Examining the Frequency of Religious Practices among Hypertensive and Non-Hypertensive Black Men

Antonius D. Skipper, PhD
Assistant Professor, Gerontology Institute
Georgia State University
One Park Place, Suite 605
Atlanta, GA
Tel: (404) 413-5147
Email: askipper1@gsu.edu

Tangela Towns, PhD
Associate Professor, Department of Behavioral Sciences
Winston-Salem State University
Coltrane Hall
Winston-Salem, NC
Tel: (336) 750-8802
Email: townsta@wssu.edu

Richard G. Moye, PhD
Associate Professor, Department of Behavioral Sciences
Winston-Salem State University
Coltrane Hall
Winston-Salem, NC
Tel: (336) 750-8811
Email: moyerg@wssu.edu

Daniel Rose, PhD
Assistant Professor, Department of Behavioral Sciences
Winston-Salem State University
Coltrane Hall
Winston-Salem, NC
Tel: (336) 750-2807
Email: rosed@wssu.edu

Authors' Note

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Abstract

Although Black men in the United States face high rates of hypertension, the nexus of health and religion remain understudied for this population. The present study analyzes religious variables, such as prayer, Bible reading, and religious meditation, to describe the frequency of these practices among hypertensive and non-hypertensive Black men. This study utilizes data from the Midlife in the United States (MIDUS) 3 – Milwaukee African American Sample series, with 135 Black men (51.1% stating that they had experienced hypertension in the past 12 months). Findings suggest that Black men with a diagnosis of hypertension were significantly more likely to report that they prayed and read religious literature more often than their non-hypertensive counterparts. The results of the present study demonstrate key religious practices that hypertensive Black men might use as a potential coping response to their health condition.

Keywords: religion; religious coping; hypertension; blood pressure; Black; African American

Introduction

Approximately 31% of adults across the world live with a diagnosis of hypertension (Mills et al., 2016). In the United States, 33% report being diagnosed with hypertension and in need of antihypertensive medications (Cuevas et al., 2017). However, the load of the illness is disproportionately distributed, as those identifying as Black or African American are significantly more likely to be hypertensive in comparison with their White counterparts (Lackland, 2014). Hypertension within the Black community contributes to lower life expectancy, a two-fold higher risk of stroke, and a risk of chronic kidney disease that is five times higher than Whites (Carnethon et al., 2017; Lackland, 2014; Lackland et al., 1998). In addition, hypertensive Blacks experience an earlier onset of hypertension and generally encounter more severe symptoms of the illness (Ford, 2011; Lackland et al., 1998).

Black American men are particularly affected by hypertension in several ways. For instance, Black men report high levels of stress from both overt and institutional racism, and multiple studies identify a relationship between perceived racism, racial discrimination, and high blood pressure (Bonilla-Silva, 2010; Davis et al., 2005; Krieger & Sidney, 1996). In addition, in comparison with Black women, Black men are more likely to be diagnosed after their hypertension has been uncontrolled for a longer period, and they often have greater difficulty adhering to medications and lowering their blood pressure (James et al., 2006). Given these unique findings, coupled with the significant dearth of research on the health of Black men, the need to understand the experiences of hypertensive Black men is crucial. As several bodies of literature suggest, religion might play a role in how Black men respond to disease and morbidity (Koenig et al., 2012; Namageyo-Funa et al., 2015).

Religion is an important aspect of life for most Americans, in general, and Black Americans, particularly. A Pew Research Center survey suggests that over 80% of Black Americans hold an absolute belief in God, with over 70% self-reporting that they pray daily (Pew Research Center, 2014). The high levels of religious beliefs and practices in Black communities serve to reduce the negative outcomes of several stressors, including those that are

health-related (Bell et al., 2010; Gregg, 2010; Koenig et al., 2012). In fact, religion for many Blacks is a mechanism for coping with the present, rather than preparing for afterlife (Cicirelli, 2002). Given the salience of religiosity in the lives of Black Americans, along with the higher rates of mortality from hypertensive-related illnesses (Lackland et al., 1998), understanding the religious practices and potential coping behaviors of this population is particularly important. Further, the underrepresentation of Black men in studies of religion and health justify the emphasis of the present study.

The present study examines the frequency of religious practices among Black American men from the Midlife in the United States (MIDUS) 3 – Milwaukee African American sample. Furthermore, this study compares the religious practices of hypertensive Black men, who might be more inclined to look toward religion for comfort due to their illness, to non-hypertensive Black men. With the majority of research on religion in Blacks focused on simplistic measures of religiosity – typically denomination or church attendance – the need to understand how and in what situations Blacks use religion persists (Taylor et al., 2004). Further, this understanding in relation to the health status of Black men can inform faith-based interventions and help medical professionals to reach one of the most religious/spiritual groups in the United States.

In the section that follows, the study of Black male hypertension and religious practices is placed within the empirical literature. The review section begins by highlighting those studies that discuss the findings and implications of hypertension for Black men. Next, the literature that explores religious practices and coping, in general, and religious practices and coping for Black Americans, specifically, is reviewed. The discussion then shifts to the present study addressing the need to better understand the religious practices of Black American men, both with and without a diagnosis of hypertension.

Hypertension in Black Men

In relation to other racial/ethnic groups, Black men suffer higher rates of morbidity and mortality because of uncontrolled hypertension, especially before the age of 65 (Douglas et al., 2003). While strides have been made in the overall management of hypertension in the U.S., Black men benefit the least of any group in relation to blood pressure control (Ford, 2011). In addition, Black men are among the least likely to regularly visit a physician and, as a result, often lack early diagnosis and preventive care (Victor et al., 2008). Given these findings, several studies vital to the present study discuss the contributors to, and implications of, a hypertensive diagnosis for Black men.

Black men are disproportionately affected by several stressors and life situations that can negatively affect their health. These stressors include incarceration, unemployment, sporadic employment, financial strain, and discrimination (Bonilla-Silva, 2010; Reiman & Leighton, 2015; Williams et al., 2019). For many Black men, responses to societal hardships include active coping strategies that can be detrimental to one's health. John Henryism is recognized as an active coping strategy driven by an "individual's self-perception that [they] can meet the

demands of [their] environment through hard work and determination" (James et al., 1983). The practice of John Henryism, named after the legend of a Black man that worked faster than a mechanical steam drill before dying as a result of his hard work, has been linked to the increased risk of hypertension for many Black men. In a study of 112 Black men in rural North Carolina, James et al. found that John Henryism and the belief that one had to work significantly harder than others contributed to significantly higher blood pressure readings (1984). Similarly, other researchers found that, for Black men, John Henryism modified the positive relationship between high status jobs and hypertension and exacerbated the negative relationship between low socioeconomic status and hypertension (Light et al., 1995; Subramanyam et al., 2013). Given these findings, the active coping response of working harder to counter racial inequities could be more harmful than beneficial for Black men, and other coping strategies might be preferred.

With the racial disparity of hypertension and the increasing prevalence of childhood obesity, researchers have worked to understand the effect of hypertension across the life course of Black men. In a nationally representative sample of adolescents aged 8 to 17 years, Muntner et al. (2004) found that systolic blood pressure averaged 2.9 mm Hg higher among Black Americans, in comparison to White Americans. Similarly, in a study of 105 Black adolescents, ages 12 to 19, findings reveal that males with a body mass index (BMI) classification of overweight or obese had a diastolic blood pressure that was 4.2 mm Hg higher than their non-overweight peers (Bruce et al., 2015). Health issues affecting Black males often begin to form prior to adulthood and require a life course approach (Thorpe & Kelly-Moore, 2013). Therefore, there is a need to examine life course responses to hypertension to understand the practices, including those that are religious, that Black men employ to cope with an illness.

Religious Practices and Coping

Religious practices come in many forms and are used for many purposes, including praise, forgiveness, thanksgiving, and a search for meaning. Often, for those facing stress or health concerns, religion is a frequent form of coping that allows individuals to maintain a perception of control over their current circumstances (Koenig et al., 2012). Religious practices can serve to defer control to a higher power, work in collaboration with a higher power, or instruct a higher power that divine intervention is not needed (Pargament, 1997). Among Black Americans, religion is one of the more commonly relied upon forms of coping (Koenig et al., 2012; Pargament et al., 2000).

Cicirelli suggests that the religious practices of Black Americans are frequently in response to coping with situations of the present, rather than in preparation for the afterlife (Cicirelli, 2002). In a study of 221 undergraduate students, Chapman and Steger found that Black respondents were more likely to utilize positive forms of religious coping and less likely to demonstrate symptoms of anxiety, in comparison with their White counterparts (Chapman & Steger, 2010). Similarly, mixed method studies find that religious beliefs and practices can protect against depression, mood disorders, and psychological distress for Black Americans (Chatters et al., 2008; Lincoln & Chatters, 2003; Odom & Vernon-Feagans, 2010). In contrast,

both Franzini et al. and Sternthal et al. find that despite higher rates of private religious practices and church attendance, Blacks might exhibit more symptoms of depression and anxiety than other racial and ethnic groups (Franzini et al., 2005; Sternthal et al., 2012).

Numerous researchers explore the religious practices and health related-outcomes of Black men and women and, in particular, the relationship between religious attendance and mortality. In a nationally representative study of over 20,000 U.S. citizens, researchers found that Blacks attending religious services more than once per week lived an average of nearly 14-years longer than those that did not attend religious services at all (Hummer et al., 1999). A more recent study, including 1,466 middle-aged Blacks, found that church attendance – particularly more than once per week – was significantly related to a reduced risk of mortality (Bruce et al., 2015). While these findings suggest that religious involvement can be especially beneficial for minority groups with a high risk of premature death, there remains a need to understand the nuances of religiosity in relation to the health of Black Americans. With the combined overuse of church attendance as a religious variable and the underrepresentation of Black men in religious-based research, researchers need to understand the "relationships between other religious measures and health related outcomes in Black men" (Ai et al, 2002).

Guiding Framework

The suppressor model of religiousness helps to ground the present study and hypotheses. Originally designed to examine the role between religion and the stress of Black Americans, the suppressor model posits that one's level of religiosity, or religious practices, are a function of the stress in their lives. Within this framework, the model recognizes that heightened levels of religiosity among Black Americans are the result of disproportionate experiences with stress and hardship (e.g., health issues, financial strain, racism). In relation to the present study, the suppressor model assumes that experiences with health issues, such as hypertension, would contribute to higher levels of engagement with religion and religious practices. In contrast, life without a hypertensive diagnosis might lead individuals to call upon the comforts of religion less often (Krause & Van Tran, 1989).

Research Questions and Hypotheses

The present study examines the religious practices of Black men in numerous ways. Foremost, given the limited in-depth literature on religion in the lives of Black men, particularly those that are middle-aged, this study seeks to answer the question, "How do middle-aged Black men, both hypertensive and non-hypertensive, report religious practices?" Second, to address the gap in research on religiosity and health outcomes in Black men, this study analyzes data to address the question, "How do hypertensive Black men compare with non-hypertensive Black men on measures of religious practices?" Given the tendency of Black Americans to rely on religion as a source of comfort and coping during stressful health situations, (Ai et al., 2002; Lynn et al., 2014), it is hypothesized that hypertensive Black men will be more likely than non-hypertensive Black men to engage in religious practices.

Methods

This study examined cross-sectional data from the Midlife in the United States (MIDUS) 3 – Milwaukee African American Sample series. MIDUS is a longitudinal survey designed to examine the health, stress, and overall well-being of adults aged 24–74. With efforts to isolate the experiences of understudied populations, this study utilizes the 135 Black men responding to the MIDUS 3 self-administered questionnaire between 2016 and 2017. A detailed description of the MIDUS study, along with the rationale and design, has been previously published (Radler, 2014).

Measuring Religious Practices

To capture religiosity, several questions from the MIDUS 3 dataset were used to understand the frequency of, and experiences with, religious practices. Foremost, participants were asked to identify their religious preference. The most commonly identified religious preference was Baptist (47%), with an equal split between hypertensive and non-hypertensive Black men. In relation to all other religious preferences selected, there were no significant differences between the identifications of hypertensive and non-hypertensive Black men.

Multiple religious practices were assessed. On a six-point Likert scale, participants were asked, "Within your religious or spiritual tradition, how often do you pray in private, mediate or chant, and/or read the Bible or other religious literature?" For analysis, responses were recoded into rarely and often. "Once a day or more" and "a few times a week" were recoded into "Often," while "once a week," "1-3 times per month," "less than once per month," and "never" were recoded into "Rarely." Simplifying the religious variables in this manner is justified for meeting key statistical assumptions and addressing categories with few respondents. Each of the variables related to religious practices were recoded in this manner.

Measuring Hypertension

The key independent variable of the present study was high blood pressure or hypertension. Within a series of health-related questions, respondents were asked if they had experienced or been treated for high blood pressure or hypertension within the past 12 months. Responses were coded as a yes/no dichotomous selection. In the current sample, 69 (51.1%) of Black men stated that they had experienced hypertension in the past 12 months, and 66 (48.9%) stated that they had not.

Other Variables

Several factors influence religiosity and religious practices. Race, gender, income, marital status, education, and age can affect how often someone turns to religion. Therefore, this study follows the work of previous researchers examining religiosity and health by controlling for these variables (Chatters et al., 2008; Gillum & Griffith, 2010; Koenig et al.,

2012; Krause, 2010; Mahoney, 2010). Education and marital status were recoded for ease of interpretation. Education was recoded into "Less than High School," "High School Graduate," and "College Degree." The "College Degree" category includes anyone who earned at least an associate's degree. The "High School" category includes anyone who earned a GED, graduated high school, or attended 1-2 years of college but without any degree. Marital Status was simplified to "Married," and "Not Married." The "Not Married" group includes respondents who are separated, divorced, widowed, or never married. Two other variables, age and total household income, are also included in the analysis. Age and household income are each continuous variables that did not require recoding.

Statistical Analysis

Data were analyzed with IBM SPSS Statistics version 25 (SPSS Institute, Inc., Chicago, IL, USA). Variables with missing data on hypertension and/or religiosity were excluded from the frequencies and descriptive statistics. Religious variables were compared with respect to treatment for hypertension within the past 12 months. Independent sample t-tests compared hypertensive Black men with non-hypertensive Black men along continuous variables, and Chi-square tests were used to compare the two groups in relation to categorical variables.

To examine the ability of group associations – hypertensive versus non-hypertensive – to predict outcomes related to religiosity, a multivariate binary logistic regression was used to control for variables that could also affect religious practices. Findings indicated as significant reflect a p-value $< .05$.

Results

The average age for Black men in this study is 60.74 years for those that are hypertensive and 58.80 years for those that are non-hypertensive. As described in Table 1, complete data on hypertension, religious attendance, and reading the Bible or religious literature were analyzed for 108 Black men. The variable of prayer includes the responses of 107 Black men, and 103 respondents answered questions related to their engagement in religious meditation. Among those with high blood pressure, 86% report praying on a frequent basis. In contrast, only 64% of the Black men without hypertension report praying on a frequent basis. Approximately 47% of hypertensive Black men report reading the Bible or religious literature often, in comparison with 26% of non-hypertensive Black men. The differences for prayer and Bible (or religious literature) reading are statistically significant and support the hypothesis that some religious practices might be more common among hypertensive Black men, possibly as a coping response to morbidity.

A binary logistic regression, as shown in Table 2, revealed that hypertension is the only variable to predict prayer frequency. Black men with hypertension are more than twice as likely to pray on a frequent basis compared with Black men without hypertension. Although

Table 1. Descriptive Statistics of Hypertensive and Non-Hypertensive Black Men

	Hypertensive Black Men (N = 69)		Non-hypertensive Black Men (N = 66)	
	Mean	SD	Mean	SD
Age	60.74	9.67	58.80	9.62
Income	62,136.03		58,007.58	
	N	%	N	%
Education				
< High School	7	10.1%	13	19.7%
High School	47	68.1%	40	60.6%
College Degree	15	21.7%	13	19.7%
Married				
Yes	32	46.4%	23	34.8%
No	37	53.6%	43	65.2%
Church Attendance				
Often	13	25.5%	9	15.8%
Rarely	38	74.5%	48	84.2%
Prayer				
Often	44	86.3%	36	64.3%
Rarely	7	13.7%	20	35.7%
Read Bible or Religious Literature				
Often	24	47.1%	15	26.3%
Rarely	27	52.9%	42	73.7%
Religious Meditation				
Often	19	38%	16	30.2%
Rarely	31	62%	37	69.8%

temporal order does not allow for causal inference in relation to this association, this finding does highlight a noteworthy difference between the religious practices of hypertensive and non-hypertensive Black men.

In Table 3, the Binary Logistic Regression predicting whether or not Black men read the Bible or religious literature often is presented. The findings here are very similar to those from Table 2. Hypertension is again the only variable in the model which is a statistically significant predictor of reading religious literature. Black men with hypertension are more than twice as likely to read the Bible or religious literature on a frequent basis compared with Black men without hypertension.

Table 2. Binary Logistic Regression Predicting Prayer (Men).[1]

	B	**S.E.**	**Wald**	**Sig.**	**Exp(B)**
Age	0.032	0.029	1.234	0.267	1.032
HH Income	0.000	0.000	0.000	0.994	1.000
Education: HS Grad	0.214	0.716	0.089	0.765	1.238
Education: College Grad+	0.495	0.696	0.506	0.477	1.641
Hypertension*	**1.029**	**0.520**	**3.915**	**0.048**	**2.797**
Married	-0.470	0.554	0.719	0.396	0.625
Constant	-1.248	2.046	0.372	0.542	0.287
DV: Prays Often. N=106. Nagelkerke R Square=.133					

Table 3. Binary Logistic Regression Predicting Reading Bible or Religious Literature (Men).[1]

	B	S.E.	Wald	Sig.	Exp(B)
Age	0.044	0.025	3.129	0.077	1.045
HH Income	0.000	0.000	0.349	0.555	1.000
Education: HS Grad	0.057	0.670	0.007	0.932	1.058
Education: College Grad+	-0.523	0.644	0.658	0.417	0.593
Hypertension*	**0.876**	**0.437**	**4.014**	**0.045**	**2.401**
Married	-0.324	0.456	0.503	0.478	0.723
Constant	-3.112	1.808	2.963	0.085	0.045
DV: Reads Bible Often. N=107. Nagelkerke R Square=.151					

Conclusion

While there is a growing body of research on minority health and the relationships between religion and health, Black men remain an understudied population (Bowie et al., 2017). Grounded in the suppressor model of religiousness and findings that race and health status can affect the frequency of religious practices and coping methods, the present study utilized a group of primarily middle-aged Black men to: (1) describe the self-reported religious behaviors of Black men, both hypertensive and non-hypertensive, and (2) compare the self-reported religious behaviors of hypertensive and non-hypertensive Black men.

Data from the MIDUS 3 – Milwaukee African American sample indicate trends in the religious practices of Black men. Further, the data show that hypertensive Black men might be more likely to engage in certain religious practices when compared with their non-hypertensive counterparts. Notably, 14.7% of the men surveyed self-reported that they did not have a religious preference. While the lack of a preference could influence the frequency of religious practices, the percentage of Black men in this study without a religious preference is similar to larger studies of Black Americans (Neighbors et al., 1998; Pew Research Center, 2014). In addition, the lack of a preference for one religion does not make an individual non-religious or anti-religion, as only one participant identified as atheist.

One primary result of this study is that respondents with a diagnosis of hypertension were significantly more likely to report that they prayed often – operationalized as more than once per week – when compared with those that were non-hypertensive. This association between hypertension and frequency of prayer remained even when controlling for income, marital status, education, and age. Although others note a similar relationship between hypertension and prayer, (Brown, 2000; Koenig et al., 2012), the majority of studies that isolate the praying practices of hypertensive Black Americans focus primarily on women (Brown, 2000; Cooper et al., 2014; Greer & Abel, 2017). Further, several studies on hypertension and prayer examine the influence of prayer on blood pressure, (Buck et al., 2009; Koenig, 1998; Steffen et al., 2001), rather than considering the frequency of prayer for those that are hypertensive. Although the findings of the present study cannot definitively suggest that hypertensive Black men pray as a form of coping with their illness, other studies do note that Black Americans with hypertension and other health conditions are more likely than those without an illness to pray for reasons related to coping (Ellison, 1996; Neighbors et al., 1998). Also, such findings suggest that while Black men might not be as involved in organizational religious practices as their female counterparts (Chatters et al., 2009), they could still benefit from faith-based health initiatives that seek to ease the psychological distress of living with an illness.

Another result of this study is that hypertensive Black men were significantly more likely to report reading the Bible or other religious literature, when compared with non-hypertensive Black men and controlling for related variables. Research suggests that, for many Blacks, reading religious literature goes beyond seeking knowledge. The reading of religious literature serves to promote mental well-being and ease the psychological distress of Blacks that have few other resources and supports (Cone, 1997; Lynn et al., 2014; Pinn, 1999). Although Bible reading is rarely studied in comparison to other religious practices, such as

church attendance, findings from the present study suggest that reading the Bible and religious literature remains an important practice for Black men facing difficulties related to their health. Similar findings are reflected in the work of Hamilton et al., 2013, which analyzes Bible reading among a sample including, though not specifically focused on, Black men. The findings of Hamilton et al., 2013 suggest that Black men often read religious scriptures, in part, to reinforce their belief of God as a healer. Such a finding provides qualitative context to the findings of the present study on hypertensive Black men.

The present study finds that age did not alter the frequency of prayer for the men studied. Similarly, educational attainment had no effect for Black men in relation to prayer. Other research has found inverse relationships among use of prayer and educational attainment (Chatters et al., 2008). With regard to relationship status, existing literature commonly reports a direct relationship among marriage and increased religiosity (Mahoney, 2010; Marks et al., 2008; Skipper et al., 2018). The sampled population in the present study's findings does not suggest a positive association between marriage and prayer, although this could be a function of the study's sample size.

As a common measure of religious engagement, religious attendance is frequently examined in relation to hypertension (Bell et al., 2012; Buck et al., 2009; Gillum & Ingram, 2006). However, similar to the aforementioned studies of prayer, the research on religious attendance and hypertension has often sought to identify the effect of religious attendance on hypertension rather than noting the tendency of those with hypertension to attend religious services. The latter – attending religious services after a diagnosis of hypertension – is a valuable perspective in understanding how attending religious services might aid in the coping of those with health issues. Findings from the present study show no significant difference in religious attendance for Black men with hypertension in comparison to those without hypertension. While several studies find an inverse relationship between blood pressure and religious attendance (Koenig, 1998; Levin & Vanderpool, 1989), others do not (Buck et al., 2009; Cozier et al., 2018). Further, researchers that consider the effects of gender find that hypertensive Black men might not benefit from religious attendance at the same rate as Black women, (Bell et al., 2012), a finding that could affect the frequency of religious attendance for Black men.

The present study demonstrates that there are behavioral differences between non-hypertensive and hypertensive Black men as they relate to religious practices (i.e. prayer and reading the Bible or religious literature). More specifically, there is a positive association between hypertension and prayer and hypertension and the reading of religious literature for Black men. These findings are consistent with the hypothesis of this study and align with the suppressor model of religiousness. More specifically, it is plausible that a diagnosis of hypertension contributes to an increase in stress and higher levels of religiosity in response to the health-related stressor. Such a relationship is of particular importance for Black men, given the relatively high rates of hypertension and hypertensive-related morbidity in the population (Lackland, 2014). There were no significant findings among age, household income, education, and marital status for men. Collectively, these findings demonstrate how hypertensive and non-hypertensive Black men practice religion differently. There remains a call for research that

extends the understanding of health and faith in Black men (Bowie et al., 2017). Findings from the present study help to advance the literature on minority health and religious practices, thereby helping researchers and medical professionals leverage the practices of religiously involved Black men.

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