and concurrent, and discriminant validity among a sample of African American/Black men. In addition, correlations between specific conditioning factors, including racial identity, and masculinity ideology were examined. Further investigation examined correlations between masculinity ideology and health behaviors. In order to answer the research questions for this study, data was used from the 300 African American/Black men who volunteered to participate by meeting the inclusion criteria and completing a series of questionnaires. Findings from this study were presented in chapter 5. In this chapter there will be further discussion regarding the research findings, implications of those findings and recommendations for future research involving masculinity ideology, self-care behaviors, and health outcomes. The discussion will follow the order of constructs as they appear in the enhanced theoretical model of self-care as described in chapter 3.

Basic Conditioning Factors

There are ten basic conditioning factors that affect the value of self-care agency of persons at a specific time. These ten factors include age, gender, developmental state, health state, socio-cultural orientation, health care system, family system factors, pattern of living, environmental factors, and resource availability and adequacy (Orem, 2001). The present study focused on eight of the ten basic conditioning factors that were believed to affect the value of

self-care agency of African American/Black men. The eight factors included in this study were age, gender, health state (presence of acute or chronic illnesses), sociocultural orientation (racial identity), health-care system factors (primary care provider), family system factors (marital status, children, individuals living in the home), environmental (where lived), and resource availability and adequacy (employment, income, insurance). Racial identity, with its three dimensions, was added to the list of basic conditioning factors as a sociocultural orientation under the presumption that basic conditioning factors "should be amended whenever a new factor is identified" (Orem, 2001, p. 245). As such, four of the basic conditioning factors (age, income, education, and racial identity) emerged as being statistically correlated with the MRNI-R (38-item). This indicated that these four statistically correlated predictor variables were suitably correlated with the MRNI-R (38-item) for examination through hierarchical multiple regression. The hierarchical multiple regression revealed that age had a negative significant relationship with the MRNI-R (38-item) while racial identity (private regard) had a positive significant relationship.

These findings show that higher scores on the measure of masculinity ideology were associated with African-American/Black men of younger age whereas higher scores on the measure of racial identity (private regard) were associated to higher scores on the MRNI-R (38-item). Therefore, it is concluded that the basic conditioning factors younger age and racial identity (private regard) had a significant influence on masculinity ideology for this study. Although only two basic conditioning factors were found to have a statistically significant relationship with masculinity ideology, the results add support for the affects of basic conditioning factors on self-care agency in previous research on the theory of self-care.

Age

The ages of the participants ranged from 18 to 81 with a mean age of about 43 years. This study suggests that younger age African American/Black men are more likely to have higher levels of masculinity ideology. One possible explanation may be attributed to the attitudes and beliefs of the urban/suburban African-American culture in which this study population dwells. The media portrayal of criminal activity, domestic violence, drug use, and rates of unemployment involving African-American/Black men has contributed to the generalization of the African-American/Black male by the broader society. In light of these adverse situations, younger African American/Black men may feel a crucial need to establish and maintain a sense of pride, dignity and respect. In doing so, they may adopt what has been classified as a "cool pose" in the classic work of Majors & Billson (1992). The cool pose is constructed from attitudes and beliefs that result in actions by African American/Black men to circumvent the idea of having second-class status. Having a cool pose projects competence, high self-esteem, self-control, and inner strength while concealing any air of self doubt, insecurity, or inner turmoil (Majors & Billson, 1992). In the process of developing a sense of "who I am", adopting the cool pose may be viewed as enhancing self-image, self-confidence, self-esteem, and self-awareness in an overall self-concept. As such, the importance of these constructs has the possibility of fluctuating with age thus resulting in one's level of masculinity ideology.

Another consideration for higher levels of masculinity ideology in younger African American/Black men is that masculinity ideology is not a constant. Masculinity ideology may continue to evolve over the life span as a variety of attitudes and beliefs are endorsed to different degrees as a result of life experiences and physical changes over time (Pleck et al., 1994). As men age, their ability to maintain a strong, muscular, and resilient physique diminishes which

may affect self-perceptions and make their masculinity ideology less important (Oliffe, 2006). In addition, there may be more frequent encounters with illness thereby increasing the awareness of one's own morbidity and mortality. As their bodies change and life's experiences increase with age, African-American/Black men may be faced with the challenge of redefining themselves which may have contributed to a readjustment in their levels of masculinity ideology.

Racial Identity

Racial identity was defined for this research as an individual's beliefs or attitudes regarding one's own race and the significance of being a member of a particular racial group (Parham & Helms, 1981; Phinney, 1990). An assessment of racial identity was done by analyzing the three dimensions (centrality, private regard, public regard) of the MIBI. Among the participants, higher scores were noted for centrality and private regard while the scores for public regard remained neutral. Although the results may indicate that race is a core part of the participants' self-concept by way of higher scores for centrality, it had no statistically significant relationship with masculinity ideology.

Public regard. Previous research (Sellers et al., 2006; Yap, Settles, & Pratt-Hyatt, 2011) suggests that the belief that others view African Americans negatively (lower public regard) is associated with higher levels of perceived racial discrimination while those with the belief that others view African Americans positively (higher public regard) is associated with lower levels of perceived racial discrimination. The neutral scores for public regard suggest that African American/Black men in this study did not let the views that others have of African Americans influence the views they have of themselves or of their own racial group.

Centrality. Individuals with higher centrality are more likely to strongly identify with their racial group and may seek out other members of the group through personal relationships or

organizational participation. Identifying with a group may promote a greater sense of belonging and acceptance by other group members (Yap et al., 2011). Centrality has been associated with feelings of group belongingness and such feelings of belongingness have been related to private regard. Thus for this study, higher centrality was associated with greater feelings of group belongingness. Although centrality did not emerge as significant in relation to masculinity ideology, the higher scores may be associated with positive feelings the participants had for their racial group connection and for themselves for having that connection.

Private regard. Higher scores for private regard suggest that the African-American/Black men in this study had a positive feeling about themselves as African-Americans (self-esteem) and about being a member of that group (racial pride). Previous racial identity research has shown that private regard is a dimension of racial identity that is positively related to self-esteem (Rowley, Sellers, Chavous, & Smith, 1998). Furthermore, self-esteem is a construct of masculinity ideology which has been conceptualized as a foundational disposition of self-care agency for this study. Therefore, the positive relationship between private regard and self-esteem and self-esteem's position as a construct of masculinity ideology within the theory of self-care may account for the positive significant correlation between private regard and masculinity ideology. Results from this study suggest that African American/Black men with higher private regard also have higher levels of masculinity ideology.

Self-Care Agency

Self-care agency is defined as "the complex acquired capability to meet one's continuing requirements for care of self that regulates life processes, maintains or promotes integrity of human structure and functioning and human development, and promotes well-being" (Orem, 2001, p. 254). Self-care agency is conditioned by factors that affect its development and

operability, and encompasses the capacity of individuals to learn from life experiences, acquire knowledge of appropriate courses of action, make decisions about what to do, and take action to achieve change. The factors for this study that were found to most likely have some kind of a significant effect on the masculinity ideology component of self-care agency were age and racial identity. More specifically, the basic conditioning factors, age and racial identity (private regard), had a significant relationship with the foundational disposition (masculinity ideology) of self-care agency.

Foundational Dispositions

Foundational dispositions affect goals sought by articulating conditions that affect individuals' willingness to look at themselves and accept the role of self-care agent, to accept that they need a particular self-care measure, or to be able to perform specific self-care measures. The dispositions affecting goals sought includes dispositions that are comparable to constructs that other researchers (Addis & Mahalik, 2003; Majors & Billson, 1992; Roberts-Douglass & Curtis-Boles, 2013) have applied to masculinity ideology as displayed in Table 21. Therefore, it is logical that masculinity ideology fits within the theory of self-care as a foundational disposition of self-care agency.

Table 21. ***Dispositions Affecting Goals Sought and the Constructs of Masculinity Ideology***

Constructs of the dispositions affecting goals sought	**Constructs of masculinity ideology**
Self-image	Self-image
Self-value	Self-confidence
Self-awareness	Self-reliant
Self-concept	Self-esteem

Table 21. ***Dispositions Affecting Goals Sought and the Constructs of Masculinity Ideology***

Constructs of the dispositions affecting goals sought	**Constructs of masculinity ideology**
Self-acceptance	Self-awareness
Self-concern	Values
Self-understanding	Willingness to seek help
Willingness to meet needs of self	

Source: Orem (2001) for constructs of the dispositions of goals sought; Addis & Mahalik (2003); Majors & Billson (1992); Roberts-Douglass & Curtis-Boles (2013) for constructs of masculinity ideology.

Masculinity Ideology

Masculinity ideology is conceptualized as a foundational disposition of self-care agency within the theory of self-care for this study. As a foundational disposition, masculinity ideology is purported to express conditions that affect persons' willingness to look at themselves as self-care agents, to accept themselves as in need of particular self-care measures, or to perform certain self-care measures (Orem, 2001, p. 261). In addition, the development of self-care agency has been noted to depend on learning, adequate instruction, life experiences and time-specific abilities (Orem, 2001).

Because racial identity is derived from a combination of instruction, learning, and life experience, the results of this study add empirical support for the development of self-care agency through the positive significant relationship between racial identity as a basic conditioning factor and masculinity ideology as a foundational disposition of self-care agency. There is also empirical support for the influence of time-specific abilities on self-care agency through the negative significant relationship between age and masculinity ideology. As age increased the level of masculinity ideology decreased. Since individuals tend to acquire

knowledge, wisdom, life experience, and quite often changes in health state as they age, there can be differences in their willingness to look at themselves as self-care agents. They may become more willing to accept themselves as in need of particular self-care measures, or to perform certain self-care measures due to their time-specific mental and/or physical abilities.

Overall, the results of this study offered support for the reliability and validity of the MRNI-R (38-item) scale derived from the principle component factor analysis. This builds on previous research on the theory of self-care (Orem, 2001) by adding a new construct, masculinity ideology, as a foundational disposition of self-care agency. Additionally, this study provides support for the reliability and validity of a measure of masculinity ideology for a population of African American/Black men. The MRNI-R (38-item) scale has 15 fewer items and one less factor than the original MRNI-R (53-item) scale which may indicate that the MRNI-R (38-item) is more specific to the urban/suburban dwelling African American/Black male. With that said, a more specific scale with fewer items can potentially reduce participant burden in future research measuring masculinity ideology along with other variables within the theory of self-care.

Masculinity Ideology and Health Behaviors

Reviews of research have demonstrated that health behaviors are linked to masculinity ideology (Berger, Levant, McMillan, Kelleher, & Sellers, 2005; Courtenay et al., 2002; Levant et al., 2011; Wade, 2008 & 2009). Previous research findings suggest that higher levels of masculinity ideology are associated with a lack of preventive health behaviors, poorer medical compliance, and behaviors that place one's health at risk (Addis & Mahalik, 2003; Courtenay et al., 2002; Levant et al., 2007; Mahalik et al., 2006). However, to the contrary, there are studies that have shown higher levels of masculinity ideology are associated with behaviors that are more conducive to establishing and maintaining health and wellness (Millar & Houska, 2007;

Wade, 2009). This research adds support to the notion that higher levels of masculinity ideology are associated with health behaviors that contribute to one's overall health. Although a statistical analysis of the relationship between masculinity ideology and health behaviors showed a positive significant correlation, there was concern regarding the negative significant relationship between age and masculinity ideology. As age increased the level of masculinity ideology decreased. At first look, this would suggest that younger participants would have higher levels of masculinity thereby associating them with more favorable health behaviors. This contradicts the earlier declaration that aging men become more aware of their own morbidity and mortality prompting them to start or increase the frequency with which they engage in healthy behaviors.

Further analysis involving assessing for the mediating effect of masculinity ideology between age and health behaviors revealed interesting results. One of the paths in the mediation model was negative, which is known as an inconsistent mediation (MacKinnon, Fairchild, & Fritz, 2007). The mediator is acting as a suppressor variable. The mediation model shows that younger participants tend to have higher levels of masculinity ideology and engage in more frequent health behaviors, while older participants also tend to engage in more frequent health behaviors. Therefore, the overall relationship between age and health behaviors may actually be zero.

On the other hand, an assessment of the mediating effect of masculinity ideology between racial identity (private regard) and health behaviors was more promising. Masculinity ideology was found to mediate the relationship between racial identity (private regard) and health behaviors. The amount of variation in the relationship between racial identity (private regard) and health behaviors decreased when masculinity ideology was held constant. This mediation

suggests support for the theory that masculinity ideology is an important factor in predicting health behaviors.

Conclusions

The results of this study provided support for the reliability and validity for the measure of masculinity ideology (MRNI-R, 38-item) for a population of African American/Black men derived from a principle component factor analysis. This was a crucial step in setting the foundation for future research involving masculinity ideology as a potentially alterable attitude/ideology that influences the health behaviors of African American/Black men. Since masculinity ideology has been conceptualized as a foundational disposition, it must be empirically testable. This research has not only provided support for its testability, there is support for the placement of masculinity ideology as a foundational disposition of self-care agency, which is a viable extension of Orem's theory of self-care.

Limitations

Consistent with all research, this study has limitations that have to be acknowledged. Although this study has provided support for the reliability and validity of the MRNI-R (38-item) scale derived from the principle component factor analysis, the measures used to assess the concurrent/convergent (MRAS) and discriminant validity (PAQ-M) had low reliability. This hinders the level of confidence that can be placed with these findings.

Further limitations for this study originate from the sample. Participants were African American/Black men from the Detroit Metropolitan area. African American/Black from different geographical locations may have answered differently as their life experiences may differ. Thus, caution should be used when generalizing these results. The self-report nature of the surveys may include responses that are biased as participants attempted to provide socially desirable

responses. Although the participants appeared to meticulously read and respond to the survey questions, the length of the questionnaires may have caused fatigue for some resulting in automatic responses.

Implications for Nursing Practice

There is a need for the continuous flow of new information so that nurses may experience a consistent growth in the knowledge that will enrich their nursing practice. By building on Orem's widely accepted theory, nurses now have a conceptual model that can be used to examine masculinity ideology as a foundational disposition of self-care agency as it relates to health behaviors. This study has provided new knowledge that will enhance the understanding of the cultural attitudes and beliefs of African American/Black men. Knowledge gained from this research has the potential to guide nurses in the development of new comprehensive assessment tools and nursing plans of care. In regard to masculinity ideology, for men with inadequate self-care behaviors and poor medical compliance, it would be important to assess their reasons for deficiencies. Disclosures of invulnerability, providing for others as a priority, and being strong despite adversity are examples that masculinity ideology may be at levels that are negatively influencing decisions regarding health behaviors. Nursing interventions would involve helping individuals to identify with others with similar conditions who have had favorable outcomes due to meticulous health behaviors. In addition, nurses could help facilitate the re-evaluation of the person's masculinity ideology and promote changes that are conducive to the improvement and maintenance of health.

In reference to racial identity, private regard had a positive significant correlation with masculinity ideology in this study. Higher scores for racial identity were associated with higher scores for masculinity ideology. This suggests that the African American/Black men with higher

levels of masculinity ideology also felt more positive toward African American/Blacks as well as being an African American/Black. With this in mind, it is important for healthcare providers to understand that positive feelings about one's racial group and being a member of that group may strengthen the endorsement of the cultural beliefs and practices of that group. As such, the need for cultural competence on behalf of the healthcare provider is essential. This research provides information that may be helpful to nurses and other healthcare professionals in acquiring knowledge that will enhance their abilities and skills to create ways to help African American/Black men improve and maintain their health by providing care and promoting beneficial health behaviors in a culturally competent way.

Recommendations for Further Research

This study has provided support for the reliability and validity of the MRNI-R (38-item) scale derived from the principle component factor analysis. Additionally, this study provided knowledge of the relationship between the basic conditioning factor, racial identity (private regard), masculinity ideology, and health behaviors. Since a principle component factor analysis was used to investigate the underlying variable structure of the MRNI-R, future research should involve a confirmatory factor analysis of the MRNI-R's (38-item) factor structure. The confirmatory factor analysis is the next step in confirming the factor structure by testing specific hypotheses about the structure that was extracted in the principle component factor analysis.

Prior studies have suggested that men and women differ in their endorsements of masculinity ideology (Levant et al., 2013). In addition, women have been shown to use social control methods such as coercion and persuasion to facilitate changes in the health behaviors of men (Lewis, Butterfield, Darbes, & Johnston-Brooks, 2004). Therefore, future research should involve an assessment of the construct validity of the MRNI-R (38-item) for women. A reliable

and valid instrument that assesses masculinity ideology among women may create opportunities for interventions to improve and maintain the health of men. This could be accomplished by formulating care plans that include a collaborating relationship with the women who have a significant role in men's lives.

To further expand knowledge in regard to the theory of self-care, this study should be duplicated in other geographical regions as well as in those with differences in cultural and ethnic backgrounds, and sexual orientation. Finally, future research should explore the MRNI-R's (38-item) association with measures of self-care and various health conditions in order to assist healthcare providers in allocating the appropriate resources for the promotion and maintenance of health among specific populations.

APPENDIX A

THEORETICAL MODELS

Figure 1. **Theoretical Model of Self-Care at Conceptual Level.** Adapted from "Self-care Deficit Nursing Theory," by D. E. Orem, 2001, *Nursing: Concepts of practice*, p.255. Copyright 2001 by Mosby, Inc.

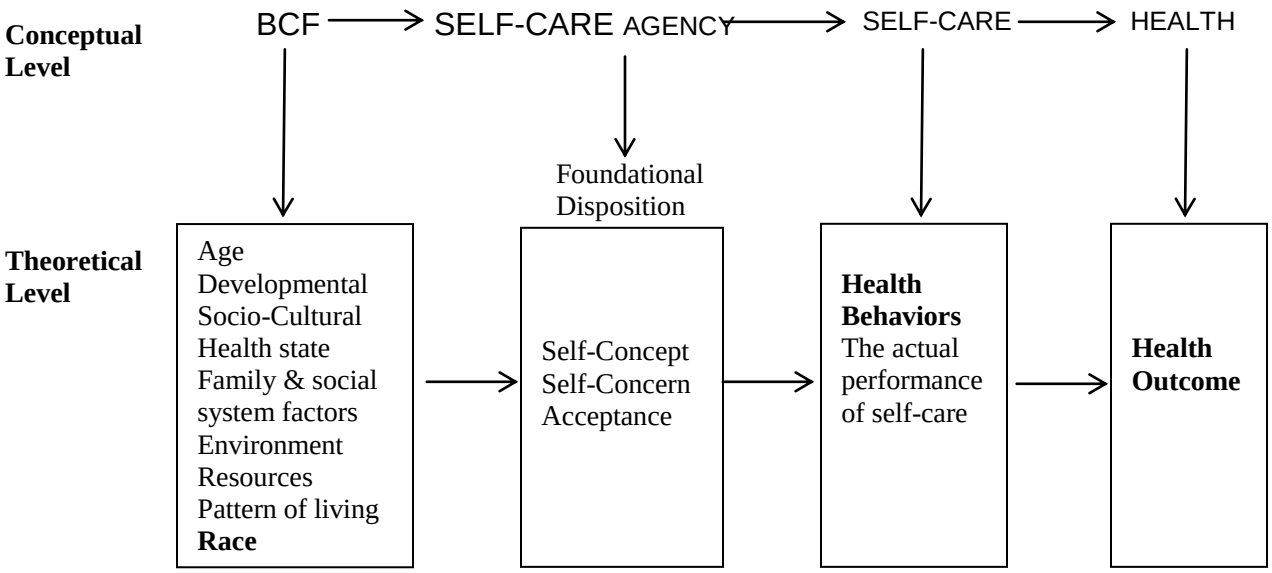


Figure 2. **Proposed Theoretical Model at Conceptual Level and Theoretical Level.** Adapted from "Self-care Deficit Nursing Theory," by D. E. Orem, 2001, *Nursing concepts of practice*, p. 255. Copyright 2001, Mosby. Inc.

APPENDIX B

THEORETICAL MODEL

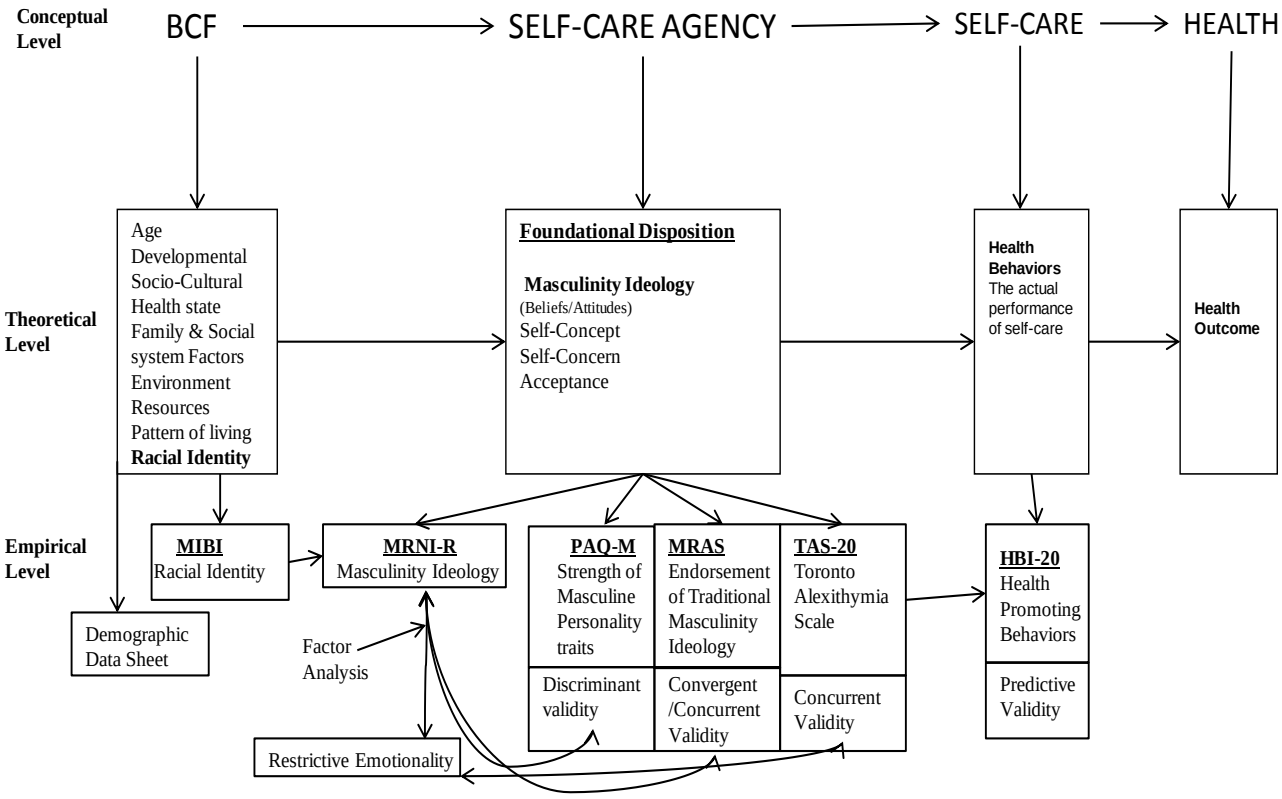


Figure 3. Proposed Theoretical Model at Conceptual Level and Theoretical Level Adapted from "Self-care Deficit Nursing Theory," by D. E. Orem, 2001, Nursing: Concepts of Practice, p.255 Copyright 2001 by Mosby, Inc.

APPENDIX C

DEMOGRAPHIC INFORMATION QUESTIONAIRE

Directions: Please circle the letter on the questionnaire that corresponds to your response to each question. Write in your response when appropriate.

1. Sex
   1 Female
   2 Male

2. What is your birth date? _____ What is your age today? _____

Note: Please answer BOTH Question 3 about Hispanic origin and Question 4 about race. For this census, Hispanic origins are not races.

3. Are you of Hispanic origin?
   1 No, not of Hispanic, Latino, or Spanish origin
   2 Yes, Mexican, Mexican Am., Chicano
   3 Yes, Puerto Rican
   4 Yes, Cuban
   5 Yes, another Hispanic, Latino, or Spanish origin (print origin—example: Argentinean, Columbian, Dominican, Nicaraguan, Salvadoran, Spaniard, etc.).

4. What is your racial origin?
   1 White
   2 African American/Black
   3 American Indian or Alaska Native
   4 Chinese
   5 Filipino
   6 Some other race (print race) _____

5. Was raced ever discussed in your home?
   1 Yes
   2 No

6. What is your present relationship status?
   1 Single, never married
   2 Single but in committed relationship
   3 Married
   4 Widowed
   5 Divorced
   6 Separated

7. I was raised by:
   1 Both parents
   2 Mother
   3 Father

8. My parents were:
   1 Married
   2 Divorced
   3 Separated
   4 Never lived together

9. What is the highest grade of education that you have completed? (Circle one)

Grade School	High School	College	Graduate School
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:

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

Congestive heart failure	1 No	2 Yes
Heart attack	1 No	2 Yes
Other heart problems	1 No	2 Yes
Stroke	1 No	2 Yes
Other vascular (vein) disease	1 No	2 Yes
Lung disease	1 No	2 Yes
Kidney disease	1 No	2 Yes
Diabetes (high sugar)	1 No	2 Yes
Severe Eye problems	1 No	2 Yes
Depression	1 No	2 Yes
Alcohol or drug problems	1 No	2 Yes
Other health problems	1 No	2 Yes

11. How would you best describe your most important health care provider or doctor?
    1. African American
    2. Caucasian
    3. Asian
    4. Indian
    5. Other Please specify _____
    6. Not applicable – I do not have a doctor currently.

12. Do you currently have health insurance?

    1. No
    2. Yes If yes, please circle or list type of insurance
        a. HMO
        b. Medicare
        c. Medicaid
        d. Medicaid HMO
        e. Blue Cross/Blue Shield
        f. Other _____

13. Having a doctor or nurse practitioner who shares my own cultural background is important to me.
    1. Strongly Agree
    2. Agree
    3. Disagree
    4. Strongly Disagree

14. I am more likely to trust the advice I receive if the doctor or nurse practitioner is from the same cultural background as I am.
    1. Strongly Agree
    2. Agree
    3. Disagree
    4. Strongly Disagree

15. Considering all the things that you do, how would you rate your health compared with other people your age?
    1 I am much less healthy
    2 I am somewhat less healthy
    3 I am about the same
    4 I am somewhat more healthy
    5 I am much more healthy

16. How many times a week do you engage in 30 minutes or more of any regular activity similar to brisk walking, jogging, aerobics, etc.?
    1 None
    2 Occasionally (1 to 2 days)
    3 Some (3 to 4 days)
    4 Often (5 or more days)

17. 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

18. 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

19. How many cigarettes do you currently smoke each day?
    (Write zero if you do not smoke.) _____

20. On a scale of 1 to 10 how much stress do you usually have on a daily basis?
    (1 = no stress - 10 = a great deal of stress) _____

21. What is your current work status?
    1 full time
    2 part time
    3 unemployed (temporary or permanent lay off)
    4 permanently disabled
    5 retired

22. How would you describe the type of work you do (what you do now, or what you did if you are retired or laid off, e.g., secretary, manager, factory worker, laborer)

    _____

23. In which of the following categories does the annual income of your family fall (before taxes)?
    1 Less than $1,000
    2 $1,000 to $4,999
    3 $5,000 to $9,999
    4 $10,000 to $14,999
    5 $15,000 to $24,999
    6 $25,000 to $49,999
    7 $50,000 to more

24. Are your monies and/or investments sufficient to meet medical and household expenses?
    1 Cannot meet my bills
    2 Can barely meet my bills
    3 Bills are no problem

25. How well do you think that you are doing financially as compared to other people your age?
    1 Better
    2 About the same
    3 Worse

26. How well does the amount of money you make take care of your needs?
    1 Very well
    2 Fairly well
    3 Poorly

APPENDIX D

ID____

Rapid Estimate of Adult Literacy in Medicine - Short Form

Instructions for Administering the REALM-SF

1. Give the participant a laminated copy of the REALM-SF form and score answers on an unlaminated copy that is attached to a clipboard. Hold the clipboard at an angle so that the participant is not distracted by your scoring. Say:

> " I want to hear you read as many words as you can from this list. Begin with the first word and read aloud. When you come to a word you cannot read, do the best you can or say, 'blank' and go on to the next word."

2. If the participant takes more than 5 seconds on a word, say "blank" and point to the next word, if necessary, to move the participant along. If the participant begins to miss every word, have him or her pronounce only known words.

Menopause	☐
Antibiotics	☐
Exercise	☐
Jaundice	☐
Rectal	☐
Anemia	☐
Behavior	☐

- Score:
  - 0 – 3 ≤ 6th grade
  - 4 – 6 7-8th grade
  - 7 ≥ 9th grade

Reading Level_____

APPENDIX E

ID_____

Male Role Norms Inventory-Revised

INSTRUCTIONS: The items listed below refer to the roles of men in our society. Please use the scale below to indicate the extent to which you personally agree or disagree with each statement. Complete the questionnaire by circling the number which indicates your level of agreement or disagreement with each statement. There is no right or wrong response. We would like this questionnaire to remain anonymous, so please do not put your name on the questionnaire.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

1.	Homosexuals should never marry	1	2	3	4	5	6	7
2.	The President of the U.S. should always be a man	1	2	3	4	5	6	7
3.	Men should be the leader in any group	1	2	3	4	5	6	7
4.	A man should be able to perform his job even if he is physically hurt	1	2	3	4	5	6	7
5.	Men should not talk with a lisp because this is a sign of being gay	1	2	3	4	5	6	7
6.	Men should not wear makeup, cover-up, or bronzer	1	2	3	4	5	6	7
7.	Men should watch football games instead of soap operas	1	2	3	4	5	6	7
8.	All homosexual bars should be closed down	1	2	3	4	5	6	7
9.	Men should not be interested in talk shows such as "Oprah"	1	2	3	4	5	6	7
10.	Men should excel in contact sports	1	2	3	4	5	6	7
11.	Boys should play with action figures not dolls	1	2	3	4	5	6	7
12.	Men should not borrow money from friends or family members	1	2	3	4	5	6	7

ID_____

Male Role Norms Inventory-Revised

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

13.	Men should have home improvement skills.	1	2	3	4	5	6	7
14.	Men should be able to fix most things around the house.	1	2	3	4	5	6	7
15.	A man should prefer watching action movies to reading romantic novels.	1	2	3	4	5	6	7
16.	Men should always like to have sex	1	2	3	4	5	6	7
17.	Homosexuals should not be allowed to serve in the military	1	2	3	4	5	6	7
18.	Men should never compliment or flirt with another male	1	2	3	4	5	6	7
19.	Boys should prefer to play with trucks rather than dolls	1	2	3	4	5	6	7
20.	A man should not turn down sex	1	2	3	4	5	6	7
21.	A man should always be the boss	1	2	3	4	5	6	7
22.	A man should provide the discipline in the family	1	2	3	4	5	6	7
23.	Men should never hold hands or show affection toward another	1	2	3	4	5	6	7
24.	It is ok for a man to use any and all means to "convince" a woman to have sex	1	2	3	4	5	6	7
25.	Homosexuals should never kiss in public	1	2	3	4	5	6	7
26.	A man should avoid holding his wife's purse at all times	1	2	3	4	5	6	7

ID_____

Male Role Norms Inventory-Revised

	1 Strongly Disagree	2 Disagree	3 Slightly Disagree	4 Neutral or Undecided	5 Slightly Agree	6 Agree	7 Strongly Agree				
27.	A man must be able to make his own way in the world				1	2	3	4	5	6	7
28.	Men should always take the initiative when it comes to sex				1	2	3	4	5	6	7
29.	A man should never count on someone else to the job done				1	2	3	4	5	6	7
30.	Boys should not throw baseballs like girls				1	2	3	4	5	6	7
31.	A man should not react when other people cry				1	2	3	4	5	6	7
32.	A man should not continue a friendship with another man if he finds out that the other man is homosexual				1	2	3	4	5	6	7
33.	Being a little down in the dumps is not a good reason for a man to act depressed				1	2	3	4	5	6	7
34.	If another man flirts with women accompanying a man, this is a serious provocation and the man should respond with aggression				1	2	3	4	5	6	7
35.	Boys should be encouraged to find a means of demonstrating physical prowess				1	2	3	4	5	6	7
36.	A man should know how to repair his car if it should break down				1	2	3	4	5	6	7
37.	Homosexuals should be barred from the teaching profession				1	2	3	4	5	6	7
38.	A man should never admit when others hurt his feelings				1	2	3	4	5	6	7
39.	Men should get up to investigate if there is a strange noise in the house at night				1	2	3	4	5	6	7
40.	A man shouldn't bother with sex unless he can achieve orgasm				1	2	3	4	5	6	7

ID_____

Male Role Norms Inventory-Revised

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

41.	Men should be detached in emotionally charged situations.	1	2	3	4	5	6	7
42.	It is important for a man to take risks, even if he might get hurt.	1	2	3	4	5	6	7
43.	A man should always be ready for sex.	1	2	3	4	5	6	7
44.	A man should always be the major provider in his family.	1	2	3	4	5	6	7
45.	When the going gets tough, men should get tough.	1	2	3	4	5	6	7
46.	I might find it a little silly or embarrassing if a male friend of mine cried over a sad love story.	1	2	3	4	5	6	7
47.	Fathers should teach their sons to mask fear.	1	2	3	4	5	6	7
48.	I think a young man should try to be physically tough, even if he's not big	1	2	3	4	5	6	7
49.	In a group, it is up to the men to get things organized and moving ahead	1	2	3	4	5	6	7
50.	One should not be able to tell how a man is feeling by looking at his face	1	2	3	4	5	6	7
51.	Men should make the final decision involving money	1	2	3	4	5	6	7
52.	It is disappointing to learn that a famous athlete is gay	1	2	3	4	5	6	7
53.	Men should not be too quick to tell others that they care about them	1	2	3	4	5	6	7

APPENDIX F

ID_____

The Male Role Attitudes Scale

INSTRUCTIONS: The items listed below refer to the attitudes toward the roles of men in our society. Please use the scale below to indicate the extent to which you personally agree or disagree with each statement. Complete the questionnaire by circling the number which indicates your level of agreement or disagreement with each statement. There is no right or wrong response. We would like this questionnaire to remain anonymous, so please do not put your name on the questionnaire.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

1.	It is essential for a guy to get respect from others.	1	2	3	4
2.	A man always deserves the respect of his wife and children	1	2	3	4
3.	I admire a guy who is totally sure of himself.	1	2	3	4
4.	A guy will lose respect if he talks about his problems	1	2	3	4
5.	A young man should be physically tough, even if he is not big.	1	2	3	4
6.	It bothers me when a guy acts like a girl.	1	2	3	4
7.	I don't think a husband should have to do housework.	1	2	3	4
8.	Men are always ready for sex.	1	2	3	4

APPENDIX G

ID_____

Personal Attributes Questionnaire-Masculinity

Instructions: The items below inquire about what kind of person you think you are. Each item consists of a PAIR of characteristics, with the letters A-E in between. For example:

Not at all artistic A.....B.....C.....D.....E Very artistic

Each pair describes contradictory characteristics – that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where YOU fall on the scale. For example, if you think that you have no artistic ability, you would choose A. If you think that you are pretty good, you might choose D. If you think you are only medium, you might choose C, and so forth.

1.	Not at all independent	A	B	C	D	E	Very independent
2.	Very passive	A	B	C	D	E	Very active
3.	Not at all competitive	A	B	C	D	E	Very competitive
4.	Can make decisions easily	A	B	C	D	E	Has difficulty making decisions
5.	Gives up very easily	A	B	C	D	E	Never gives up easily
6.	Not at all self-confident	A	B	C	D	E	Very self-confident
7.	Feels very inferior	A	B	C	D	E	Feels very superior
8.	Goes to pieces under pressure	A	B	C	D	E	Stands up well under pressure

APPENDIX H

ID_____

TORONTO ALEXITHYMIA SCALE

INSTRUCTIONS: Using the scale provided as a guide indicate how much you agree or disagree with each of the following statements by circling the appropriate number. Give only one answer for each statement: (1)Strongly Disagree, (2) Moderately Disagree, (3) Neither Disagree nor Agree, (4) Moderately Agree, (5)Strongly Agree.

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree

1.	I am often confused about what emotion I am feeling.	1	2	3	4	5
2.	It is difficult for me to find the right words for my feelings.	1	2	3	4	5
3.	I have physical sensations that even doctors do not understand.	1	2	3	4	5
4.	I am able to describe my feelings easily.	1	2	3	4	5
5.	I prefer to analyze problems rather than just describe them.	1	2	3	4	5
6.	When I am upset, I do not know if I am sad, frightened or angry.	1	2	3	4	5
7.	I am often puzzled by sensations in my body.	1	2	3	4	5
8.	I prefer to just let things happen rather than to understand why they turn out that way.	1	2	3	4	5
9.	I have feelings that I cannot quite identify.	1	2	3	4	5
10.	Being in touch with emotions is essential.	1	2	3	4	5
11.	I find it hard to describe how I feel about people.	1	2	3	4	5
12.	People tell me to describe my feelings more.	1	2	3	4	5

ID_____

TORONTO ALEXITHYMIA SCALE

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither Disagree Nor Agree	Moderately Agree	Strongly Agree

13.	I do not know what is going on inside me.	1	2	3	4	5
14.	I often do not know why I am angry.	1	2	3	4	5
15.	I prefer talking to people about their daily activities rather than their feelings.	1	2	3	4	5
16.	I prefer to watch "light" entertainment shows rather than psychological dramas.	1	2	3	4	5
17.	It is difficult for me to reveal my innermost feelings, even to close friends.	1	2	3	4	5
18.	I can feel close to someone, even in moments of silence.	1	2	3	4	5
19.	I find examination of my feelings useful in solving personal problems.	1	2	3	4	5
20.	Looking for hidden meanings in movies or plays distracts from their enjoyment.	1	2	3	4	5

APPENDIX I

ID_____

Health Behavior Inventory - 20

INSTRUCTIONS: The items listed below refer to the roles of men in our society. Please use the scale below to indicate the extent to which you personally agree or disagree with each statement. Complete the questionnaire by circling the number which indicates your level of agreement or disagreement with each statement. There is no right or wrong response. We would like this questionnaire to remain anonymous, so please do not put your name on the questionnaire.

1	2	3	4	5	6	7
Always						Never

1.	I avoid chips and fried foods.	1	2	3	4	5	6	7
2.	I limit the amount of red meat I eat.	1	2	3	4	5	6	7
3.	I limit the amount of fat I eat.	1	2	3	4	5	6	7
4.	I limit the amount of salt I eat	1	2	3	4	5	6	7
5.	I avoid eating large amounts of sugar.	1	2	3	4	5	6	7
6.	I get angry and annoyed when I am caught in traffic.	1	2	3	4	5	6	7
7.	I get irritated and mad when waiting in lines.	1	2	3	4	5	6	7
8.	Things build up inside until I lose my temper.	1	2	3	4	5	6	7
9.	I conduct a breast or testicular self-exam every month.	1	2	3	4	5	6	7
10.	I check my skin for unusual spots or coloring every few months.	1	2	3	4	5	6	7
11.	I have physical exams every year.	1	2	3	4	5	6	7
12.	I have dental exams every year.	1	2	3	4	5	6	7

ID_____

Health Behavior Inventory - 20

	1 Always	2	3	4	5	6	7 Never
13.	I get my blood pressure checked every year.	1	2	3	4	5	6	7
14.	I go to all my scheduled health care appointments.	1	2	3	4	5	6	7
15.	I consult a health care provider right away when I have unfamiliar physical symptoms.	1	2	3	4	5	6	7
16.	I take prescription medication only as directed by a health care provider.	1	2	3	4	5	6	7
17.	I fill my medicine prescriptions immediately	1	2	3	4	5	6	7
18.	I use tobacco products.	1	2	3	4	5	6	7
19.	I drink more than 2 alcoholic drinks per day.	1	2	3	4	5	6	7
20.	I use recreational drugs.	1	2	3	4	5	6	7

APPENDIX J

ID_____

Multidimensional Inventory of Black Identity

INSTRUCTIONS: Using the scale below as a guide, assign a value to each statement based on your opinions, beliefs, and attitudes. There is no right or wrong answer.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	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.	I feel good about Black people.	1	2	3	4	5	6	7
3.	Overall, Blacks are considered good by others.	1	2	3	4	5	6	7
4.	In general, being Black is an important part of my self-image.	1	2	3	4	5	6	7
5.	I am happy that I am Black	1	2	3	4	5	6	7
6.	I feel that Blacks have made major accomplishments and advancements.	1	2	3	4	5	6	7
7.	My destiny is tied to the destiny of other Black people.	1	2	3	4	5	6	7
8.	Being Black is unimportant to my sense of what kind of person I am.	1	2	3	4	5	6	7
9.	In general, others respect Black people.	1	2	3	4	5	6	7
10.	Most people consider Blacks, on average, to be more ineffective than other racial groups.	1	2	3	4	5	6	7
11.	I have a strong sense of belonging to Black people.	1	2	3	4	5	6	7
12.	I often regret that I am Black.	1	2	3	4	5	6	7

ID_____

Multidimensional Inventory of Black Identity

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

13.	I have a strong attachment to other Black people.	1	2	3	4	5	6	7
14.	Being Black is an important reflection of who I am.	1	2	3	4	5	6	7
15.	Being Black is not a major factor in my social relationships..	1	2	3	4	5	6	7
16.	Blacks are not respected by the broader society	1	2	3	4	5	6	7
17.	In general, other groups view Blacks in a positive manner.	1	2	3	4	5	6	7
18.	I am proud to be Black.	1	2	3	4	5	6	7
19.	I feel that the Black community has made valuable contributions to this society.	1	2	3	4	5	6	7
20.	Society views Black people as an asset.	1	2	3	4	5	6	7

APPENDIX K

Ronald F. Levant
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330-972-5174 (Fax)

Omnibus Permission Form for the Male Role Norms Inventory-Revised (MRNI-R), Male Role Norms Inventory-Adolescent (MRNI-A), Femininity Ideology Scale (FIS), Health Behavior Inventory-20 (HBI-20), Women's Non-Traditional Sexuality Questionnaire (WNSQ)

Name:	**Wilfred Allen**
Address:	**5557 Cass Avenue, Suite 113**
City, State, Zip	**Detroit, Michigan 48202**
Email Address	**ar7321@wayne.edu**
Phone:	
Fax:	

1. Which instrument do you plan to administer (check one)?

	MRNI-SF
X	MRNI-R
	MRNI-A
	FIS
X	HBI-20
	WNSQ

2. Please briefly describe your research project (use reverse side if necessary).

The primary purposes of my study are to: 1. assess the factor structure of the MRNI-R using exploratory factor analysis, 2. to assess its reliability using Cronbach's alpha, and 3. construct validity using Pearson's r correlation for convergent and concurrent validity among a diverse sample of African American men. In addition, correlations between racial identity, traditional masculinity ideology, and health behaviors will be explored.

3. How many participants will complete the instrument? 200

4. If this is a master's thesis or doctoral dissertation, who is supervising the research (please provide faculty member's name address, phone number, and email address):

Name	Dr. Feleta Wilson PhD, RN, FAAN
Address:	5557 Cass Ave, Suite 354
City, State, Zip	Detroit, Michigan 48202
Email Address	feleta.wilson@wayne.edu
Phone:	(313) 577-2915
Fax:	(313) 577-5574

I agree to send the results to Dr. Ronald Levant to be included in any future reviews on his instruments. This
means sending me copies of the thesis, dissertation, convention presentation, and submitted or published
journal article that describes the research's rationale, methods, results, and discussion.

Signature: Mulfred Allen Date: 1/13/14

Retain one copy of this form, and return one to Ronald Levant at the address on page one.

APPENDIX L

Wayne Connect **ar7321@wayne.edu**

RE: Omnibus Permission

From : Ronald F Levant <levant@uakron.edu> Tue, Jan 14, 2014 06:11 AM
Subject : RE: Omnibus Permission 3 attachments
To : Wilfred Michael Allen <ar7321@wayne.edu>
Cc : Feleta Louise Wilson <aa3107@wayne.edu>

Hello Wilfred: Thank you for sending your permission for the use of the MRNI-R and HBI-20. Your permission is granted. I have attached the instruments and all of the information that you will need. Good luck on your project!
Sincerely,
Ron Levant

Ronald F. Levant, Ed.D., A.B.P.P.
Professor, Collaborative Program in Counseling Psychology
The University of Akron
Akron, OH 44325-4301
Phone: 330-972-5496
Fax: 330-972-5174
Web: DrRonaldLevant.com

-----Original Message-----
From: Wilfred Michael Allen [mailto:ar7321@wayne.edu]
Sent: Monday, January 13, 2014 8:29 PM
To: Levant,Ronald F
Cc: Feleta Louise Wilson
Subject: re: Omnibus Permission

Hello Dr. Levant,
My name is Wilfred Allen, a PhD candidate in the college of nursing at Wayne State University in Detroit Michigan. As a nurse practitioner I have been working with a population of African American men for the past several years. I believe that your work with masculinity would provide new perspectives for future developments in the plans of care. Attached is the omnibus permission form requesting the use of your instruments for my dissertation which will be the beginning step toward future research involving masculinity ideology and health

behaviors. Thank you in advance for considering this request.

Wilfred Allen ANP-BC
Wayne State University
5557 Cass Avenue, Suite 113
Detroit, Michigan 48202
Cell Phone: (586)854-2508

MRNI-R.doc
44 KB

MRNI-R scoring (2).doc
25 KB

HBI-20 scale and scoring directions.doc
37 KB

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ABSTRACT

AN EVALUATION OF THE FACTOR STRUCTURE, RELIABILITY AND CONSTRUCT VALIDITY OF THE MALE ROLE NORMS INVENTORY-REVISED FOR AFRICAN AMERICAN/BLACK MEN

by

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May 2015

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Background: In the United States, on average, men die nearly five years younger than women. Among men, the life expectancy for African American/Blacks is 72.1 years compared to 76.6 years for White/European Americans. African-American/Black men experience an earlier onset and more severe disease with higher rates of complications than White/European American men. Masculinity ideology has been identified by researchers as having an influence on health behaviors and ultimately health outcomes. Based on prior research literature, higher levels of masculinity ideology have been associated with fewer health promoting behaviors. As such, there is a need for a reliable and valid measure of masculinity ideology for African American/Black men. This would allow researchers to assess which aspects of masculinity ideology most influence their health behaviors.

Purpose: The primary purposes of this study were to: 1). assess the factor structure of the MRNI-R, 2). to assess the reliability of the MRNI-R, and 3). to assess the construct validity of the MRNI-R for a sample of African American/Black men.

Methods: A non-experimental, correlational research design was used for this study. Data was collected from a convenience sample of 300 men age 18 to 81 who self-identified as African

American/Black, living in the Detroit metropolitan area, and able to read/write English at a seventh grade level. Participants completed a questionnaire packet which they returned upon completion. Descriptive analysis, principle component factor analysis, Cronbach's alpha, Pearson's r correlations, and multiple regression analysis were performed.

Results: Results for this study revealed a factor structure that is different from the original MRNI-R. Six factors were identified instead of seven. Two of the factors (Self-Reliance Through Mechanical Skills and Negativity Towards Sexual Minorities) have been renamed to more adequately reflect the language used within the instrument. A new factor emerged and was named Machismo to reflect a strong sense of masculine pride. The Importance of Sex and Toughness did not come forward as factors in this study and therefore were eliminated. The results of this study provided support for the reliability and validity for a measure of masculinity ideology (MRNI-R; 38-item) for a population of African American/Black men.

Conclusion: This study provides new knowledge that will enhance the understanding of cultural differences among men. In addition, the knowledge gained from this research has the potential to guide nurses in the development of new comprehensive assessment tools and nursing plans of care with scientific evidence. The knowledge gained from this research will also help facilitate the development and implementation of theoretically based nursing interventions that focus on the promotion of health and self-care behaviors for African American/Black men.

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