A Correlational Study on Spiritual and Religious Well-being, Social Determinants of Health, and Self-efficacy for Appropriate Medication Use Among African American Women with Hypertension

Tracie LaVette Augusta

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A CORRELATIONAL STUDY ON SPIRITUAL AND RELIGIOUS WELL-BEING, SOCIAL DETERMINANTS OF HEALTH, AND SELF-EFFICACY FOR APPROPRIATE MEDICATION USE AMONG AFRICAN AMERICAN WOMEN WITH HYPERTENSION

by

Tracie LaVette Augusta

A Dissertation
Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Major: Nursing Science

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Dedication

This dissertation is dedicated to my children, Derrick, Alexis, and Ariel. Over my long career, you have supported me every step of the way. You have always been my why. I wanted you all to see that hard work and dedication do count. You may not see it in the midst of what appears to be a storm, but when the clouds clear, you are standing in victory. The sacrifices, the night shifts, the long hours, and the “sleepy mom,” you three have endured it all, and for that I say, Thank you! To my bonus daughters, Bria and Meaghan, I love you! I send kisses to my grandchildren, Dylan and Justyce! GiGi loves you!! Mom and dad, I love you both. You have influenced me in ways you’ll never know. To my sister and brother, Tony and Kandi, I sing to you, “Just the three of us!”
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Abstract

**Background:** African American (AA) women are disproportionately affected by hypertension and are less likely to adhere to their medication regimen when compared to White and Hispanic women. Very little is known about social factors associated with medication adherence among AA women. Spiritual well-being (SWB), religious well-being (RWB), and social determinants of health (SDOH) may be associated with self-efficacy for appropriate medication use (SEAM).

**Purpose:** The purpose of the study is to: (1) examine the relationships among SDOH, namely age, education level, household income, and marital and insurance status, and SWB and RWB; (2) examine the relationships between SDOH and SEAM; and (3) assess the potential associations of SWB and RWB with SEAM.

**Methods:** The study employed a cross-sectional correlational design. An online survey was used to collect data. A purposive sample of 187 AA women with hypertension diagnosis over 1 year was recruited. SWB and RWB were measured using the Spiritual Well-Being Scale, and SEAM was measured using the Self-Efficacy for Appropriate Medication Use Scale. SDOH were adopted from Healthy People 2030. Linear regression analysis was conducted to assess the adjusted association of SWB and RWB with SEAM, and $p < .05$ was considered significant.

**Results:** The women of the study were middle aged ($M = 57.34$ years, $SD = 12.89$) and had moderate SWB and RWB scores. Only age and education were positively associated with SEAM ($p < .001$ and $p = .025$, respectively). There was no association of SWB or RWB with SEAM.

**Discussion and Conclusion:** SWB and RWB scores did not predict SEAM in this sample of AA women with hypertension. However, this could be due to lack of power due to a small sample size. Older age and higher education level were associated with higher self-efficacy. Interventions to improve adherence to antihypertension drug treatments aimed at younger AA
women with lower educational attainment could help in improving care and reducing disparities in health outcomes for this population.
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Chapter 1: Introduction

Hypertension is a public health epidemic that affects millions of Americans, resulting in nearly half a million deaths in 2019 (Centers for Disease Control and Prevention [CDC], 2021b). Only one in four Americans has their blood pressure controlled. Simultaneously, 30 million people (about the population of Texas) who should be taking medication are not (CDC, 2020). Hypertension is more common in non-Hispanic African American (AA) adults than in any other race and is acquired earlier (National Institutes of Health Office of Research on Women’s Health [NIH], 2015; Thomas et al., 2018). The prevalence of hypertension, mortality, and morbidity is higher for AAs than for other ethnicities (CDC, 2021b). When it comes to those prescribed blood pressure medication, those who are non-Hispanic White (32%) have better control than those who are non-Hispanic Black (25%), non-Hispanic Asian (19%), or Hispanic (25%) (CDC, 2021a). AA women are disproportionately affected by hypertension compared to White and Hispanic women and are less adherent to their medication regimen (Thomas et al., 2018).

Heart disease is the foremost killer of AA women, and uncontrolled hypertension is among the conditions that increase the risk of heart disease and stroke (NIH, 2015). According to the CDC, 57.7% of AA women older than 20 years had uncontrolled hypertension, higher than the proportions among Hispanic (45.6%) and White (37.1%) women (CDC, 2019b). Low adherence is one reason for uncontrolled hypertension, and AA women have lower adherence rates with regard to antihypertensive medications (American Heart Association [AHA], 2016; Bazargan et al., 2017; Pettey et al., 2016a).
The Religious and Spiritual Link

Historically, AAs health care practices combined handed-down medicinal herbalism, community healers, and spiritual practices (Mitchell, 2021). Community health care providers (such as shamans or “lay folk healers”) also provided spiritual guidance in these traditions (Marsh-Lockett & West, 2013; McBride, 2005). Many people viewed health and spirituality as interconnected. The health care system at the time provided dismal services for and to AAs. In Article 1, section 2 of the US Constitution, 1787, an AA counted as only three-fifths of a person (The United States Senate, n.d.). Although this was for voting purposes, the sentiment reflected the times. Health care for AAs was not a primary concern, but rather their ability to perform and the possibility of lost profits. Therefore, the goal was not optimum health and well-being but rather functioning, as with a piece of equipment. To that end, healing and spiritual leaders of the enslaved community cared for their own people. These leaders were usually root workers, midwives, and “treaters” (Hazzard-Donald, 2012).

Some enslaved AAs were Christian when captured and taken to the Americas, and more were Muslim. Nevertheless, the most significant number, by far, were followers of traditional religions common in West Africa at the time (Mitchell, 2021). Spiritualism was the basis of those traditions. A common element of these African belief systems was the presence of a distant, supreme god who created the world and a pantheon of lesser deities and ancestor spirits who played a role in daily life (Mitchell, 2021).

There is a distinction between religion and well-being throughout literature, and it is rare for them to be defined together as a phenomenon. Religious people are commonly believed to exhibit well-being, but this is not the case. There is evidence, however, that people who engage in religious activities are happier and healthier than those who do not (Newman, 2018). As AAs
age, four major religious paradigms are identified: engagement, faith, spiritual connectivity, and maintaining religious practices (Epps & Williams, 2018).

Today, AAs are more religious than Whites or Latinos and are more apt to use spiritual practices when health care is required (Masci et al., 2018). Spirituality in AA women’s lives is well documented and is associated with positive health outcomes. AA women tend to be spiritually minded, even when not actively involved in formal religious practices or attendances (Musgrave et al., 2002). Seventy-five percent of AAs say religion is critical to their lives, compared with a smaller share among Whites (49%) and Hispanics (59%) (Masci, 2018). They are also more likely to profess their belief in God with absolute certainty (83%) compared with Whites (63%) or Latinos (59%) (Masci, 2018). Overall, 81% of AAs believe God directly determines what happens in their life, and approximately 68% believe he controls their life directly (Diamant, 2021). Patients’ adaptation to chronic illness is significantly affected by spiritual well-being (SWB) and adaptation to chronic diseases, according to Kütmeç Yılmaz (2020).

Spirituality remains a valuable resource for AA women coping with illness and seeking inspiration. The belief in spirituality influences adherence to prescribed medications (Greer & Abel, 2017). Spirituality is an understanding or confidence that something greater than oneself affects every day experiences. It is a knowing that there is more to being human than encounters and that all are part of the cosmic and divine (Burkhardt & Nagai-Jacobson, 2016). Spiritual well-being is the ability to integrate experiences and reflect while having positive feelings, behaviors, and thoughts of relationships with oneself, others, the divine, and nature (Gomez & Fisher, 2003). This state provides a sense of self-identity, happiness, joy, beauty, wholeness, love, respect, positive attitudes, inner peace, harmony, contentment, purpose, and direction in life (Gomez & Fisher).
Based on AA women’s level of SWB, they may either affirm or deny a diagnosis. Beliefs range from using God as an inspiration and source of support for adherence to relinquishing all responsibility for the diagnoses to God (‘turn it over to the Lord’) (Polzer & Miles, 2007). As AA women are well known for combining medical care with spiritual practices, it may be helpful to refer to their SWB or religious well-being (RWB) as well as to recognize the effects of the role as a community leader and a need to approach health care holistically.

**Social Determinants of Health**

Conditions of birth, growth, living, and aging determine one’s state of health. They include the physical environment, education, housing, employment, and income, often referred to as social determinants of health (SDOH) (WHO, 2022). SDOH strongly influences people’s health, well-being, and quality of life. SDOH categories include “safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; polluted air and water; language and literacy skills” (Office of Disease Prevention and Health Promotion [OASH], 2021b, para. 1).

In addition to individual characteristics (genetics) and behaviors, social determinants contribute directly to individual health variations (Nutbeam & Lloyd, 2021). As a result of structural racism, disenfranchised groups such as AA women have had limited access to resources and opportunities related to health and wellness (Crear-Perry et al., 2021). More than a decade ago, the WHO established the Social Determinants of Health Commission, but the term lost its meaning within the health care system. In recent years, its importance has reemerged. Integrating social care into clinical practice is crucial to the success of health care systems (Crear-Perry et al.).
In integrating social needs into health care, the National Academies of Science, Engineering, and Medicine (NASEM) identified five essential activities: awareness, adjustment, assistance, alignment, and advocacy (Crear-Perry et al., 2021). The first step is awareness, which indicates the need for SDOH screening. In the second step, services must be tailored to resolve negative determinants and promote positive ones. Assisting and aligning refer to strengthening social support and redesigning health services to better meet the general public’s needs. Finally, advocacy involves using local, state, and federal governments to support public health efforts in addressing SDOH within the context of the community where care is provided (Crear-Perry et al.).

**Self-Efficacy**

Self-efficacy, which refers to confidence that one can handle tasks (such as taking medication), influences medication adherence (Braverman & Dedier, 2009). Self-efficacy was initially theorized by the psychologist Albert Bandura. Among the benefits of self-efficacy are resilience to adversity and stress, healthy lifestyle habits, improved work performance, and academic success (Lopez-Garrido, 2020). According to Bandura (2011), four primary influences shape self-efficacy beliefs: mastery experiences, vicarious experiences, social persuasion, and emotional states.

There have been stereotypical views of AA women’s role in society, especially within their own communities. The myth portrays them as “aggressive, ill-tempered, illogical, overbearing, hostile, and ignorant without provocation” (Ashley, 2013, para. 1). The discriminatory environment in which they live, as well as the attitudes and behaviors they may deal with daily, can make stress particularly relevant to them and decrease their mental and physical health outcomes (Liao et al., 2019)—internalizing the narrative causes isolated misery, depression, anxiety, and low self-esteem (Liao et al., 2019). However, self-efficacy, self-care,
and resilience may mitigate and serve as a buffer for the harmful effects of stress and cardiovascular disease risk factors such as hypertension (Adkins-Jackson et al., 2019; Felix et al., 2019; Meyer et al., 2022). Stress perception was determined to be most affected by self-efficacy (Meyer et al.).

According to a large body of evidence, suboptimal/poor compliance with antihypertensive therapy is multifactorial and influenced by socioeconomic factors such as the health care system/team (provider–patient interaction), the prescribed treatment regimen (doses, frequency, drug efficacy, side effects), SDOH, as well as patient factors (low self-efficacy and insufficient social support) (Still et al., 2019). It may be possible to use sociocognitive indicators such as self-efficacy to investigate the relationship between SDOH and well-being in managing hypertension.

In order to measure self-efficacy and medication adherence, a multidisciplinary team with expertise in medication adherence and health literacy developed a scale measuring self-efficacy for the appropriate use of medication (SEAM) (Risser et al., 2007). AA women’s sense of spirituality with attunement to their SWB, RWB, SDOH, and the way they interact with SEAM may be crucial in treating hypertension, achieving health equity, and ensuring medication adherence. A health care system’s attention to these areas satisfies the essential activities identified by the NASEM.

Assessments of SWB, RWB, SDOH, and SEAM can provide AA women with the missing link to adherence to antihypertensive medication. Integrating a spiritual perspective into AA women’s treatment plan for hypertension can help them adhere to antihypertensive medication (Lewis, 2011). Such assessments may also assist in identifying predictors of adherence, culturally sensitive care, and appropriate follow-up.
Statement of the Problem

AA women have the lowest adherence rates for hypertension treatment of the more than 75 million Americans affected by hypertension (Pettey et al., 2016). There has been very little acknowledgment of AAs’ health care delivery history or their integration of spiritual or religious well-being, SDOH, or SEAM into care plans. Health care system attempts to treat the body primarily has missed the mark in providing health equity, culturally competent care, or decreased disparities for communities. The inclusion and integration of AA into health care systems were incomplete and without respect for their customs, ideals, goals, or worldviews on health, spirituality, and community. Even now, spiritual care is optional in health care environments.

Significance of the Problem

Poor adherence to the prescribed medication regimen is the leading cause of poor hypertension control among AA women (Braverman & Dedier, 2009). Increasing adherence has the most significant effect on achieving disease control. A study by Kang et al. (2020) found that 84% of AA women with hypertension failed to adhere to their medication, and 59% failed to adhere to lifestyle management to control their hypertension.

Purpose of the Study

The purpose of the present study is to

1) examine the relationships among SDOH (i.e., age, level of education, household income, marital and insurance status), SWB, and RWB;

2) examine the relationships between SDOH and SEAM; and,

3) furthermore, assess the potential associations of SWB and RWB with SEAM.

Study Questions and Hypothesis

In this context, the following questions are posed:
(1) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SWB and RWB?

(2) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SEAM?

(3) Are SWB and RWB associated with SEAM?

The following hypotheses are tested based on the above questions:

H$_1$: SDOH (i.e., age, level of education, household income, marital and insurance status) are associated with SWB and RWB.

H$_2$: SDOH (i.e., age, level of education, household income, marital and insurance status) are associated with SEAM.

H$_3$: SWB and RWB are associated with SEAM.
Chapter 2: Literature Review

The purpose of this chapter is to review the literature explaining why spiritual and religious well-being (i.e., SWB and RWB), SDOH, and SEAM are essential paradigms to explore for AA women in health care settings. We must dig deep into foundational issues and historical truths to fully understand disparities and appreciate AA women from a health care perspective. In this chapter, I explore the history of health care for AAs, including segregation, desegregation, and SDOH. I also closely examine hypertension and its physiology, the mediators and moderators of hypertension in AA women, modifiable risk factors for hypertension, its prevention, and lifestyle change strategies. Additionally, self-efficacy and perceptions of medication adherence are explored for AA women with hypertension, along with SDOH and variables that influence medication adherence.

History of Health Care Delivery for AAs in the United States

During the Truman administration, in 1946, the Hill-Burton Statute permitted the construction of hospitals with “separate but equal” facilities for Blacks and Whites (DiAntonio, 2023). AAs were integrated into the health care system during the civil rights era by force, with the federal government threatening the loss of funding (Smith, 2005). Under Title VI of the Civil Rights Act of 1964, federally funded programs and activities, such as hospitals, were prohibited from discriminating against anyone (DiAntonio, 2023). There was strong resistance to hospital and health care desegregation. There were no real incentives to change attitudes and goals of care or to incorporate AA culture or perspectives in health care delivery. The goal was integration. For the most part, the same providers that fought integration provided health care services. While a few separate hospital systems served the AA population, they were unequal; many changes were merely cosmetic (Smith, 2005).
Segregated all-White hospitals would not admit Black patients or hire Black medical staff until the 1960s, primarily during the civil rights era (Foster, 2012). Until then, Black-owned hospitals were present nationwide, providing health care and training doctors and nurses. At one point, there were approximately 500 Black-owned hospitals in the US (Foster, 2012). The last standing historically Black hospital is Howard University, previously known as Freedman’s Hospital, in Washington, DC (founded in 1862) (Duke University Medical Center and Archives, 2021; Foster, 2012). Black-owned hospitals focused on educating health care professionals and continuing community health care, educating the community, eliminating inequities in health care facilities and practices, and providing culturally competent care. The separate and unequal facilities could have facilitated better outcomes (Smith, 2005).

As a result of Brown v. Board of Education, Jim Crow–era institutions such as separate and unequal hospitals began to desegregate, bringing in the AA body for health care services without considering the AA mind, culture, religion, or spirituality and without empathy for AA history and struggle. The hurried, disconnected integration impacted AA culture and its spiritual foundation in health care catastrophically. Recommendations for the treatment of hypertension in AAs did not begin until 1984 with the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 3rd edition (JNC3) (Williams et al., 2016). It stated that Black hypertensive patients might respond somewhat better to diuretics than to beta blockers. There was no mention of cultural or spiritual perspectives on treatment, determinants of hypertension as co-management techniques, or the SDOH that affect positive outcomes.

**Social Determinants of Health**

The WHO (2022, para. 1) defines social determinants of health (SDOH) as non-medical factors that influence health outcomes and behaviors. They include income, social protection, education, working conditions, food (in)security, housing, (un)employment, job security, early
childhood development, structural support, and access to (decent) health services (WHO, 2022). As a professional organization, the American College of Physicians (ACP) promotes universal access to high-quality health care without discrimination based on personal characteristics (Butkus et al., 2020).

US health care has continued to be a hot topic, with the debate on whether it is a right or a privilege, while low-income and minority citizens suffer poor access, insurance status, and health outcomes. Many measures of SDOH show that AAs, Hispanics, American Indians, and Alaska Natives have poorer health outcomes than Whites (Guerra, 2022). AA women usually find themselves with the worst health care outcomes in many measures (Guerra, 2022).

Regarding geographical location and SDOH, location can be a barrier to receiving care. Hospital closures in rural communities also impede health access, as do lack of transportation, housing, and food, as well as the cost of childcare and missed work; all harm the experience of rural residents seeking medical care (Butkus et al., 2020). According to a survey of elderly Medicare beneficiaries, a lack of care coordination, financial barriers, transportation difficulties, and a lack of usual sources of care are significant barriers to obtaining medical care (Butkus et al., 2020).

In addition to negatively affecting physical and psychological health, discrimination based on race increases allostatic load over time, compromising health (Chinn et al., 2021). Because of their racial/ethnic minority status, class, and gender (i.e., intersectionality), AA women of low socioeconomic status are among the most marginalized and underserved in the United States. A qualitative study by Okoro et al. (2020) demonstrated that low-income AA women struggle to receive adequate patient care primarily because they feel stereotyped and discriminated against. Health care - seeking behaviors and treatment outcomes are affected by these experiences within health care systems.
According to Ochieng and Crist (2020), there is no denying the importance of SDOH to health care and outcomes. They reported that SDOH influence AA women’s self-management of type 2 diabetes. The themes that emerged in that study were

- geographic location (living in a rural area as a factor in accessing timely health care services),
- education (women unsure of how to find information and dependent on the health care provider as the source of all disease education),
- level of income (inability to afford healthy choices),
- health literacy (inability to understand the disease process and treatment), and
- systemic racism (lack of trust in the health care industry or individual providers) (paras. 14–19).

According to Wilder et al. (2021), food insecurity (Adjusted odds ratio (aOR)=.56; 95% CI .42–.7), housing instability (aOR = .64; 95% CI .44–.93), social determinants in general (aOR = 0.75; 95% CI 0.65–0.88), and medication adherence are significantly correlated. Medication adherence is most consistently affected by food insecurity and housing instability and is significantly affected by adverse social determinants.

During the COVID-19 pandemic, SDOH caused harm to AAs, with higher rates of COVID-19 cases (2.6 times higher), hospitalizations (4.7 times higher), and deaths (2.1 times higher) than among non-Hispanic Whites (Maness et al., 2020). Systemic racism and SDOH are interconnected in the United States and contribute to various health disparities (OASH, 2021b). Systemic racism profoundly affects SDOH (Maness et al., 2020). Health equity is one of Healthy People 2030’s goals: “eliminate health disparities, achieve health equity, and improve health literacy to improve the health and well-being of all” (OASH, 2021a, para. 1).
**Hypertension in AA Women**

Hypertension is a silent killer in the AA community. AA women are disproportionately affected by high blood pressure compared to other ethnic groups and have lower adherence rates to antihypertensives (Bazargan et al., 2017; Pettey et al., 2016). As of the 2017 national guidelines, hypertension is blood pressure at or above 130/80 mmHg (CDC, 2021b). Severity levels are categorized. Stage 1 hypertension is a systolic blood pressure ranging from 130 to 139 mm Hg or a diastolic pressure ranging from 80 to 89 mm Hg; stage 2 is blood pressure at or above 140/90 mmHg; stage 3 is a hypertensive crisis with a systolic BP >180 mmHg (CDC, 2020). At least 1,100 people die daily from high blood pressure in the US, according to the CDC (2019). Treating 0.7 million hypertensive AAs would prevent about 8,000 cardiovascular disease events annually (Vasudeva et al., 2016). It is more frequent and destructive in AAs than in any other racial or ethnic group and is acquired at an earlier age (Thomas et al., 2018; Whelton et al., 2018).

More than 40% of non-Hispanic AAs have high blood pressure, among whom 42.9% are women (AHA, 2016a; US Department of Health & Human Services et al., 2019). Only 48.5% of those women have their blood pressure under control (US Department of Health & Human Services et al., 2019). A meta-analysis found that AA and Asian American women had the highest rate of nonadherence to antihypertensive regimens, at 62.5% (Abegaz et al., 2017). In a report published by the CDC’s National Center for Health Statistics (2019), for AA women >20 years old, 57.7% had uncontrolled hypertension. In contrast, the proportion among Hispanic women was 45.6%, and among White women 37.1% (CDC, National Center for Health Statistics, 2019).
Hypertension Physiology in AAs

Arterial hypertension is the most prevalent form of hypertension in the AA population. This condition is associated with cardiovascular disease and end-organ damage (CDC & National Center for Chronic Disease Prevention and Health Promotion, 2019; National Center for Chronic Disease Prevention and Health Promotion & Division for Heart Disease and Stroke Prevention, 2020b; Ortega et al., 2015). There is an increased risk of stroke, chronic renal failure requiring dialysis, a higher risk of left ventricular hypertrophy, and an associated higher risk of heart failure (Kim et al., 2016; Nesbitt & Victor, 2004; Ortega et al., 2015).

The cause of arterial hypertension includes a mix of genetic and environmental influences. Polymorphisms of the epithelial sodium channel are consistent with patterns of hypertension seen in AAs, as they tend to retain more sodium and water (Nesbitt & Victor, 2004). Nonadherence to prescribed medications significantly contributes to higher rates of hypertension, stroke, chronic kidney disease, and premature death among AA women (Health and Medicine Division et al., 2017).

Mediators and Moderators of Hypertension in AA Women

Mediators of hypertension include obesity, sodium sensitivity, and activation of the renin-angiotensin-aldosterone system. Discrimination may directly cause hypertension through the stress pathway or indirectly through unhealthy behaviors such as unhealthy eating or sedentary lifestyle (Forde et al., 2020). In AA women, excess intake of dietary sodium combined with salt sensitivity, obesity, lower dietary potassium intake, excess alcohol intake, and an inadequate intake of healthy fruits and vegetables aggravate the problem. One in six AA women is morbidly obese (BMI >40 kg/m²), which is almost fourfold higher than that of their White or Hispanic counterparts (Ortega et al., 2015). Physical inactivity and diet are major contributing factors to obesity, although genetics can play a role (Vuori, 2018).
Modifiable Risk Factors for Hypertension, Prevention, and Lifestyle Change Strategies

Modifiable risk factors include reducing salt intake (to less than 5 g daily), eating more fruits and vegetables, regular physical activity, avoiding tobacco use, reducing alcohol consumption, limiting the intake of foods high in saturated fats, eliminating or reducing dietary trans-fat, adherence to a medication regimen, and stress reduction (WHO, 2019). The strong Black women schema identified stress factors that primarily affect Black women. The factors included characteristic themes such as (a) embodying and displaying multiple forms of strength, (b) possessing self/ethnic pride despite intersectional oppression, (c) embracing every woman, and (d) being anchored by religion/spirituality (Abrams et al., 2014).

In the South, 36.3% of adults are obese, followed by 35.4% in the Midwest, 29.9% in the Northeast, and 28.7% in the West. The rate of obesity or overweight among AA women in the United States is highest compared to other groups. The obesity rate among AA women is approximately four in five. The risk of heart disease and stroke is higher for obese people because they are likely to have hypertension, high cholesterol, and diabetes (CDC, 2022).

The benefits of treatment depend on the risk factors (Institute for Quality and Efficiency in Health Care, 2019). Non-modifiable risk factors are genetically determined traits such as age, gender, and race-ethnicity (CDC, 2020). Risk factors for nonadherence include barriers to treatment, beliefs regarding hypertension, and facilitators of treatment adherence. Facilitators of treatment adherence include the reasons to follow the provider’s orders, positive/proactive changes, knowledge about hypertension, adherence to self-care, and social support (Fongwa, 2008).

There are guideline-driven therapies tailored explicitly for AAs, yet management is less effective, yielding higher mortality. Explanations for these persistent disparities in hypertension are multifactorial and span from the individual level (stress, adherence, perceptions, and
socioeconomic) to the social environment (family and social support) (Carnethon et al., 2017). Medical therapies have played an essential role in life expectancy increases over the past century, but SDOH have been far more influential (Nutbeam & Lloyd, 2021).

Self-Efficacy and Perceptions of Medication Adherence in AA Women With Hypertension

**Self-Efficacy**

Self-efficacy is a person’s belief in their capacity to execute specific behaviors despite circumstances (Bandura, 1994). Self-efficacy includes physical and emotional states (anxiety, stress, arousal, and mood experienced when contemplating an action) (Resnick, 2018). It is a mutable trait amenable to intervention (Warren-Findlow et al., 2011). Good self-efficacy is significantly associated with medication adherence, consuming a low-salt diet, engaging in physical activity, not smoking, and practicing good weight management techniques for AAs with hypertension (Warren-Findlow et al., 2011).

Perceived self-efficacy is an optimistic belief about one’s capacity to tackle new or complex tasks or cope with adversity in various domains of human functioning. As a positive resistance resource factor, perceived self-efficacy enables goal setting, effort investment, persistence, and recovery from setbacks. It is necessary to manipulate perceived self-efficacy in clinical practice and behavior change since it is directly related to subsequent behavior (Schwarzer & Jerusalem, 1995). Self-efficacy is critical when collaborating on care pathways for AA women with hypertension. It is a potent predictor of medication adherence (Lewis & Ogedegbe, 2008). The addition of SWB could be the missing link in the model, which may move the agenda forward to improved medication adherence for AA women with hypertension.

**Medication Adherence Among AA Women**

Medication adherence is the extent to which the patient’s medication-taking behaviors correspond with health care provider recommendations (Shiyanbola et al., 2018). Adherence to
prescribed antihypertensives can lower the 10-year risk of cardiovascular disease by 20%–30% of the individual risk (Cologne, 2012). Desirable blood pressure control is achievable with appropriate therapeutic lifestyle changes and self-care management techniques (Abel et al., 2017; Douglas et al., 2002), and adherence has the highest potential to improve symptoms and overall disease status (Braverman & Dedier, 2009).

**Perceived Susceptibility to or Severity of Hypertension**

AA beliefs regarding hypertension tend to vary from those of their health care provider. Generally, AAs believe that hypertension is serious but that it only occurs when symptoms such as headaches or dizziness are present (Kronish et al., 2011). It is widely believed among AAs that stress causes hypertension and that by reducing stress, hypertension can be prevented or cured. A health care setting reinforces this belief by asking them to wait a few minutes before retaking their blood pressure. A common belief is that antihypertensives work by calming nerves and thus are not needed daily (Kronish et al., 2011). Relief or the absence of symptoms reinforces this belief.

AA women believe they are vulnerable to hypertension and see societal ills and lifestyle as the biggest driver of hypertension (Kronish et al., 2011). However, given their psychological burdens (such as the propensity toward overachieving, multiple social roles involving family, work, and the community, and the obligation of their family commitment), stress is seen as unavoidable (Stallings, 2016). A study by Heydari et al. (2014) demonstrated that patients who perceived high susceptibility to hypertension had better adherence than those perceiving moderate or low susceptibility.

**Perceived Benefits and Barriers to Hypertension Medication Adherence**

Research has shown a strong association between medication adherence, benefits of the treatment, and attitude toward hypertension medications (Mekonnen et al., 2017). Having a
positive attitude avoids misconceptions that directly affect medication adherence. Perceived benefits of hypertension medication adherence include better control of symptoms, feeling better or not getting worse, and curing the disease altogether (Heydari et al., 2014).

Perceived barriers to hypertension medication adherence include disbelief in the diagnosis, side effects to the medication, trust in the provider–patient relationship, health care beliefs regarding hypertension, and medication variables such as cost and number of drugs prescribed (Yang et al., 2016). These variables include price and the number of pills prescribed (Teshome et al., 2017; Uchmanowicz et al., 2019).

**Medication Nonadherence in AA Women**

Nonadherent AA women have twice the risk of stroke as nonadherent White women (Berg, 2019). Nonadherence leads to not achieving therapeutic goals, which in turn leads to an increased risk of mortality, increased emergency room visits, and overall reduced quality of life (Shiyanbola et al., 2018). Medication nonadherence is a significant barrier to improved outcomes for AA women. AA women are more likely to die early from all causes (Gibbs & McLean, 2011), and nonadherence is a mediator in these numbers (CDC, 2020).

AAs demonstrate misconceptions about the nature of and treatment goals for hypertension. In a study by Odebegebe et al. (2004) that assessed AA expectations regarding hypertension treatment, 38% expected a cure to the disease, 38% did not expect to take antihypertensive medications for life, and 23% took pills only with symptoms. Hypertension was perceived as an episodic, symptomatic illness often associated with stress, and the patient’s decisions to take the medications depended on the presence of symptoms (Pettey et al., 2016b).

Categories of medication adherence include intentional and unintentional causes. There are various reasons AA women do not take prescribed antihypertensives; some are within their
control, while others are not. The health care team needs to understand this sobering fact when treating this population.

**Social Determinants of Health Affecting Medication Adherence in AA Women**

SDOH significantly influences health and health practices, including medication adherence, hypertension management, and self-care practices. Recently, these concepts have received attention due to noticeable disparities in the health care system. Unfortunately, related inequities seem to fall along racial and ethnic lines. Numerous studies have concluded that SDOH influence 30%–55% of health outcomes. Examples include poor air quality that may exacerbate asthma and food availability, choices, and education as causative factors in obesity, diabetes, and high blood pressure.

SDOH affects the entire population, not only the poorest and most vulnerable (Alderwick & Gottlieb, 2019). These causative factors are known. SDOH beyond their control interferes with AA women’s ability to adhere to hypertension medication use. There are also intentional reasons they may decide not to take their medications as prescribed.

**SDOH Affecting Nonadherence – Unintentional**

AA women continue to also fall behind Hispanic and White women in many quality health care measures, such as quality of care, access to care, timeliness, and outcomes (Office of Women’s Health, 2017). Adherence factors, including economic disadvantages, inequalities in education, racism, communication difficulties between patient and provider, cultural barriers, provider stereotyping, lack of access to providers, and lack of access to health care services, severely impact the likelihood of optimal outcomes (Taylor, 2019).

**Access and Timeliness**

Due to the history of residential segregation, AA communities are more likely to lack hospitals and other health care providers, leaving them to rely on community health centers and
emergency rooms for care (Taylor, 2019). There may also be issues with transportation that interfere with regular access to health care–related appointments. AAs also are more likely to report poor provider–patient communication than White patients (ACP, 2010).

**Quality of Care**

AAs are not receiving the same quality of care as their White counterparts (Taylor, 2019). Research has demonstrated that racial and ethnic minorities continue to receive lower quality health care than Whites even when insurance status, income, age, and condition severity are comparable (ACP, 2010; Bridges, 2018). Also, disparities in the health care system contribute to the overall disparities in health status that affect AA women (Taylor, 2019). They are less likely than White persons to receive appropriate cardiac care, kidney dialysis or transplants, and the best treatments for maternal care, stroke, cancer, or AIDS (HHS, 2018). In a report by the Agency for Healthcare Research and Quality (AHRQ), AAs fared significantly worse on 19 of 38 core quality measures (ACP, 2010).

**Poverty**

The average household income for AAs in 2018 was $41,361, while it was $70,642 for White households (US Census Bureau, 2018). A higher percentage of AAs were in extreme poverty in 2018 at 20.8% compared to Hispanic (17.6%), White (10.1%), and Asian American (10.1%) individuals (US Census Bureau, 2019). This disparity demonstrates the importance of critical public programs such as Medicaid and government programs created to ensure access to health care for this population.

**Education**

Education status contributes to the gap in health care–driven outcomes. The gaps in educational achievement between AA students and other groups are substantial. According to Bowman et al. (2018), AA students score lower on tests and receive lower grades, and their
dropout and failure rates are higher than those of other students. They are not usually enrolled in honors courses in high school or accepted into competitive 4-year colleges, and a higher percentage do not excel (Bowman et al., 2018). They also receive disciplinary action at a higher rate than other students (NCES, 2019). In 2013–14, 13.7% of AA students received an out-of-school suspension as opposed to 3.4% of White students (NCES). AA communities have faced generations of legal and illegal measures depriving them of fundamental rights, an equitable education, and the materials necessary for success in education systems (Bowman et al., 2018).

There was an increase of nine percentage points in the percentage of AAs 25 or older with a high school diploma or higher, from 78% to 87%. In 2021, the percentage of AAs with a bachelor’s degree or more was 28.3%, compared to 41.8% of Whites (NCES, 2022). In the fall of 2015, 58% of AA students attended a public school, whereas only 5% of White students attended them (IES, 2019).

**Communication**

Communication can be a factor in receiving adequate health care services. Health care providers often make assumptions about others based on how they speak, as well as on their geographic origin and socioeconomic status. People who do not speak English fluently or natively can have difficulty navigating health care systems. Language barriers, a lack of interpreters, and discrimination based on immigration or documentation status are all barriers (Kronish et al., 2011). Also, some AAs speak African American Vernacular English (AAVE). Because the dominant society frames AAVE as incompetent, illiterate, and ‘street slang,’ AAVE speakers have been subject to discrimination and prejudice (Lee et al., 2022).

AAs usually feel that their perspectives are only sometimes appreciated (Cuevas et al., 2016). Cross-cultural communication links many health care disparities, and clinical decision-making relies on effective communication between patients and providers (Institute of Medicine...
et al., 2003). With the history of distrust, racial discrimination, and medical negligence in AA history, communication continues to be a challenge yet to be resolved.

**Geography**

There is a difference between rural and urban areas in the use of health care services. Compared to the urban population, the rural population is less healthy (Georgetown University Health: McCourt School of Policy Institute, 2022). In rural areas, chronic conditions are somewhat more prevalent among adults (Rural Health Information Hub [RHIhub], 2022). The rate of limitations for adults living in rural areas is higher, whether related to social, recreational, or family activities, paid work, housework, or school. Rural adults are more likely to engage in risky health behaviors (RHIhub, 2022). There is a lower rate of chronic disease testing for adults living in rural areas. Residents of rural areas are more likely to be uninsured and stay uninsured for extended periods. In rural areas, health care expenditures are slightly higher. The availability of health care providers in rural areas is limited (Cameron et al., 2020; Chen et al., 2018). Finally, rural populations are less likely to receive dental care.

**Historically Based Nonadherence – Intentional**

AA women can display intentional nonadherence to hypertensive medication. Intentional reasons are related to perceptions of the disease (disbelief in diagnosis), ongoing concerns regarding medications and their side effects, and poor communication with the treating health care provider(s) (Shiyonbola et al., 2018). With intentional nonadherence, many admit to using culturally passed-down treatments for hypertension, including drinking pickle juice, losing weight, and destressing as primary treatments (Pettey et al., 2016a).

**Disbelief in Diagnosis**

Occasionally, AAs do not take their medication due to disbelief in the diagnosis (Shiyonbola et al., 2018). Many AA women view hypertension as a symptomatic disease caused
by emotional stress; therefore, they may feel no need to medicate if they are asymptomatic. Unfortunately, hypertension usually has no symptoms. A belief or acquiescence that they may have hypertension is when there is an occasional headache, which they feel is easily treatable by destressing and using a home remedy (Stallings, 2016).

**Social Support**

As are usually very connected to their communities and family units, and they had to rely on each other for necessities because of their historical circumstances. Forty-three percent say that what happens to other AAs in their local community affects their own lives in some form (Cox & Tamir, 2022). Both social support and self-efficacy mediate medical diagnosis disclosure and medication adherence (Mi et al., 2019; Relf et al., 2019). Social support buffers discrimination and psychological distress (Steers et al., 2019). Support from friends and family is a critical protective factor in reducing the adverse effects of stress on health (Spikes et al., 2019). Interpersonal conflict, unreliable or sporadic family support, and other psychological problems can exacerbate stress and depression (Cross et al., 2018). There is a possibility that AAs will not take their medication regularly when social support is lacking or inadequate.

**Trust**

AA communities has never gained trust in health care systems. It is essential to mention that AAs have been tortured, maltreated, denied care, and even outright lied to for the sake of science. Examples include the Tuskegee Syphilis experiment, in which experimenters outright lied to Black men about the diagnosis and later the treatment of syphilis in order to record the natural history of syphilis progression (Tuskegee University, 2021); J. Marion Sims, known as the “father of gynecology,” experimented on enslaved African women without anesthesia (Wall, 2006), and Henrietta Lacks’s cells (HeLa cells) were used without consent to revolutionize the
medical field. Her cells have been bought and sold for vast profits without benefiting her family (Beskow, 2016).

Trust in the provider prescribing the treatment is a significant factor in adhering to medications (Abel & Efird, 2013). AAs are more likely to disbelieve a diagnosis if they lack trust in the diagnosing provider and their technical skills, feel racially stigmatized, perceive financial gain for the provider, or have a feeling of being experimented on (Jacobs et al., 2006). AA women who trust their health care provider are more apt to adhere to their medication regimen (Abel & Efird, 2013). In the US, AAs have an inherent distrust of health care and health care systems. Trust facilitates care-seeking behavior and promotes patient honesty and adherence to the medication regimen (Jacobs et al., 2006). A distrust of medications and their use is prevalent in the AA community and is linked to patient beliefs about treatment and medications. AAs have also been shown to fear becoming addicted to medications and to believe that medications symbolize illness (Shiyanbola et al., 2018).

Due to distrust, there is a plethora of passed-down information regarding hypertension and its causes, control, and management that is deemed authoritative. Notable common beliefs among AAs, contrary to institutional health care providers, is that hypertension produces symptoms manifested by headaches caused by the stress of discrimination and racism and that it is common for all AAs to suffer from it (Spikes et al., 2019). That information, including hypertension management techniques, is shared throughout the community with female family members and friends, primarily in group settings (Jones et al., 2018). Passed-down information also includes ways to adapt self-management strategies to work for them because they want to prevent others from suffering from that illness and as a means to reinforce their knowledge about hypertension self-management (Jones et al., 2018).
Health Care Beliefs

There are notable beliefs common among AAs that are contrary to those within health care systems, such as that hypertension is symptomatically manifested primarily by headaches caused by the stress of discrimination and racism and that it is universal and inevitable for all AAs to have the disease (Spikes et al., 2019; Stallings, 2016). Some have even described hypertension as an anger that AAs grow up with (Kronish et al., 2011). Trends seen in hypertension management by AA women include false starts (starting the regimen and abruptly stopping), poor outcomes, poor control of symptoms, and increased mortality and morbidity (Conn et al., 2014; Grant et al., 2016; Ogedegbe et al., 2004; Polinski et al., 2014; Shiyanbola et al., 2018).

Length of Diagnosis

According to Jankowska-Polanska (2017) and Mekonnen et al. (2017), having hypertension for more than 3 to 10 years is a predictor of medication adherence. A better understanding of health status, treatment goals, the consequences of missing doses, and attitudes toward hypertension treatment contribute to adherence (Mekonnen et al., 2017). During the first year of treatment, Lee et al. (2021) found that those nonadherent were younger, more likely to be women, and in the lower income quartiles. Initially, they had lower blood pressure and were less likely to be treated with combination antihypertensive therapy, but they had unhealthy lifestyles and more comorbid conditions.

Medication Variables Affecting Adherence

Medication Side Effects

The possible side effects of medications are a huge concern for AAs and can cause intentional nonadherence. A study by Shiyanbola et al. (2018) noted that AAs were fearful regarding how medications made them feel and whether they were effective. There were also
fears of taking the medication long-term and that the medication may do more harm than good, a fear that was ever-present (Shiyanbola et al., 2018)

Side effects are not the only medication-specific reason AA women may decide not to take a prescribed medication. It is no secret that there are racial and ethnic disparities in prescription patterns and medication use among AA women. Studies have shown that even medical students and residents hold false beliefs about biological differences in AAs that affect how they view and eventually decide to treat them (Hoffman et al., 2016). By the end of the residency, this belief remains. Common myths are that AAs have less sensitive nerve endings and thicker skin and that blood coagulates more quickly than that of White people (Hoffman et al., 2016). In any case, these play directly into what AAs fear in health care. Solomon et al.’s (2016) study indicates that AA women are less likely to use prescription drugs than White women, possibly because they are less likely to be prescribed medication.

Cost

Hypertension is the costliest of all cardiovascular diseases, with the focus shifting from inpatient to outpatient settings. Hypertension-associated health care costs account for about $131 billion (about $400 per person in the US) (Kirkland et al., 2018). Estimates predict that individuals with hypertension will face nearly $2,000 higher annual health care expenditure than their normotensive peers (Kirkland et al., 2018). This number has increased from the 2012–2013 amount of $1,494 (Zhang et al., 2017). AAs are more likely to report that they cannot see a doctor because of cost (African American Health, 2017). Heydari et al. (2014) demonstrated that adherence was more significant among patients older than 60 years and those aged 30–39 years, female, and married.

The income gap in 2016 demonstrated the median net worth of White households to be 9.7 times higher than that of AAs (Benavidez & Frakt, 2018). In a study by Teng et al. (2008),
race/ethnicity significantly predicted medication underuse due to lower income, higher out-of-pocket expenses, and lack of drug coverage. Tajeu et al. (2017) measured the costs and quality of life years (QALY) for hypertensives who were adherent or nonadherent to their hypertension medication regimen. They found that AA women without hypertensive treatment have a lifetime average cost of $63,268. AA women on antihypertensive medications have a lifetime average cost of $53,020, saving $10,248 with a gain of 1.79 QALY. The treatment of hypertension in AAs is more cost-effective than in the general population and improves QALY (Tajeu et al.).

**Polypharmacy**

Studies have demonstrated that the more complex the medication regimen is, the less adherent patients are to it (Hu et al., 2014). Polypharmacy is using multiple drugs to treat a single condition (Oxford Lexico, 2021). The treatment of hypertension usually starts with monotherapy; however, the provider may continue to adjust dosages and the number of medications used in order to achieve treatment goals. However, evidence has demonstrated that adherence wanes when a medication regimen is too complex (Jimmy & Jose, 2011). The causes of this nonadherence may be multifactorial, including confusion or misunderstanding of the regimen, feeling defeated by the disease, and medication costs. It was demonstrated in studies by Teshome et al. (2017) and Uchmanowicz et al. (2019) that patient adherence is higher when antihypertensives are prescribed as monotherapy or as one-tablet polytherapy.

**Spirituality in the Lives of AA Women**

When it comes to spirituality, it is translated as spirit or breath, while its essence is spiritual and immaterial (Murgia et al., 2020). Spiritually cultivating practices and attention proposes that the form provides residence for the spirit, and the spirit is the master of the form. They enjoy a complementary relationship and are essential elements of overall health. When the
form is in excellent condition, it can achieve healthy emotional and spiritual outcomes. Therefore, safeguarding the form provides a healthy spirit (Liu et al., 2012).

For AAs, spirituality is an amalgamation of the will to survive, history, culture, an enduring presence, and memories rooted across time that have left an indelible mark on the African diaspora (Marsh-Lockett & West, 2013). In slave cosmology (regarded as the genesis of AA culture/race, an outgrowth of the African presence in the new world), supernatural forces inherent in the carnal world were considered to connect the spiritual and material worlds. All encounters resulted from the supernatural or spiritual in which all humans had to engage to survive (Fett & Rinker, 2004). These encounters influenced health and healing concepts, practices, and ideas in slave communities. As part of a traditional community relationship, kinship emphasizes health, linking ancestors with living generations (Fett & Rinker).

The enslavement period witnessed attempts to destroy African and indigenous cultures, the sexual abuse of AA men and women, and their separation from their families (Musgrave et al., 2002). Spirituality was utilized as an outlet or escape with hopes of a higher power avenging, protecting, or providing strength. AA churches have always functioned beyond the scope of housing religious ceremonies. They have served as seats of resistance, providing economic empowerment, education, and a voice for their congregants through their leadership (Dessio et al., 2004).

In history, the trauma and violence of the new world caused religious syncretism and the development of diasporan spirituality and healing practices among displaced Africans. There are Voudou/Vodun practices in Haiti, Santeria in Cuba, Candomble in Brazil, Obeah in Jamaica, Quimbois in Martinique and Guadeloupe, and Hoodoo/Black Holiness in the United States (Marsh-Lockett & West, 2013, p. 4). Both Voodoo and Hoodoo were used by emancipated AAs and other poor people whose access to medical care was still inaccessible or unaffordable in the
postbellum South (Kolin, 2016). It took the form of root worker, conjurers, midwives, and treaters, whose roles included spiritual advisor and doctor (Samuel & Martin, 2012). A conjurer was considered a life force generator. To maintain a high standard of living that would ensure people reach their fullest potential, they needed to be present in the community (Samuel & Martin, 2012).

AAs suffered notorious neglect from health care systems and used traditional medicinal herbal treatments, spiritual guidance, and healing within their communities. Hoodoo’s medicinal herbalism was passed down as “home remedies” by tradition and could vary from region to region (Hazzard-Donald, 2012). Although Hoodoo, in its magical forms, went out of favor due to Christianity, was forced underground by the White church, and was hidden within Christian doctrine and practices, its herbalism continued to flourish while being written off as superstition by the mainstream. Its practice has been resurgent over the last few years (Araugo-Hawkins, 2021).

Since the establishment of American religious systems, 87% of AA women have sought refuge in churches, mosques, or community-based spiritual organizations (Segal et al., 2009). Overall, 97% of AA adults believe in God or a higher power, 61% report attending religious services a few times per year, 63% say they pray daily, and 60% attend religious services in all AA congregations (Mohamed et al., 2021). AA women stand out for their superior level of religious commitment; 84% say religion is vital to them, and 59% say they attend religious services at least once a week (Segal et al., 2009).

Unfortunately, belief and reliance upon a supreme being potentially increases the trust and expectation of divine healing instead of adherence to prescribed medications and treatments (Kretchy et al., 2013). Consequently, AA women’s health care outcomes have lagged for hundreds of years, and medication adherence continues to be a problem. A direct solution to
eradicating nonadherence issues may lie in capitalizing on unique aspects of this population, such as its need for spiritual atonement, attachment, recognition, and spiritual cultivation.

AA women participants suggested in a study by Shiyanbola et al. (2018) that spirituality needs to be considered in health care. A culturally sensitive perspective and approach are imperative for making a difference in the health care of AA women. Spiritual practices in the lives of AA women can connect intense innate spirituality to health care practices. Many AA women express the need to include their spirituality in health care services because they feel that spirituality is intrinsically connected (Delgado, 2005; Shiyanbola et al., 2018). There is a correlation between health-seeking behaviors and spirituality among these women.

Prayer is the most customary practice of self-help therapy among AAs (Dessio et al., 2003). Complementary alternative medicine use by AAs is higher than that by Whites when prayer is included (Robles et al., 2017). Spirituality is an essential factor in the lives of most AA women, and it is known to influence self-esteem, create a sense of belonging, and sustain valued health behaviors (Musgrave et al., 2002). In a study by Dessio et al. (2004), 42.8% of AA women reported using spirituality/religion in health care. The health care team’s ability to include SWB and self-efficacy assessments in clinical services is could propel the care plan for and increase adherence to antihypertensive medications by AA women. It could promote the patient–provider relationship, identify possible issues with medication adherence early on, and be a catalyst in continuing to provide culturally competent care.

**Religion vs. Spirituality Among AAs**

Despite cultural differences in beliefs and practices, AAs’ religious beliefs influence how health care is approached and treated. Most (79%) AAs are Christians, though several sects are active in communities (Masci et al., 2018). There is a distinct difference between religion and spirituality, although some use the terms interchangeably. Religion is a system of beliefs, rituals,
values, symbolism, and participation in a religious organization (Hamilton, 2020). In contrast, spirituality is viewed as more personal, with wide variations in practice and distinctly set apart from affiliations with organized religion.

By seeking meaning through dimensions of connectedness, spirituality involves answering questions about life, finding a connection with God, and making life’s experiences meaningful. It involves connecting with oneself, others, the environment, and God or another higher power according to the individual’s belief system (Hamilton, 2020). A profession in a particular religion is not needed to experience and express spirituality. AAs have clearly articulated that religion plays a significant role in health care, including patient–provider relationships, self-management, and coping strategies (Whitney et al., 2017). More recently, AA youth have begun to engage in spiritual practices, abandoning religious affiliation (Dill, 2017; Mohamed et al., 2021).

AA women experience a paradigm shift when diagnosed with a chronic disease; some will attempt to use home remedies or seek advice from trusted spiritual leadership before adhering to what health care providers recommend. They are more apt to include religious doctrine or spiritual practices in their informal health care practices and are generally open to including the practices more formally (Moore & Mary, 2020). For hypertensive AA women, spiritual cultivation as a part of lifestyle changes can entail rewarding practices that may increase medication adherence and overall health. It may also be complementary and align with long-held spiritual beliefs.

A qualitative study by Whitney et al. (2017) exploring the translation of a clinical diabetes education program into a faith-based education program for use in AA churches identified five themes: 1) faith as a motivator for health behavior change, 2) the integration of physical and spiritual health, 3) coping/stress, 4) the role of the church community and social
support, and 5) patient–provider communication. The expression and integration of these variables into daily life is the essence of SWB.

Foundational Concepts of Spiritual Well-Being Related to Health: Eastern vs. Western Medicine

Eastern Medicine

In traditional Eastern medicine (TEM), the belief is that mind and spirit are inseparable and that to have good health, one must have a good spirit (Shi & Zhang, 2012). The approach to medicine is holistic at its core. TEM posits that disease is due to an invasion by pathogens that destroy the harmony and coordination of yin, resulting in disharmony of form (body) and spirit (Liu et al., 2012). Yin is the passive feminine principle in nature exhibited in darkness, cold, or wetness (Augustyn, 2021). Cultivating spirituality/SWB is considered a necessary intervention since it is believed that those with spirit live while those without spirit die (Zhan-wen, 2012). It is possible to categorize spirituality into cultivating with peace and tranquility, four seasons, continence, spirit regulation with culture, and spirit exercising with qigong (Zhan-wen).

Yang sheng is another element of SWB in TEM. Light, heat, and dryness are examples of yang, the masculine, active principle in nature. Its representative organs are the small and large intestines, gall bladder, stomach, and urinary bladder (Augustyn, 2021). Yang involves nurturing, nursing, caring for, fostering, or promoting health. Sheng means life, birth, growth, vitality, and health. Yang sheng together refers to the pursuit of longevity, nourishment of life, and fostering health and well-being. Yin and yang combined make up the totality of us all in this paradigm (Ng et al., 2014).

Western Medicine

Historically, societal and historical contexts ingrained in Western conceptions of spirituality influenced the emergence of spirituality as a concept, including cultural dimensions,
religious and spiritual traditions, ethnic diversity, and historical and social contexts (Murgia et al., 2020). Presently, Western medicine is considered incomplete and immature (Attena, 2016). It lacks the epistemology from which clinical knowledge derives. The integration of epistemic concepts such as indeterminism, holism, and vitalism provide a more comprehensive, systematic explanation to complement the reductionist approach in Western medicine. Despite their prominence within Western medicine, these concepts need a sound epistemological foundation (Attena, 2016).

Plants and herbs were used at the foundation of Western medicine. However, as technology and science expanded, modern, scientific explanations of pathology replaced prescientific holistic approaches to medicine (Mantri, 2008). Hippocratic-Galenic medicine was first conceived during the early days of medicine as an integrative system, proposing that the relationship between a patient’s body, mind, and personality and the outside world was synergistic. However, physiology began to be viewed as the product of mechanized organ interactions by 1628.

The impact of technology and pathologic anatomy on medicine was pervasive. The uninitiated patient was excluded from the burgeoning medico-scientific dialogue, which silenced the patient’s voice so central to Hippocratic cosmology. As a result, the physician gained control over the body (Mantri, 2008). Only recently has Western medicine begun to realize its need for balance and to understand that there is an element of individuality to illness and a universal side to disease etiology (Attena, 2016). There is a slow tide moving toward holistic treatment.

**Spiritual and Religious Well-Being**

There is a positive correlation between SWB and quality of life (Ali et al., 2015). Although there is no universal definition of spirituality across pantheons, SWB can be measured and defined. SWB deals with a person’s core, and it can be a source of happiness or unhappiness
and affect how they deal with stress and illness, how they perceive their sense of support, and their resilience (Chirico, 2016). High SWB positively influences the immune, endocrine, cardiovascular, and nervous systems (Chirico, 2016). Mill et al. (2015) demonstrated that gratitude (a warm feeling of thankfulness toward the world or toward specific individuals) partially mediates the relationship between SWB and self-efficacy.

In illness, SWB “is a concept of finding spiritual meaning in the experience” (Prashanth, 2018, p. 79). In SWB, the middle range theory focuses on “identifying, supporting, and strengthening the impact of spiritual resources on illness and disability” (p. 79). Most people’s perceptions of SWB are influenced by their spiritual and religious beliefs, attitudes, and behaviors. These usually include a belief in God, confidence in God’s power, strength received from faith beliefs, peace found in spiritual and religious beliefs, trust in provisions from God, spiritual contentment, satisfaction in one’s faith, a feeling of closeness to God, security in God’s love, lack of fear, support of the faith community, reconciliation to God, consolation in prayer, and communication with God through religious practices, to name a few (Prashanth).

There is an association between religious and spiritual coping and a lower risk of hypertension among AA women, especially those who report high levels of stress (Cozier et al., 2018). According to Ninian Smart, religion has seven dimensions: narrative/mythological, doctrinal, ethical, institutional, material, ritual, and experiential. Essentially, narrative refers to a religion’s foundational stories, while ethics refers to its rules or laws (Newman, 2018).

In most AA communities, religious doctrine and beliefs were passed down, and high church attendance and ritualistic religious activity were hallmarks (Mohamed et al., 2021). Churches and schools were built in the South as a result of missionary efforts by AA ministries. By 1900, Black literacy in the South had increased from 5% to approximately 70%. As in the North, many AA leaders were active in politics outside the sphere of the church, though the
church was the hub of spiritual and social well-being for its community. AA churches—and later mosques—served as important sites of racial solidarity, civic engagement, and RWB during the time of segregation, as well as sources of inspiration and hope for their community (Mohamed et al.).

**Self-Efficacy for Appropriate Medication Use**

Self-efficacy is a person’s belief in their capacity to execute specific behaviors despite circumstances (Bandura, 1994). Self-efficacy includes physical and emotional states (anxiety, stress, arousal, and mood experienced when contemplating an action) (Resnick, 2018). Self-efficacy is a mutable trait amenable to intervention (Warren-Findlow et al., 2011). Good self-efficacy is significantly associated with medication adherence, consuming a low-salt diet, engaging in physical activity, not smoking, and practicing good weight management techniques for AAs with hypertension (Warren-Findlow et al., 2011). Behavioral change is highly dependent on self-efficacy, and it is increasingly recognized as a crucial component of disease management (Risser et al., 2007).

The role of SEAM is a critical factor when collaborating on care pathways for AA women with hypertension. Self-efficacy and sufficient social support are potent predictors of medication adherence (Lewis & Ogedegbe, 2008). Spiritual and religious well-being (SWB and RWB), SDOH, and SEAM could be the missing link in the model, which may move the agenda forward to improved medication adherence for AA women with hypertension.

**Research Gap**

Many studies have sought to increase medication adherence by AAs. Interventions have included cognitive-behavioral counseling, medication therapy management, motivational interviews, peer counseling, single and group sessions, home visits, handouts, telephone calls, and reminder devices (Hu et al., 2014). However, only some studies have sought to understand
the relationships among SWB, RWB, and SDOH with SEAM in AA women with hypertension. In addition, there is little research on social factors affecting AA women’s medication adherence.

Health-promoting resources and opportunities to address SDOH are subject to many upstream factors, such as governance, policy, and cultural norms and values, that are beyond the individual’s control (Crear-Perry et al., 2021). While consistent, there is debate over the causal relationship between social conditions and health outcomes and the most effective ways to address disparities in health outcomes between groups.

US health care systems have not holistically acknowledged the roles that SWB, RWB, and SDOH with SEAM may have in AA women’s lives and how their inclusion in guidelines, recommendations, or practice standards may affect health care–driven outcomes (Banerjee et al., 2016). Health care still needs to successfully implement or assess the healthy behaviors recommended as part of hypertension management. Nor has it implemented nonpharmacological, system-wide interventions that research has proven to improve outcomes for AA women diagnosed as having hypertension (Balfour Jr et al., 2015; Kang et al., 2018; Long et al., 2017).

Current suggested strategies to increase medication adherence by AA women from a health care system approach include full prescription coverage, reduced copayments, fixed-dose combination therapy, and counseling (Banerjee et al., 2016). There is, however, no mention of the SWB and self-efficacy of AA women or the impact that SDOH might have on their adherence to medication. It is unknown whether SWB and self-efficacy affect medication adherence among AA women with hypertension.

Through assessing, emphasizing, planning interventions, and implementing care based on related findings, hypertensive AA women may be better able to communicate and emphasize their need for holistic treatment encompassing their SWB, RWB, SDOH, and ultimately SEAM. By examining SWB, RWB, and SDOH with SEAM at the point of care for AA women with
hypertension, this study contributes to the growing body of evidence concerning these factors in health care. Related issues have yet to be explored as health care practitioners seek to address health disparities and to increase medication adherence by AA women (Figure 1).

**Theoretical Framework**

The perspectives utilized in the present study are Bandura’s theory of self-efficacy and Paloutzian’s SWB and quality of life conceptual framework. A person’s self-efficacy is determined by their motivation, actions, and feelings, which all contribute to their belief that they will achieve a goal (Bandura, 1994). The theory describes observed and expected phenomena and has been widely used to research human behavior in various settings. Human activity is theorized to be shaped by belief in self-efficacy (Bandura et al., 2011). The theory has been applied to medical and nursing research involving professionals, students, and patients. More specifically, it has been used as a framework for research on health equity, professional settings, and health behaviors, to name a few areas.

According to Bandura (1994), self-efficacy beliefs affect four processes: motivational, cognitive, affective, and selection. The theory indicates that people with high confidence in their abilities approach a complex task as a challenge to be mastered instead of avoiding it. In contrast, people with low self-efficacy avoid tasks seen as complicated or not readily achievable. As applied to this study, this theory holds that one would expect the independent variable of SWB to influence the dependent variable of self-efficacy. The theory suggests that SWB in AA women will influence self-efficacy, which, in turn, will influence appropriate use of their medication.

Paloutzian conceptualized SWB and quality of life by assuming that a person’s past social interactions and current social experiences significantly influence their perceived quality of life. SWB was found to have two dimensions. One dimension is vertical and refers to a person’s sense of well-being with God, while the other is horizontal, that is, it is one’s perception
of what life is all about apart from any particular religious preference (Paloutzian & Ellison, 1982). An individual’s sense of well-being should be considered in a comprehensive care plan, according to Paloutzian. The priority of a person’s SWB should increase with the severity of the illness.

My approach both acknowledges the prevalence of hypertension and the rich tradition among AA women of combining spiritual practices with health care and recognizes the burden their role in the community has taken on their health care as well as their health care practices.
Study Questions and Hypotheses

Within this context, the following questions are asked: (1) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SWB and RWB? The hypothesis for this question is that these SDOH are associated with SWB and RWB. (2) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SEAM? The hypothesis for this question is that these SDOH are associated with SEAM. (3) Are SWB and RWB associated with SEAM? The hypothesis for this question is that SWB and RWB are associated with SEAM.
Chapter 3: Methods

This research study aimed to examine relationships among SDOH, SWB, RWB, and SEAM in AA women with hypertension. This chapter discusses the study design, methodologies, sample, variables, recruitment, and data collection procedures. In addition, an explanation of the analytical procedures is provided. SDOH, SWB, and RWB were analyzed using a regression model to determine the best predictors of SEAM. A two-tail hypothesis test with a $p$-value of .05 was used to determine the significance of the findings.

Operational Definitions

The variables and instruments used for the analysis are described in Table 1. Operationally, African American (AA) is defined as a Black person in the US of African descent, specifically Black African descent (US Census Bureau, 2021). There has been official recognition of this term since 1988. In this study, participants self-identified as AA.

The term woman refers to a person born with a sex assigned to her as female (Magliozzi et al., 2016). According to social scientists, sex is a relatively permanent part of biology that determines one’s gender (Phillips, 2005). Operationally, it is self-reported as female at birth.

Social determinants of health (SDOH) are factors of birth, growth, employment, aging, and living that influence health equity (WHO, 2022). The determinants used in this study are age, level of education, household income, marital status, and insurance status. These variables correspond to the five critical domains outlined by the AHRQ (2022): social context (age, race/ethnicity), economic context (income), education, physical infrastructure (inferred based on income), and health care context (health insurance). Social factors identified by the National Academies of Sciences, Engineering, and Medicine (2016) were socioeconomic position, race, ethnicity, cultural context, gender, social relationships, and residential and community context.
The concept of *spiritual well-being* (SWB) refers to the ability to experience and integrate meaning and purpose in life through connecting with the self and a power greater than oneself (Srivastata, 2018, para. 2). The operational definition of SWB is the score on Paloutzian’s SWB scale.

Religion entails a strong belief in a supernatural power that exists beyond one’s self. Usually, it involves participation in a religious organization and rituals, values, beliefs, and symbols (Hamilton, 2020). *Religious well-being* (RWB) is operationally defined by the score received on the RWB subscale in Paloutzian’s SWB scale.

Self-efficacy is a person’s belief in their ability to execute certain actions to produce specific results (Bandura, 1994). *Self-efficacy for appropriate medication use* (SEAM) is operationally defined as the confidence a person has that they will take their medication under certain or changing conditions. The operational definition of this self-efficacy is the Self-efficacy for Appropriate Medication Use Scale (SEAMS) score (Risser et al., 2007).

*Hypertension* is a health condition in which the force of blood pushing up against the blood vessels is consistently too high (AHA, 2016). Operationally it is defined as a blood pressure greater than a systolic BP of 130 mmHg or a diastolic BP of 80 mmHg (AHA).
Table 1

Variables and Measurements

<table>
<thead>
<tr>
<th></th>
<th>Variable</th>
<th>Instrument</th>
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<tbody>
<tr>
<td>1</td>
<td>SDOH</td>
<td>Online Survey</td>
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<tr>
<td>2</td>
<td>SWB</td>
<td>Spiritual Well-Being Scale Online Survey</td>
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<tr>
<td></td>
<td>RWB</td>
<td>Spiritual Well-Being Scale Online Survey</td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td>4</td>
<td>SEAM</td>
<td>Self-Efficacy for Appropriate Medication Use Scale Online Survey</td>
</tr>
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</table>

Note. SDOH = social determinants of health; SWB = spiritual well-being; RWB = religious well-being; SEAM = self-efficacy for appropriate medication use.

Study Design

A cross-sectional correlational design was used to explore the relationships examined in this study. In this design, data were collected at a single time point, which made it relatively inexpensive and less time-consuming compared to other types of research. It was possible to collect data from a large pool of subjects and compare differences between groups (Setia, 2016).

Population and Sample

This study’s target population was AA women older than 21 years diagnosed as having hypertension and who were prescribed medication for at least 1 year. The inclusion criteria were participants who self-reported 1) as an AA woman, 2) hypertension diagnosis, 3) prescribed medication(s) for the treatment of hypertension for at least 1 year, and 4) age >21 years. Exclusion criteria included 1) non-English speaking, (2) more than three diagnosed comorbidities, or (3) illiteracy or cognitive impairment— inability to complete the survey without assistance.
Purposive sampling was used. Purposive sampling is a non-probability approach that was appropriate for this study because the target population was women who fit the inclusion criteria. It is the most cost-effective and time-efficient sampling method. Research questions can be addressed by finding the cases, individuals, or communities that are best suited for answering them. The limitation of this technique is that it is difficult to estimate bias in the sample, which reduces the generalizability of the findings.

**Procedure**

This section explains the study’s procedure in detail. It describes the methods used to recruit participants, validity measurement, data collection, the instruments used, privacy and confidentiality, quality control, and ethical considerations.

All efforts were made to obtain a representative sample of the target population to improve the study’s validity. In order to accomplish this, community-based organizations that work to improve women’s health and well-being were contacted. The focus was on AA women because AAs are not only among the most nonadherent patients in hypertension care, but also most at risk of developing complications associated with hypertension (Balfour et al., 2015; Braverman & Dedier, 2009; CDC, 2017; Nesbitt & Victor, 2004). Power analysis was used to identify sample size.

**Data Collection**

The survey was conducted online. AA women were recruited from Chi Eta Phi Sorority, Inc., a predominantly Black organization (Appendix E). Participants were also recruited from Church Health Center, a faith-based community clinic (Appendix F), and community service networking events.

Each organization’s appropriate point person was contacted, and permission was obtained to distribute the survey to their membership. A link was sent via email blast to Chi Eta Phi
members inviting them to take the survey. Participants could access a QR code or link at Church Health Center. A QR code or link to the survey was distributed to community members during networking events. By clicking on the link or scanning the QR code, they were directed to a document describing the survey, its risks and benefits, and a consent form. Without consent, viewers were taken to the survey’s end. Those who consented moved on to the survey questions. Those who did not meet the inclusion criteria were taken to the end of the survey, where they were thanked for participating. It took approximately 20 minutes to complete the survey, which included 50 questions. There was no way to skip questions.

Data were initially available in the Qualtrics online system and downloaded to the University of Memphis OneDrive, an Internet-based storage platform by Microsoft. The university provided the Statistical Package for Social Sciences (SPSS) for statistical analysis. Qualtrics and the research folder on OneDrive containing survey results were available to faculty advisors and committee members. Although the principal investigator is responsible for the information, the advisor and committee members had access to both.

Measures

**Spiritual Well-Being and SEAMS**

The SWB scale and SEAMS were used to collect, measure, and analyze the data. The SWB scale was selected for its ability to distinguish between SWB and RWB. It allows the direct measurement of spirituality. The SEAMS was selected since it measures medication self-efficacy in chronic disease management. A total scale score and two subscale scores distinguish self-efficacy for taking medication under challenging circumstances from self-efficacy for continuing to take medication under uncertain circumstances. This study used the total score. When these instruments were analyzed together, they addressed the research question of whether SWB and SEAM are associated with hypertension in AA women.
Social Determinants of Health

The SDOH collected via survey included age and marital status (single, living with a partner, married, widowed, divorced, or separated). Another variable was household income (defined as <$20,000 [below or near the poverty line], $20,000–$44,999 [low income], $45,000–$139,999 [middle class], $140,000–$149,999 [upper middle class], $150,000–$199,000 [high income], and >$200,000 [highest income bracket]) (Congressional Research Service & Elwell, 2014; Pew Research Center, 2015). Educational status was less than high school diploma; high school diploma or equivalent (e.g., general educational development (GED); some college but no degree; college graduate; or technical school. Insurance status was insured, yes or no. The majority of these variables were from the Healthy People 2030 categories. Race, ethnicity, gender, and social relationship status were from social categories identified by the National Academies of Sciences, Engineering, and Medicine (2016).

Co-variates

Other demographic variables included the region of the US the respondent was originally from (West, South, Midwest, New England, Mid-Atlantic, or Southwest); number of children; religious preference (Christian, Buddhist, Hindu, Muslim, Jewish, Sikh, no religion [atheist or agnostic], and any other religion with a free text box) (Pew Research Center, 2021). Whether respondents considered themselves spiritual, religious, or neither, this variable describes spiritual and religious (non)beliefs. Medication-specific variables included how long they had been prescribed antihypertensive medication (1–4 years, 5–9 years, 10–14 years, 15 or more years) and how many pills they were prescribed to take daily.

Exposure Measurement

Raymond Paloutzian created the SWB scale (Appendix A). It measures the subjective state of well-being and has good face validity. It measures perceived spiritual and existential
states (Paloutzian & Ellis, 2009). There are religious and non-religious connotations of the term “God.” For this reason, the scale is nonsectarian and is composed of two subscales: an RWB scale and an existential well-being (EWB) scale. It is delineated by scores of 20–40, which demonstrate low SWB; 41–99, showing moderate SWB; and 100–120, which indicate higher SWB (Paloutzian & Ellis).

For the SWB scale, the test–retest reliability coefficients across four studies, with 1–10 weeks between testing, were .93, .99, .99, and .82. The index of internal consistency, coefficient alpha, also showed high reliability. Across seven samples, the internal consistency coefficients ranged from .89 to .94 for SWB, .82 to .94 for RWB, and .78 to .86 for EWB (Paloutzian & Ellis, 2009). The SWB scale is a good indicator of a lack of well-being. SWB, RWB, and EWB are correlated positively with a sense of purpose in life, a positive self-concept, emotional adjustment, and physical health. Negative correlations are observed with bad health, emotional maladjustment, and lack of purpose in life (Paloutzian & Ellis).

The SWB scale is a 20-item instrument that takes 15 minutes to complete. It was self-administered and deployed electronically. The items are answered on a 6-point Likert-like scale. The endpoints of the responses are the phrases “Strongly Agree” and “Strongly Disagree,” with appropriate progressions in between. Ten statements assess RWB and contain the word “God,” while the other ten assess EWB and have no religious connotation. Half the items are worded negatively to control for any response bias (Paloutzian & Ellis, 2009, p. 5). For this study, only the RWB and SWB scores were utilized. Permission was received to use the scale (Appendix G).

Outcome Measurement

As the outcome measurement, self-efficacy for appropriate medication use was measured by SEAMS (Appendix B). It was designed to help health care providers understand and approach medication adherence in patients with low literacy skills. According to its authors, using it in
academic research does not require a license or cost. The scale measures two aspects: self-efficacy for taking medications under challenging circumstances (factor 1; items 1–7) and self-efficacy for continuing to take medications under uncertain conditions (factor 2; items 8–13). It can be used with various chronic illnesses and across various levels of literacy. The scale has 13 questions that use a 3-point response approach (1 = not confident, 2 = somewhat confident, 3 = very confident). The scale takes approximately 5 minutes to complete.

Psychometric analysis determined that the overall scale is reliable and valid, with a strong correlation with self-reported medication adherence. Correlations ranged from .20 to .71; item–total correlations were high; and Cronbach’s alpha was .89, according to reliability analysis (Risser et al., 2007). Across the scale and subscales, the mean interitem correlations are .38, .46, and .39, respectively. Factor analysis revealed the two-factor solution in the scale with item correlations ranging from .15 to .72. The test–retest reliability of the 13-item scale was adequate (Spearman’s $\rho = .57, p = .0001$).

**Privacy and Confidentiality**

HIPAA (Health Insurance Portability and Accountability Act of 1996) policies were followed by the researcher while handling and sharing data. The researcher used the Qualtrics online survey system to maintain the privacy of individual participants. Responses to the survey were assigned a numeric code by default, and the survey was set to anonymous. SPSS provided the numeric codes in shorthand form, and the text of the responses was used as value labels. This simplified data analysis. Passwords protected the researcher’s computers. No personal information was collected from the data to protect the privacy of participants.

Presentations based on the results of this study do not provide any identifying information about the participants. As part of their responsibilities in protecting the rights and welfare of participants, the institutional review board (IRB) for the University of Memphis may
review the data as needed. The research data were not used or disclosed to any other person or entity unless required by law or for authorized oversight of this research study by other regulatory agencies or other research that the IRB has approved as ensuring confidentiality. Data will be retained for 3 years after submission of all required reports and publications, research, and other special reports.

**Quality Control Plan**

Using the online survey system Qualtrics, the survey was distributed electronically across the US. The survey was set to anonymous; therefore, no internet protocol (IP) addresses or global positioning system (GPS) coordinates were stored, and no identifying information was gathered. The data were downloaded to the University of Memphis OneDrive platform. Access to the drive is limited to the investigator and password protected. The information may be used for subsequent studies as needed.

Using mandatory or required fields for primary, prospective data collection dramatically reduced the amount of missing data for key variables (AHRQ [US] et al., 2018). In designating fields as required, the focus was on those data elements necessary to answer the primary research question. Information collected for secondary objectives or to support subgroup analyses did not have a hard stop.

**Data Analysis**

The statistical software IBM SPSS for Windows (version 28) was used for statistical analysis. Descriptive statistics were calculated to describe the study’s sample, including means, standard deviations (SDs), and 95% confidence intervals for continuous variables. Regression analysis was used to assess the adjusted associations among SDOH, SWB, and RWB with SEAM. For each exposure, a 95% confidence interval was calculated. Significance was determined by a $p$-value of .05 and a two-tailed hypothesis test. The instruments were analyzed
according to the instructions provided, and total scores were calculated for each scale along with their means and SDs.

Missing information was identified. One age variable was missing in the survey, for which the mean age of survey participants was used. Nine surveys contained only demographic data and were removed from the analysis. A total of 12 questions were missed across all scales. For each of these items, the mean value of responses was entered.

**Limitations**

A threat to external validity is its generalizability. Non-probability sampling methods are often used for convenience. However, a consequence is that results can only be generalized to populations that have characteristics similar to those of the sample. In addition, selection bias is a limitation of purposive sampling and a threat to internal validity. It is a distortion caused by the sample selection process that alters the measure of association in a way that is not representative of the studied population. In order to limit this threat, multiple settings were used, which increased the sample size. Another potential threat to internal validity is history (where an unrelated event influences the outcomes). If a participant experienced a stressful or “altering” event before taking the survey, it may have influenced their answers to the questions on either scale. Finally, threats to construct validity include participants answering based on their awareness of their role in the study. To address this, pre-tested and validated instruments were used.

Because of the small sample size, results may be nonsignificant due to a lack of power. An effect may need to be stronger to establish a significant relationship, the relationship may not be linear, or random variation may be too large for the identification of a clear, significant relationship. Small sample sizes can undermine the validity of a study (Polit & Beck, 2017).
Small differences in very large samples can also be statistically significant—even if they are not clinically significant.

With the SWB scale, religiously conservative samples can experience a ceiling effect (Paloutzian et al., 2012). For the SEAMS, a statistically significant correlation was not found between the scale and blood pressure or glycemic control; however, the scale is valid regarding self-reported adherence (Risser et al., 2007). In addition, no previous studies have investigated SWB and SEAM related to SDOH among AA women. Thus, the study may be limited by insufficient sample size and a lack of previous research on the topic, in addition to a lack of time.
Chapter 4: Results

In this chapter, the results of the study are presented along with their statistical analyses. This study aimed to examine the relationship between SDOH, SWB, RWB, and SEAM in AA women with hypertension by using a cross-sectional design. The results presented here address each research question, and a hypothesis test and an outcome accompany each question. The study’s questions asked as follows: (1) Are SDOH, namely age, education level, household income, and marital and insurance status, associated with SWB and RWB? (2) Are SDOH associated with SEAM? (3) Are SWB and RWB associated with SEAM?

Sample Description

The recruitment of AA women who met the inclusion criteria occurred between February and October 2022 through social networks, women’s organizations, community clinics, and networking events. As shown in Table 2, the demographics of the women are summarized based on frequencies and percentages.

In all, 187 AA women with hypertension with an average age of 57.34 (SD = 12.89) years participated in the survey. In 85.6% (n = 160) of households, a child or children were present. With regard to belief, 93.6% (n = 175) identified as Christian, while 4.8% (n = 9) were atheist or agnostic; 64.7% (n = 121) considered themselves both religious and spiritual, while 10.7% (n = 20) were religious and 23% (n = 43) were spiritual. Overall, 46.5% (n = 87) were married, 20.9% (n = 39) were single, and 18.7% (n = 35) were divorced. A total of 97.3% (n = 182) had health insurance. Among the women, 48.7% (n = 91) earned a middle-class income of between $45,000 and $139,000, whereas 17.6% (n = 33) earned between $150,000 and $199,000. Most (64.2%, n = 120) came from the South, while 12.8% (n = 24) came from the Mid-Atlantic and 11.8% (n = 22) from the Midwest. College graduates accounted for 87.8% (n =
164) of the women. The survey indicated that 20.3% \( (n = 38) \) of the women had hypertension for 5–9 years, 15.5% \( (n = 29) \) for 10–14 years, and 42.8% \( (n = 80) \) for 15 or more years.

### Table 2

**Sociodemographic Characteristics of Participants**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>( N = 187 )</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>39</td>
<td>20.9</td>
</tr>
<tr>
<td>Married</td>
<td>87</td>
<td>46.5</td>
</tr>
<tr>
<td>Divorced</td>
<td>35</td>
<td>18.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>20</td>
<td>10.7</td>
</tr>
<tr>
<td>Separated</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td>Lives With Partner</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Health Insurance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>182</td>
<td>97.3</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$20,000</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td>$20,000–$44,999</td>
<td>24</td>
<td>12.8</td>
</tr>
<tr>
<td>$45,000–$139,999*</td>
<td>91</td>
<td>48.7</td>
</tr>
<tr>
<td>$140,000–$149,000</td>
<td>21</td>
<td>11.2</td>
</tr>
<tr>
<td>$150,000–$99,000</td>
<td>33</td>
<td>17.6</td>
</tr>
<tr>
<td>&gt;$200,000</td>
<td>14</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Educational Attainment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;High School</td>
<td>5</td>
<td>2.7</td>
</tr>
<tr>
<td>High School or GED</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Some College</td>
<td>14</td>
<td>7.5</td>
</tr>
<tr>
<td>College Graduate</td>
<td>164</td>
<td>87.7</td>
</tr>
<tr>
<td>Technical School</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Religious Preference</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>175</td>
<td>93.6</td>
</tr>
<tr>
<td>Atheist or Agnostic</td>
<td>9</td>
<td>4.8</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.6</td>
</tr>
</tbody>
</table>

*Note. * This range is considered middle class according to the Pew Research Center (2015).
Table 2 Continued

Sociodemographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N=187</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious vs. Spiritual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>20</td>
<td>10.7</td>
</tr>
<tr>
<td>Spiritual</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td>Religious and Spiritual</td>
<td>121</td>
<td>64.7</td>
</tr>
<tr>
<td>Neither</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>2</td>
<td>1.1</td>
</tr>
<tr>
<td>Not Hispanic/Latino</td>
<td>185</td>
<td>98.9</td>
</tr>
<tr>
<td>Have Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>160</td>
<td>85.6</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>14.4</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The West</td>
<td>6</td>
<td>3.2</td>
</tr>
<tr>
<td>The South</td>
<td>120</td>
<td>64.2</td>
</tr>
<tr>
<td>The Midwest</td>
<td>22</td>
<td>11.8</td>
</tr>
<tr>
<td>New England</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Mid-Atlantic</td>
<td>24</td>
<td>12.8</td>
</tr>
<tr>
<td>Southwest</td>
<td>8</td>
<td>4.3</td>
</tr>
<tr>
<td>Length of Time on Antihypertensives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>12</td>
<td>6.4</td>
</tr>
<tr>
<td>1–4 years</td>
<td>28</td>
<td>15.0</td>
</tr>
<tr>
<td>5–9 years</td>
<td>38</td>
<td>20.3</td>
</tr>
<tr>
<td>10–14 years</td>
<td>29</td>
<td>15.5</td>
</tr>
<tr>
<td>≥15 years</td>
<td>80</td>
<td>42.8</td>
</tr>
</tbody>
</table>

Spiritual Well-Being Scores

The SWB scale provided three primary scores: measures of total SWB, RWB (subscale), and EWB (subscale). Table 3 shows the frequencies and percentages of scores for each measure. For each scale, a higher number represents greater well-being; items containing negative connotations were reverse scored. The total score for SWB is the sum of positively and negatively worded items. Scores of 20–40 indicate a low overall sense of SWB, 41–99 indicate a
moderate sense of SWB, and 100–120 indicate a high sense of SWB (Paloutzian & Ellis, 2009). One participant indicated a low sense of well-being; a moderate sense was indicated by 186; and a high sense was indicated by none of the women. Mean SWB score was 65.57 (SD 6.50).

**Religious Well-Being Scores**

An individual’s RWB score indicates how they view their relationship and sense of satisfaction with God. Ten statements assessed RWB and contained the word “God.” Each item was scored between 1 and 6. The odd-numbered items of the scale are added to give the total. A total score between 10 and 20 indicates little to no satisfaction with one’s relation to God; 21–49 indicates a moderate sense of RWB; and 50–60 indicates a sense of satisfaction with one’s relationship with God (Paloutzian & Ellis, 2009). In this study, two women indicated an unsatisfactory relationship with God, and none indicated a high sense of satisfaction with their relationship with God. The majority expressed moderate satisfaction with their relationship with God. Raw scores (M = 30.00, SD = 4.03) were used for statistical analysis.

**Self-Efficacy for Appropriate Medication Use Scores**

Medication adherence is influenced by self-efficacy, which is one’s belief in the ability to accomplish tasks. In this study, women were asked to indicate the degree of confidence they had in taking their medication correctly under specific circumstances, as well as their level of confidence in taking it correctly under different circumstances; (1 = not confident, 2 = somewhat confident, and 3 = very confident). This 13-item scale had a potential score range of 21 to 63. The higher the score, the higher the self-efficacy in medication adherence (Risser et al., 2007). In the study, 78 women scored as not confident, 109 scored as somewhat confident, whereas no women scored as very confident. Analyses were conducted using raw scores (M = 33.99, SD = 5.72) (Table 4).
Table 3

Spiritual Well-Being, Religious Well-Being, and SEAM Score

<table>
<thead>
<tr>
<th>Category</th>
<th>$n = 187$</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spiritual Well-Being</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–40 Low</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>41–99 Moderate</td>
<td>186</td>
<td>99.5</td>
</tr>
<tr>
<td>100–120 High</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Religious Well-Being</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–20 Low Satisfaction</td>
<td>2</td>
<td>1.1</td>
</tr>
<tr>
<td>21–49 Moderate</td>
<td>185</td>
<td>98.9</td>
</tr>
<tr>
<td>50–60 High</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Self-Efficacy for Appropriate Medication Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Confident</td>
<td>78</td>
<td>41.7</td>
</tr>
<tr>
<td>Somewhat Confident</td>
<td>109</td>
<td>58.3</td>
</tr>
<tr>
<td>Very Confident</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. SEAM = self-efficacy for the appropriate use of medications.

Hypothesis Testing Results

This section presents the results according to the three research questions and the three hypotheses.

Social Determinants of Health and Spiritual and Religious Well-Being

The first research question is whether SDOH (i.e., age, level of education, household income, and marital and insurance status) is associated with SWB and RWB. The working hypothesis for this question is that SDOH are associated with SWB and RWB.

The results of the regression suggest that SDOH and SWB explain only 1.6% of the variance, $R^2 = .016$, $F(5,181) = .599, p = .70$, and SDOH and RWB explain only 1.5%, $R^2 = .147$, $F(5,181) = .802, p = .549$. None of the tested variables are associated with SWB (Table 4) or RWB (Table 5). In this instance, the SDOH age, level of education, household income, and marital and insurance status have no statistically significant relationship to SWB or RWB.
Table 4

Associations Among SDOH and SWB

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>95% CI LL</th>
<th>95% CI UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDOH and SWB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−0.017</td>
<td>0.040</td>
<td>−0.426</td>
<td>.671</td>
<td>−0.165</td>
<td>0.122</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.364</td>
<td>0.494</td>
<td>0.737</td>
<td>.462</td>
<td>−0.086</td>
<td>0.200</td>
</tr>
<tr>
<td>Household Income</td>
<td>0.235</td>
<td>0.434</td>
<td>0.540</td>
<td>.590</td>
<td>−0.073</td>
<td>0.213</td>
</tr>
<tr>
<td>Education Level</td>
<td>0.980</td>
<td>0.897</td>
<td>1.093</td>
<td>.276</td>
<td>−0.040</td>
<td>0.244</td>
</tr>
<tr>
<td>Health Ins. Status</td>
<td>1.056</td>
<td>3.103</td>
<td>0.340</td>
<td>.734</td>
<td>−0.143</td>
<td>0.144</td>
</tr>
</tbody>
</table>

Note. SDOH = social determinants of health; SWB = spiritual well-being (dependent variable). B = unstandardized beta; SE = standard error. LL = lower limit; UL = upper limit.

Table 5

Associations Among SDOH and RWB

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>95% CI LL</th>
<th>95% CI UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDOH and RWB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.006</td>
<td>0.025</td>
<td>0.253</td>
<td>.800</td>
<td>0.042</td>
<td>0.055</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.251</td>
<td>0.305</td>
<td>0.823</td>
<td>.412</td>
<td>−0.351</td>
<td>0.854</td>
</tr>
<tr>
<td>Household Income</td>
<td>0.125</td>
<td>0.305</td>
<td>0.466</td>
<td>.642</td>
<td>−0.405</td>
<td>0.655</td>
</tr>
<tr>
<td>Education Level</td>
<td>0.681</td>
<td>0.554</td>
<td>1.229</td>
<td>.221</td>
<td>−0.412</td>
<td>1.774</td>
</tr>
<tr>
<td>Health Ins. Status</td>
<td>2.00</td>
<td>1.907</td>
<td>1.049</td>
<td>.296</td>
<td>−1.762</td>
<td>5.763</td>
</tr>
</tbody>
</table>

Note. SDOH = social determinants of health; RWB = religious well-being (dependent variable). B = unstandardized beta; SE = standard error. LL = lower limit; UL = upper limit.

SDOH and SEAM

The second question asks whether the SDOH age, level of education, household income, or marital or insurance status is associated with SEAM. The working hypothesis for this question is that these SDOH are associated with SEAM.

The regression results demonstrated that the model explains 1.5% of the variance, $R^2 = .015$, $F(5,181) = 6.378$, $p < .001$, with a positive correlation. In this instance, there is a statistically significant relationship between the SDOH age and level of education with SEAM.
The relationships between health insurance status and marital status are nonsignificant. The correlation is insignificant relative to the standard alpha level of .05; however, the $p$-value for household income (.077) was below .10. For each change to a lower household income group, SEAMs decreased by −0.637%.

**Table 6**

*Associations Among SDOH and SEAM*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>SE</th>
<th>$t$</th>
<th>$p$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LL     UL</td>
</tr>
<tr>
<td>Age</td>
<td>0.147</td>
<td>0.032</td>
<td>4.552</td>
<td>&lt;.001*</td>
<td>0.084 0.211</td>
</tr>
<tr>
<td>Marital Status</td>
<td>−0.481</td>
<td>0.404</td>
<td>−1.190</td>
<td>.236</td>
<td>−1.277 0.316</td>
</tr>
<tr>
<td>Household Income</td>
<td>−0.637</td>
<td>0.355</td>
<td>−1.795</td>
<td>.074</td>
<td>−1.338 0.063</td>
</tr>
<tr>
<td>Education Level</td>
<td>1.66</td>
<td>0.733</td>
<td>2.266</td>
<td>.025*</td>
<td>0.214 3.106</td>
</tr>
<tr>
<td>Health Ins. Status</td>
<td>−3.736</td>
<td>2.522</td>
<td>−1.481</td>
<td>.140</td>
<td>−8.712 1.240</td>
</tr>
</tbody>
</table>

*Note.* SDOH = social determinants of health; SEAM = self-efficacy for appropriate medication use (dependent variable). * $p < .05$. $B$ = unstandardized beta; $SE$ = standard error. LL = lower limit; UL = upper limit.

**SWB, RWB, and SEAM**

The third question asks whether SWB and RWB are associated with SEAM. The hypothesis for this question is that SWB and RWB are associated with SEAM. There is no significant association between SWB or RWB and SEAM (see Table 7).
Table 7

*Associations Among SWB, RWB, and SEAM*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$t$</th>
<th>$p$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LL</td>
</tr>
<tr>
<td>SWB</td>
<td>−0.059</td>
<td>0.127</td>
<td>−0.463</td>
<td>.644</td>
<td>−0.311</td>
</tr>
<tr>
<td>RWB</td>
<td>0.091</td>
<td>0.206</td>
<td>0.444</td>
<td>.658</td>
<td>−0.315</td>
</tr>
</tbody>
</table>

*Note.* SWB = spiritual well-being; RWB = religious well-being; SEAM = self-efficacy for appropriate medication use. $B =$ unstandardized beta; $SE =$ standard error. LL = lower limit; UL = upper limit.
Chapter 5: Discussion

This correlational descriptive study aimed to examine the relationships among SWB, RWB, and SDOH with SEAM in AA women with hypertension. This chapter begins with a discussion of the study and sample. In the second section, I discuss the analysis results in the context of the research questions raised and the hypothesized relationships among the study variables. The third section of the chapter presents the study’s conclusions. The final section summarizes the results of the study and provides recommendations for future studies.

Among AA women, hypertension is highly prevalent, and antihypertension medication adherence is low. The study hypothesized that for AA women, the missing piece might be the inclusion of their SWB, RWB, and SDOH and understanding of their SEAM, which may affect adherence to antihypertension medication.

Discussion of the Study Sample

Age

The mean age of the women in the study was 57.34 (SD 12.89) years. Thus, AA women participating were, on average, middle-aged. Among non-Hispanic AAs in the United States, men have a life expectancy of 74.9 years, and women have a life expectancy of 78.1 years (Perez et al., 2022). A variety of life course events, including exercise, happiness, stress, social support, health care, marriage at an early age, high parity, and adverse experiences, such as the death of a child or being dismissed from work, have been linked to health in early old age (Perez et al., 2022).

The health of AA women in the United States has improved significantly over the last century, but health disparities persist, including shorter life expectancies (Chinn et al., 2021). Health declines as adults age, and exposure to the built and social environment impacts stress, an influential factor in aging. Health disparities between AA women and White women increase
with age due to socioeconomic disadvantages and racism (Chinn et al., 2021). Tan et al. (2022) concluded that SDOH for the elderly requires a multidimensional, multidisciplinary, and multisectoral approach.

**Income**

Of the women, 48.7% ($n = 91$) had an income in the range of $45,000–$139,000/yr., with only 2.1% ($n = 4$) of the participants having an income of <$20,000/yr. As a result, it can be inferred that the majority of this sample were middle class. There is a $5,500/yr. wage difference between AA and White women, with a higher unemployment rate, a higher poverty rate, more racially segregated neighborhoods, and lower property values for AA women (Chinn et al., 2021). Consequently, AA women do not have as much money and resources as White women to support themselves and their families, as is supported by the literature (Reddy, 2022; US Census Bureau, 2022b). Higher life expectancy and better health are associated with wealth (Perez et al., 2022).

The wage gap between men and women is still sizable, with women earning about 83 cents for every dollar earned by men. This gap may reflect stereotypes and discrimination (Congressional Budget Office [CBO], 2020). For every dollar paid to a White, non-Hispanic man, an AA woman is paid 64 cents. In the 25 states with the highest rates of AA women working full time, year-round, they are paid 45 cents to 64 cents less than White, non-Hispanic men. The average wage for AA women in the US is $36,303 compared to $57,005 for White, non-Hispanic men (Reddy, 2022).

**Education**

In the sample, 87.7% were college graduates, suggesting that they (at least) know how to access educational materials regarding hypertension management. It also suggests that there should be at least a baseline comprehension of appropriately directed education. There has been
an increase in rates of 4-year college completion among AAs, especially women (Guyot, 2017). In their efforts to control hypertension and become more adherent to their medication regimen, AA women have increasing educational attainment in their favor. Health care systems should consider AA women’s educational patterns. Programs should be implemented that provide targeted and appropriate educational opportunities for the appropriate age groups.

Lack of knowledge, resources, strategies for success, and social support influence how individuals manage their hypertension and could be positively affected by adequate education. While many AA women express a willingness and interest in improving hypertension self-management skills, these factors affect their decisions and ability to do so (Jones et al., 2022). Fortunately, these factors do not appear to influence middle-aged, middle-income, college-educated women. It is noteworthy that older adults with higher education have a significantly lower risk of frailty and cognitive impairment (Tan et al., 2022).

**Marital Status**

Among the respondents, 46.5% were married, 20.9% were single, and 18.7% were divorced. This study sample had a majority of married women, and marriage usually affords additional resources. It is more common for well-educated individuals to be married with a household of two income earners (Karney, 2021). In 1970, 35.6% of AA men and 27.7% of AA women were never married. In 2020, these percentages jumped to 51.4% and 47.5%, respectively (US Census Bureau, 2022a). Interestingly, married people have a healthier physical and mental state but are more likely to be overweight or obese (Perez et al., 2022). In contrast, AA women with an undergraduate degree are less likely to be married than White women with an undergraduate degree (Guyot, 2017). Unfortunately, this statistic is growing yearly.
Insurance Status

In all, 97.3% of the women had health insurance, implying that coverage for these women’s hypertension medications was not an issue. Following the Affordable Care Act (ACA) Marketplace and Medicaid expansion provisions, the uninsured rate among nonelderly AA decreased by eight percentage points between 2013 and 2016. Uninsured AAs have limited access to health care services, a considerable determinant of health in hypertension treatment (Chinn et al., 2021). Low-income AAs often face limited resources, high environmental and social risks, high levels of stress, and limited health care access, which increases the risk of multiple medical conditions (Zabler et al., 2018).

Prior to the pandemic, uninsured rates had been rising for several years. During the pandemic, the uninsured rate among AAs decreased from 11.4% to 10.9%, a statistically significant decrease (Kaiser Family Foundation [KFF], 2022). In spite of recent gains and the large coverage gains under the ACA, coverage disparities persist. Medicaid coverage gains over the period largely offset declines in employer-sponsored coverage, and the uninsured rate for AAs is 1.5% higher than for Whites (KFF, 2022). AAs and other people of color are most likely to fall into a coverage gap in states that have not expanded Medicaid under the ACA (usually Southern states). They earn too much to qualify for Medicaid but not enough to be eligible for premium tax credits (Taylor, 2019).

Geography

In this study, the most prominent demographic came from the South at 64.2%, followed by the Mid-Atlantic (12.8%) and the Midwest (11.8%). Based on this, most of the study sample is from the South. Over the past several decades, the AA population has experienced considerable geographic mobility, but the South still contains the largest share, including those who have returned. The West and South had significantly higher percentages of married non-
Hispanic AA adults in both 2005–2009 and 2015–2019 (US Census Bureau, 2022a), which coincides with this study. There were two waves of AA migration out of the South: the First Great Migration after the Civil War and the Second Great Migration after the Great Depression. The trend of AAs moving away from the South began to reverse approximately 40 years ago (National Geographic, 2022).

Across the continental United States, hypertension, diabetes mellitus, and smoking patterns differ by race, state, and county. There is a very significant correlation between geography and poor blood pressure control in individuals (Baum et al., 2020). Hypertension is most prevalent in the Southeast among AAs (Loop et al., 2017). According to Yang et al. (2018), Mississippi has the highest predicted prevalence of hypertension among adults and women. Geography plays a significant role in SDOH. In terms of regional differences, more research needs to be conducted on the social factors affecting hypertension management, SDOH, and geographical location. Rural versus urban studies have dominated much of the research.

There is a consistent difference in health between rural and urban populations, but it is only sometimes substantial. There is a higher incidence of health-related risk behaviors, chronic conditions, and activity limitations among rural residents (Chen et al., 2018). The prevalence of chronic conditions among adults in rural areas is somewhat higher (Kozhimannil et al., 2019). Regarding urban versus rural care, SDOH are highly affected by geography; the health care workforce shortage in rural areas is more severe than in urban areas (Kozhimannil et al., 2019). In the past decade, the maternal burden of pre-pregnancy hypertension has nearly doubled, and the rural–urban divide in prevalence has been persistent (Cameron et al., 2020).

Sociodemographic differences between rural and urban populations may contribute to differences in access to and use of health information sources. Several structural barriers may exist, including a lack of specialist doctors and limited exposure to the media. Rural residents
may need help accessing health information because of these barriers, especially those with limited health literacy (Chen et al., 2018).

**Religion and Spirituality**

Overall, 64.7% of the women identified as spiritual and religious, whereas 23% described themselves as only spiritual and 10.7% as only religious. Christians made up 93.6% of the women. Of the religious women, 65% were from the South. It is interesting to note that 67% of these women considered themselves both spiritual and religious. Accordingly, a large proportion of Southerners still practice and believe in spirituality. Regarding the most religious places to live, Alabama (ranked first overall) and Mississippi are statistically the most religious states in the nation, with Tennessee close behind (Lipka & Wormald, 2016).

Although the West and Midwest have been well studied for this kind of connection, there has yet to be research measuring the most spiritual states in the US. Despite the overlap between spirituality and religiosity, when religious versus mystical tendencies are taken into account, spirituality and religion diverge (Wixwat & Saucier, 2021). The use of religious and spiritual coping strategies by AA women with high stress levels has been found to lower hypertension rates (Cozier et al., 2018).

**Discussion of Study Findings Upon Research Questions and Hypotheses**

The research questions for the current study were the following: (1) Are the SDOH age, level of education, and socioeconomic, marital, and insurance status associated with SWB and RWB in AA women with hypertension? (2) Are the SDOH age, level of education, and socioeconomic, marital, and insurance status associated with SEAM? (3) Are SWB and RWB associated with SEAM in AA women with hypertension? Hypotheses were formulated based on these questions. A discussion for each hypothesis follows.
**Hypothesis 1: SWB, RWB, and SDOH**

The first study hypothesis was that SDOH (i.e., age, level of education, and socioeconomic, marital, and insurance status) are associated with SWB and RWB in AA women with hypertension. In the current study sample of AA women, for these SDOH, there was no statistically significant relationship with SWB. Based on the findings, a person’s sense of SWB or RWB may not be dependent on their SDOH.

Although no association was demonstrated between SWB, RWB, and SDOH in this study, the sample was homogeneous, with 97.3% \((n = 182)\) having health insurance, 87.7% \((n = 164)\) being college graduates, and 48.7% \((n = 91)\) in the middle-income bracket. Findings may differ for AA women without health insurance, without a college degree, or in a different income bracket.

Historically, AA women’s spirituality was centered on surviving the hardships of slavery (Fett & Rinker, 2004). The use of spirituality transcended and transformed their experiences and provided hope through personal and community relationships (Musgrave et al., 2002). This continued system, passed down through generations as both a cause and a product of hope, may explain why the SDOH had no relationship to SWB or RWB. The study’s small sample size may also have contributed to this nonsignificant result, and its nonsignificance may also be based on a nonlinear relationship.

Despite these findings, the literature shows that AA women are highly spiritual, dating back to periods of enslavement (Hazzard-Donald, 2012). Their spiritual practices led them to seek strength, protection, and vengeance from a higher power. When dealing with health issues, AA women tend to depend on God but to look to their own strengths (Yan et al., 2019). SDOH has no bearing on SWB or RWB as they relate to this study. AA women’s health care could be improved with a spiritually sensitive perspective and approach, but there does not seem to be a
need to adjust the approach in a health care setting when accounting for SDOH with this population. Research with a larger sample size may show different results.

Spirituality has been shown to promote and maintain resilience in older adults (Manning et al., 2018). Furthermore, SWB and RWB significantly mediate the relationship between depressive symptoms and health-related quality of life in older adults (Lee & Salman, 2018). These particular investigations were not limited to AA women. However, studies have demonstrated that religious activities emphasizing mindfulness and spirituality contribute to the well-being of elderly AAs with dementia (Epps & Williams, 2018). The current study, however, recruited middle-aged, not elderly, AA women, with an average age of 57 years. Future research should focus on SWB and RWB in young adult and older AA women with hypertension.

A person’s SWB comes from believing in something greater than themselves, and this is the essence of the phenomenon and experience of SWB in every individual (Musgrave et al., 2002). Through this lens, a person seeks to make sense of the world and their circumstances. The results of this study indicate that SDOH may simply be the circumstances of AA women. However, their sense of SWB and RWB transcends those circumstances.

**Hypothesis 2: SDOH and SEAM**

The second study hypothesis was that SDOH (i.e., age, education level, socioeconomic status, marital status, and health insurance status) are associated with SEAM in AA women with hypertension. The results demonstrate that middle-aged, middle-income AA women with hypertension feel more confident about their ability to take their medication under changing circumstances, exhibiting SEAM. As AA women age, their level of SEAM increases. Self-efficacy is the belief that an action can be performed. With the increased resources that aging usually brings, women become more confident in their ability to perform needed self-care tasks.
Education level was also positively associated with SEAM in the women. Many AA women are continuing their education and earning degrees. Historically, there were no AA women with a degree in 1860. However, by 2019, nearly 10% of AA women had earned a college degree. From 1976 to 2020, the female student population at historically black colleges and universities grew from 53% to 64%, with 88% attending a 4-year college and 12% attending a 2-year college (National Center for Education and Statistics [NCES], 2022). In 2017–2018, most degrees conferred to AA students were conferred to women (NCES, 2022). As AA women’s education status increases, targeted self-management education programs can support hypertension management.

In terms of age, US residents lived longer in 2015 than in 1950, with an average life expectancy of 78.8 years. Although there has been an overall improvement, there are still many gender and racial/ethnic disparities. AA had the lowest life expectancy in 2015 (75.7 years), and there has been an increase in racial disparities in health care over the years (Singh et al., 2018). Disparities in mortality and morbidity by racial/ethnic identity, socioeconomic status, and geography were particularly evident in cardiovascular disease, hypertension, smoking, obesity, and access to quality health care (Singh et al.).

Understanding the impact of age and educational status can help decrease disparities involving AA women. It is possible to use these variables to predict success in educational programs and interventions as health care systems attempt to create health equity where it is lacking, close disparity gaps, and remove their stigmas among AA women. It is also appropriate to tailor interventions that target each age group for optimum outcomes. Exactly where SEAM interfaces with SDOH would be an advantageous element to add to any study investigating SDOH, hypertensive management, and self-care. The distribution of SDOH and social risk factors has been shaped by structural racism, and health care has been unable to avoid such
influences. (Egede & Walker, 2020). Racial/ethnic disparities in hypertension outcomes can be reduced by informing policy to address the fundamental causes of disease and designing interventions that address intermediate social determinants (Skolarus et al., 2020).

In clinical practice, addressing AA women’s hypertension disparities begins with understanding the impact of SEAM, age, and education. This study demonstrates the positive correlation between these elements. Research on this phenomenon will assist health care practitioners to implement and provide culturally competent care as they pay attention to the individual characteristics of AA women. It will also assist practitioners in providing suitable educational material to the right patient. Health care is not a one-size-fits-all institution. Providing all patients with timely, equitable, culturally sensitive, and competent care is always essential. SDOH and SEAM as a phenomenon requires further research.

**Hypothesis 3: SWB, RWB, and SEAM**

The third hypothesis stated that SWB and RWB are associated with SEAM. The study demonstrated that SWB and RWB do not have a statistically significant relationship with SEAM. It can be inferred that in AA women with hypertension, SEAM is not affected by SWB or RWB.

Studies focused on religion and spirituality among AA women and self-efficacy are conflicting. Some have demonstrated that spirituality reduces stress levels and improves psychosomatic health in hypertensive individuals (Papathanasiou et al., 2020). Cozier et al. (2018) demonstrated that high involvement of religion and spirituality in coping with stressful events is associated with a reduced risk of hypertension. However, more frequent prayer is associated with an increased risk of hypertension in AA women. Studies have also demonstrated that AA women with the highest self-efficacy have higher measured systolic blood pressure (Kang et al., 2020). Abel and Greer (2017) found no association between religion/spirituality and medication adherence.
A study that investigated the spirituality and self-efficacy of breast cancer patients (Sheppard et al., 2018) noted that higher levels of spirituality are positively associated with self-efficacy \((r = .17; p = .02)\). SWB and self-efficacy are important markers in mental health and self-care. To what extent these phenomena are factors in hypertension and medication adherence, essential in the search for decreasing the disparities of AA women, is unknown. For AA women, the intersection of spirituality and health can enhance health outcomes and help eliminate health disparities (Musgrave et al., 2002). This area requires further research.

In a study focusing primarily on AA women experiencing COVID-19 and cancer, it was found that AA women found purpose and meaning through expressing their spirituality (Hamilton et al., 2021). During the COVID-19 pandemic, people were socially isolated and primarily disconnected from social networks of strength. Self-efficacy and self-care were highlighted in health care at the time due to increased depression and other mental health issues. Additionally, self-efficacy mediated the relationship between spirituality and hopelessness (Kasapoğlu, 2022).

According to Ampofo et al. (2022), SWB and family support are associated with self-care among type two diabetic patients, but self-efficacy does not moderate the relationship. Spirituality has been shown to help people cope with diabetes. Globally, SWB needs to be better explored, and patients who receive spiritual and social support are more likely to take better care of themselves (Ampofo et al.). Psychosocial interventions should therefore be integrated into health care delivery by health care providers.

For research, the effects of SWB, RWB, SDOH, and SEAM on hypertension management in AA women warrant further investigation. This paradigm takes the researcher down the road of psychosocial integration into hypertension management and how it might shape health care. The importance of SWB, RWB, SDOH, and self-efficacy in hypertension care might
be better understood with a larger sample size and more time to recruit AA women across communities. Further research into this phenomenon may result in improved treatments and services for AA women with hypertension.

In clinical practice, the practitioner can begin to incorporate psychosocial factors into the care of hypertensive AA women as they follow the research. Considering SWB, RWB, SDOH, and SEAM can assist in tailoring clinically astute and culturally competent interventions. By understanding these variables, we can close gaps, achieve health equity, and eradicate disparities among AA women of color.

**Implications**

The original contribution of this study is its investigation into the significance of the inclusion of SDOH and SEAM in hypertension management for AA women. In order to ensure SDOH are addressed, disparity gaps are closed, and health equity is achieved among AA women with hypertension, it is critical to understand the variables that affect adherence. There are no studies addressing spiritual/religious well-being and SDOH with SEAM. Even though AA women are not monolithic, as a whole, they stand on solid spiritual and religious foundations that are not affected by SDOH. Most SDOH also does not affect their ability to be self-efficacious in this study.

This study’s novelty rests in its finding that the SDOH age and education are essential indicators of SEAM in AA women with hypertension. An AA woman’s decision to adhere to her medication is influenced by her age, education, and (to a lesser extent) income. Self-efficacious antihypertensive treatment is self-evident among middle-aged and middle-income AA women in this study.

This study’s results have implications for theory, practice, education, and research involving SWB, RWB, SDOH, and SEAM. The study has provided valuable information,
including that these AA women with hypertension did not feel very confident about taking their medication when circumstances change and were only somewhat confident. In terms of SWB and RWB, overall, they felt moderately satisfied with life and their sense of purpose and were moderate in their relationship with God. These factors did not influence how they took their medication.

The assessment of SEAM with a focus on SDOH in hypertensive management could provide health care providers with a road map to understanding and providing culturally competent care to AA women to eradicate disparities. It will benefit AA women by providing a space to communicate and emphasize their need for holistic treatment with attention paid to how SDOH affect their decision to adhere to the medication regimen. These services would be the foundation for providing comprehensive health care, as this population needs. It would also form a foundation and rationale for SEAM assessments to treat hypertension within health care. The study emphasizes the importance of a holistic approach to AA women for both women and the health care providers that choose to provide care for this aggregate. It assists in the establishment of trust in the patient–provider relationship.

It has been acknowledged that structural racism has not been fully addressed in health care, but attention is being paid to SDOH and how they affect not only patient–provider relationships but also health care outcomes. Nursing research has the opportunity to begin to take on this issue from a unique perspective that touches the patient and affects outcomes. When coupled with SEAM, nursing research can begin to elucidate core issues and place a spotlight on disparities and health equity. In a health care environment, this research informs systems on what is essential to the aggregate its SEAM, given the inclusion of SDOH as having a role in medication adherence for AA women. The standard of care should be comprehensive of holistic treatment, which is a step in the right direction with its addition to educational and clinical
platforms. Implications for nursing research include future studies and building a foundation for creating protocols and practice standards for nursing practice related to AA women with hypertension, including SDOH and self-efficacy.

For nursing practice, health care providers will be informed about what AA women have deemed necessary for their individualized care as we continue to move toward closing the gap, creating health equity, eradicating disparities, and providing patient-centered care. A patient-centered approach that emphasizes society and history’s role in health outcomes is known as centering at the margins (Crear-Perry et al., 2021). To provide patient-centered care at the margins, providers must acknowledge the impact of society and history on health outcomes, which ties directly to SDOH.

The goal is that a holistic approach inclusive of understanding how SDOH affect decisions will be a standard of care. Also, further research into self-efficacy utilizing SWB, RWB, and SDOH to assist in building a bridge and mending wounds between AAs and health care systems will eventually alleviate disparities in outcomes. As health care systems seek to eradicate the effects of SDOH on their standard care for all patients, clinicians can focus on ensuring they fill in the gap with consistent, yet individualized care provided to all patients.

In terms of patient education, understanding and sensitivity to health care services are not a one-size-fits-all operation; patients should be accommodated where they are, and their needs met individually. These discussions at the provider level should ensure that appropriate provisions are made so that patients are successful in taking their medications as prescribed. These discussions open the door and provide opportunities for more extensive conversations that address barriers to medication adherence, such as stress, costs, polypharmacy, finances, trust in the provider’s guidance, and health care beliefs that may rival health care standards of care.
Culturally, mending the relationship between AAs and health care providers begins at the point of care.

**Recommendations**

**SDOH and SEAM**

Based on the results of this study, further research is needed on SDOH and their effects on AA women with hypertension. In order to manage hypertension and ensure medication adherence, social factors must be considered. Downstream factors that affect practice-level interventions, such as age-appropriate education, effective communication strategies, community-based campaigns of health improvement, and strategies focused on increasing SEAM, would be beneficial. Health care systems should consider AA women’s education background. Programs should be implemented that provide targeted and appropriate educational opportunities for appropriate age groups.

A holistic approach to AA women’s medication adherence includes SDOH and SEAM, which have been shown to directly affect their adherence. SDOH policy should focus on removing inequalities and leveling the playing field in health care for marginalized citizens. More studies focused on SEAM and its effects on medication adherence within and between age groups would be beneficial. Furthermore, studies on lifestyle management among hypertensive AA women and the effects of SEAM would be helpful.

This study demonstrates the association between SDOH and SEAM, which warrants further investigation. The interaction and transition of health care practices for young adult and elderly AA women should be examined. A qualitative study would also be beneficial to identify other themes or variables affecting SEAM. Probing questions to consider could be as follows: Are there stressors occurring in their life that the health care system can alleviate for improved hypertension management? Is there a way for patients to directly access opportunities within the
health care system that address SDOH? What role does social support have in SEAM and antihypertensive medication adherence?

**SWB and RWB**

It is recommended that SWB and RWB be further explored in SEAM for AA women with hypertension. There is no doubt that spirituality and religion play a significant role in AA women’s lives, so their influence on health care decisions should not be overlooked. Although this study did not demonstrate a significant relationship, this does not imply that there is no relationship. Further probing questions in qualitative studies designed to investigate this phenomenon might include: Is the AA woman open to discussing religious and spiritual needs with a health care provider? Is there a preference in type of providers for their health care? From a psychosocial standpoint, is the time and place of hypertensive treatment a factor? What is the individual experience with community-based clinics versus private practices? Is the ability to communicate specific needs for holistic treatment heightened in either setting relative to the other?

**Limitations**

Several limitations are associated with this study. First, a purposive sampling approach was used, which limited the number of participants. AA women were selected as the subject group because they could speak directly about hypertension and their experiences, which could introduce bias. Second, as a result of the small sample size, power and effect were reduced. Third, since AA women were targeted for sampling, the study was not able to obtain data for comparison with other groups. Finally, the survey was conducted online, and there may be more incomplete data or missing information with online surveys. It is possible for respondents to feel discouraged from providing accurate, honest answers in an online survey; they may feel uncomfortable responding in a negative manner; and they may not be fully aware of the reasons
for their answer to a particular question due to lack of memory on the subject, or even boredom (Nayak & K A, 2019; Polit & Beck, 2017).)

Conclusions

This cross-sectional correlational study examined the relationship between SWB, RWB, and SDOH with SEAM in AA women with hypertension. Three research questions guided it: (1) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SWB and RWB? (2) Are SDOH (i.e., age, level of education, household income, marital and insurance status) associated with SEAM? (3) Are SWB and RWB associated with SEAM?

There was a significant relationship between the SDOH variables age and education and SEAM. The study of the social factors in SEAM is an emerging science, and further research with validated instruments for SDOH and SEAM is warranted. Future research should focus on various SDOH, well-being, education level, influences of young adult and elderly medication adherence, and SEAM. The findings of the study demonstrate no association between SDOH and SWB or RWB. There were also no relationships found among SWB, RWB, and SEAM.
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Appendix A

Spiritual Well-Being Scale

**SWB Scale**

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

<table>
<thead>
<tr>
<th>SA</th>
<th>MA</th>
<th>A</th>
<th>D</th>
<th>MD</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Moderately Agree</td>
<td>Agree</td>
<td>Disagree</td>
<td>Moderately Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

1. I don’t find much satisfaction in private prayer with God.  
   SA MA A D MD SD

2. I don’t know who I am, where I came from, or where I’m going.  
   SA MA A D MD SD

3. I believe that God loves me and cares about me.  
   SA MA A D MD SD

4. I feel that life is a positive experience.  
   SA MA A D MD SD

5. I believe that God is impersonal and not interested in my daily situations.  
   SA MA A D MD SD

6. I feel unsettled about my future.  
   SA MA A D MD SD

7. I have a personally meaningful relationship with God.  
   SA MA A D MD SD

8. I feel very fulfilled and satisfied with life.  
   SA MA A D MD SD

9. I don’t get much personal strength and support from my God  
   SA MA A D MD SD

10. I feel a sense of well-being about the direction my life is headed in.  
    SA MA A D MD SD

11. I believe that God is concerned about my problems.  
    SA MA A D MD SD

12. I don’t enjoy much about life.  
    SA MA A D MD SD

13. I don’t have a personally satisfying relationship with God.  
    SA MA A D MD SD

    SA MA A D MD SD

15. My relationship with God helps me not to feel lonely.  
    SA MA A D MD SD

16. I feel that life is full of conflict and unhappiness.  
    SA MA A D MD SD

17. I feel most fulfilled when I’m in close communion with God.  
    SA MA A D MD SD

18. Life doesn’t have much meaning.  
    SA MA A D MD SD

19. My relation with God contributes to my sense of well-being.  
    SA MA A D MD SD

20. I believe there is some real purpose for my life.  
    SA MA A D MD SD

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Appendix B

Self-Efficacy for Appropriate Medication Use Scale (SEAMS)

Self-Efficacy and Appropriate Medication Use Scale
How confident are you that you can take your medicines correctly. . . .

<table>
<thead>
<tr>
<th>Question</th>
<th>Not Confident</th>
<th>Somewhat Confident</th>
<th>Very Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>when you take several different medicines each day?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when you take medicines more than once per day?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when you are away from home?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when you have a busy day planned?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when they cause some side effects?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when no one reminds you to take the medicine?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when the schedule to take the medicine is not convenient?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when your normal routine gets messed up?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when you are not sure how to take the medicine?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when are not sure what time of the day to take your medicine?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when are feeling sick (like having a cold or the flu)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>when you get a refill of your old medicines and some of the pills look different than usual?</td>
<td></td>
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<td></td>
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<tr>
<td>when a doctor changes your medicine?</td>
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</tbody>
</table>

https://doi.org/10.1891/106137407783095757
Appendix C

IRB Initial Approval

The University of Memphis Institutional Review Board, PWA0000015, has reviewed your submission in accordance with all applicable statutes and regulations as well as ethical principles. Approval of this project is given with the following obligations:

1. When the project is finished a completion submission is required.
2. Any changes to the approved protocol requires board approval prior to implementation.
3. When necessary submit an incident/serious events for board review.
4. Human subjects training is required every 2 years and is to be kept current at irbprogram.org.

For any additional questions or concerns please contact us at irb@memphis.edu or 901.869.2705

Thank you,
James R. Wheeler, Ph.D.
Institutional Review Board Chair
The University of Memphis.
Appendix D

IRB Modification Approval

Institutional Review Board
Division of Research and Innovation
Office of Research Compliance
University of Memphis
315 Admin Bldg
Memphis, TN 38125-3579

May 4, 2022

PI Name: Tracee Moore
Investigator:
Advisory and/or Co-PI: Amarepo Mery
Submission: Type: Modification
Title: Spiritual Well-being and Medication Adherence in AA women with Hypertension
IRB ID: WPRO-FY20-088
Level of Review:

Approval: May 4, 2022
Expiration: 

The University of Memphis Institutional Review Board (FWA00005813), has reviewed your submission in accordance with all applicable statutes and regulations as well as ethical principles.

The modification is approved.

Approval of this project is given with the following obligations:

1. The IRB approval for modification has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human subjects consent forms and recruiting materials are no longer valid and any research activities involving human subjects must stop.
2. When the project is finished a completion form must be submitted.
3. No changes may be made in the approved protocol without prior board approval.
4. Human subjects training is required every 2 years and is to be kept current at https://rpi.org.

*Modifications do not extend the expiration of the original approval

Thank you,
James P. Whalen, Ph.D.
Institutional Review Board Chair
The University of Memphis.
Appendix E

Chi Eta Phi Sorority, Incorporated’s Permission to Survey Members

RE: Member Research Request

Samantha Agee <SAgee@chietaphi.org>
To: Tracie Lavelle Moore <tragee@memphis.edu>
Fri, Sep 17, 2021 at 9:13 PM

Greetings Dr. Moore,

Congratulations on this important milestone in your career.

In line with the mission of Chi Eta Phi Sorority, Incorporated® to provide service, a lead the pace of nursing and increase interest in the nursing profession, I look forward to assisting you with the distribution of your study surveys. We do not currently have an IRB process; however, our mission incorporates encouragement of pursuit of continuing education. Advancement to higher degrees by our members and professional nurses is encouraged.

Please submit the following at least three weeks prior to the start of the study:

- The actual survey
- Documentation of approvals from IRB and school
- Disclaimers walkage of Chi Eta Phi Sorority, Incorporated® independence from the study except for members completing
- The survey on a voluntary basis.

I remain available for questions.
Please let me know how I may help.

Blessings,
S. Agee

Samantha Agee, MSN-Ed, RN, APRN, CRNA
706-872-1417

2nd National Vice President
Accredited Provider Program Director
Alpha Chi Chapter, Nashville, TN (SER)
Appendix F

Church Health Center Letter of Support

November 30, 2021

Dr. Trace L. Augusta, DNP, MSNEd
Ph.D. Candidate, University of Memphis
Memphis, Tennessee 38152

Dear Dr. Augusta,

I am pleased to write this letter of support for the proposed study, “Spiritual well-being, self-efficacy, and medication adherence in AA women with Hypertension”. This proposal offers the opportunity to address hypertension in a disproportionately affected group of African American women, which are also impacted by other factors such as spiritual well-being, an understanding of self-efficacy, and medication adherence. This study provides an opportunity to delve into these factors and determine the role they play in combating hypertension within this special population.

Church Health is uniquely positioned to be a partner in this study as it is the largest faith-based, privately funded primary care clinic of its kind. We provide healthcare for the working uninsured and underserved individuals and promote the health and well-being for all within the Memphis community. Church Health delivers comprehensive medical, dental, physical rehabilitation, eye care, and behavioral health services, in addition to nutrition, movement, and children’s programs offered on-site and in the community. It is strategically located within the Mid-South and the non-profit sector to provide a wide array of services. Partnerships with health care institutions, diagnostic centers, laboratories, and pharmaceutical and medical device companies enable affordable, accessible care.

The proposed project to address elements affecting hypertension in African American women aligns well with Church Health’s integrated care approach. This study offers the opportunity to incorporate different non-traditional practices that would assist in treating and preventing hypertension in the community we serve. I believe this project will add to our knowledge base and provide additional resources to identify and increase our reach within our patient population. We will make our resources available to this project by aiding in the recruitment of study participants representative of the racial and ethnic underrepresented population, especially amid the African American and Hispanic American communities, and also within the faith-based communities affiliated with Church Health.

Once again, I would like to emphasize my enthusiasm for this study. These efforts will undoubtedly improve both the awareness, knowledge, and implementation of changes to healthcare delivery and solutions for many individuals in the Mid-South. We look forward to our continued collaboration and the future of the proposed research study.

Kind Regards,

[Signature]

Fwonda Ruggles, PhD, CDRP
Director of Research
Appendix G

Permission to Use Spiritual Well-Being Scale

SWBS
3 messages

Ray Paloutzian <paloutz@westmont.edu> Mon, Oct 12, 2020 at 4:27 PM
To: Tracie Augusta <drtracie.moore@gmail.com>

Dear Tracie,

I received your note indicating that you have an interest in the Spiritual Well-Being Scale.

Below I copy and paste a long email that I send in response to the many requests I get about the SWBS. It may have a few bits of info that might help you. Also, attached is a chapter published in an Oxford textbook that is a recent review of SWBS research, and another chapter that is in press on international measures. The latter especially is an update to the research bibliography that is on the website and that comes with the manual. May be useful. Here is the information.

Permission is granted to use the SWBS subject to purchase of the number of copies (i.e., authorization to make the number of copies from a PDF file that you download) that you will use. See the website www.lifeadvancex.com. It has information about the scale and the instructions to follow to obtain the Specimen Set that includes one examination copy of the scale, the manual for the SWBS that includes scoring instructions, norms, interpretive information, and a research bibliography. (For student research, a student is authorized to use the student discount procedure, which will give a 50% discount on all items.) When you go to the products page of the website, select the icon that indicates the number of copies of the scale that you are purchasing authorization to make from the PDF download that you retrieve after processing your order. You will see on the Products Page that the cost per copy goes down as the N goes up, in steps of 50. After you select the icon that corresponds to your number of copies, you will go to the shopping cart page. Change the number to the correct number for your purchase and then punch the "update shopping cart button." Then follow the procedures, collect the PDF file download as indicated on the web page (or on the email that is also sent to you), and you are thereby authorized to make and use the number of copies that you purchased authorization to make.

See the chapter by Paloutzian et al. published in the Oxford Textbook of Spirituality in Healthcare, edited by Cobb et al. This chapter is the latest statement on the topic. I have attached this chapter to this email.

Data Analysis: If you plan on doing statistical analysis on scale scores: One thing that I always recommend is to analyze your data not only according to the SWBS total scores, but also according to the RWB and EWB subscale scores separately, in addition to the total SWBS scores. Of course total SWBS is made up of RWB + EWB. Fine. But RWB and EWB correlate only modestly, which is why they are two separate factors. And sometimes the RWB and EWB scores behave differently from each other, and not exactly the same as the behavior of the SWBS total. This means that looking at those two subscales can tell you something psychologically interesting that the SWBS total score cannot do by itself, i.e., it allows you to dig deeper. So I strongly recommend that you look at your data and do the same analyses all three ways. See the review paper by Bufford, Paloutzian, and Ellison 1991 as a nice example of how the scores can be meaningfully broken down in this way.

Translations: If you need to make a translation of the SWBS from English into another language, contact me and I am able to authorize it. The website has translations into Arabic, Cebuano, Chinese, Czech-Short Version, English Childhood Retrospective, Indonesian, Korean, Malaysian, Norwegian, Persian, Portuguese, Spanish, Tagalog, Thai, Turkish, and Urdu.

Electronic administration: It is OK to use the SWBS electronically with, e.g., Survey Monkey or similar. In this case, 1 electronic administration of the scale equals 1 paper copy of the scale, so (for example) if you have an electronic N = 100, the cost is exactly the same as for 100 paper copies. The website has to be protected so that only your authorized subjects have access to it, the scale cannot be copied or emailed or otherwise distributed, the copyright line should show electronically, and the scale should be removed from the website at the close of data collection.

In addition, you may find it helpful to see the 3rd edition of Paloutzian and Park (2013) Handbook of the Psychology of Religion and Spirituality, 2nd ed., Guilford Press. It is as a chapter on religion and spirituality, measurement of R and S, and other topics that may be related to your needs. (Also, it is available in paperback for only about $40 USD.) Also see Paloutzian, R. F. (2017), Invitation to the Psychology of Religion, 3rd ed., Guilford Press. Paperback.

Thank you,